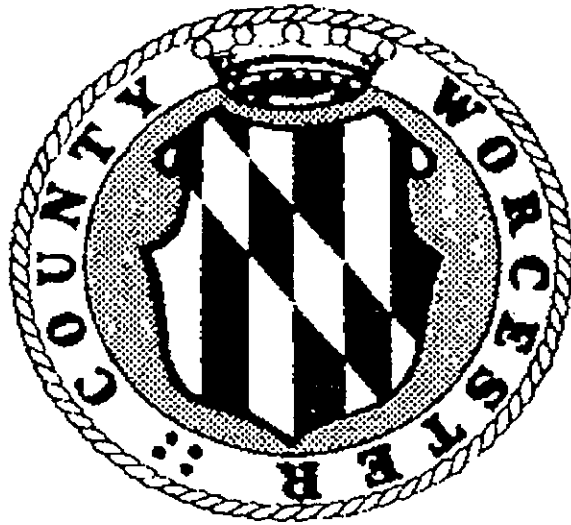


Worcester County



Water and Sewerage Plan

August 1994

WATER AND SEWERAGE PLAN OUTLINE

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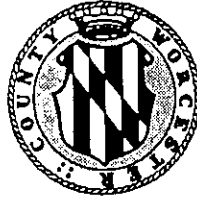
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INTRODUCTION



OFFICE OF THE
COUNTY COMMISSIONERS

Worcester County

ROOM 112 COURT HOUSE
SNOW HILL, MARYLAND
21863

COMMISSIONERS
JEANNE LYNCH, PRESIDENT
FLOYD F. BASSETT, JR., VICE PRESIDENT
JOHN E. BLOXOM
REGINALD T. HANCOCK
GEORGE M. HURLEY

JOHN A. YANKUS
CHIEF ADMINISTRATIVE OFFICER
EDWARD H. HAMMOND, JR.
COUNTY ATTORNEY

CERTIFICATION

Certification of Adoption

This is to certify that the 1994 Comprehensive Plan for Water and Sewerage Systems, Worcester County, Maryland, was the subject of a public hearing held on 9/9/94 and was officially adopted by the Commissioners for Worcester County at their meeting on August 23, 1994.

Certificate of Submittal

This is to further certify that the Plan has been submitted to the Maryland Department of the Environment and that it meets the requirements of Section .02B of Regulation 26.03.01.

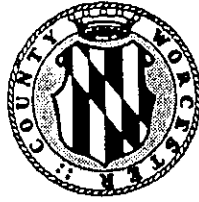
By Jeanne Lynch
Jeanne Lynch
President, Commissioners
for Worcester County

Date 9/23/94

Letter of Approval

See letter following, dated August 23, 1994.

TELEPHONE 410-632-1194
FAX 410-632-3131



OFFICE OF THE
COUNTY COMMISSIONERS

Worcester County

ROOM 112 COURT HOUSE
SNOW HILL, MARYLAND
21863

August 23, 1994

COMMISSIONERS
JEANNE LYNCH, PRESIDENT
FLOYD F. BASSETT, JR., VICE PRESIDENT
JOHN E. BLOXOM
REGINALD T. HANCOCK
GEORGE M. HURLEY

JOHN A. YANKUS
CHIEF ADMINISTRATIVE OFFICER
EDWARD H. HAMMOND, JR.
COUNTY ATTORNEY


Mr. J. L. Hearn, Director
Water Management Administration
Department of the Environment
2500 Broening Highway
Baltimore, Maryland 21224

Dear Mr. Hearn:

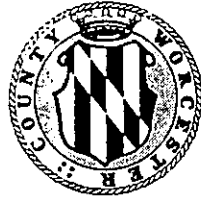
As required by COMAR 26.03.01.03, Worcester County herewith submits the Comprehensive Water and Sewerage Plan for Worcester County for the review and approval of your Department. The Plan meets the requirements of COMAR Regulation 26.03.01.02B. Eight complete copies of the Plan are provided.

It is our understanding that you will forward copies of the Plan to all necessary agencies.

Sincerely,


Jeanne Lynch
President

JEB:dls



PLANNING, PERMITS AND INSPECTIONS

Worcester County

ROOM 116 COURT HOUSE

SNOW HILL, MARYLAND 21863

301-632-1200

BOARD OF APPEALS
PLANNING COMMISSION
AGRICULTURAL PRESERVATION
ENVIRONMENTAL PROGRAMS

ELECTRICAL BOARD
SHORELINE COMMISSION
LICENSE COMMISSIONERS

Mr. J. L. Hearn, Director
Water Management Administration
Department of the Environment
2500 Broening Highway
Baltimore, Maryland 21224

Dear Mr. Hearn:

This is to certify that the Worcester County Planning Commission has reviewed the revised Worcester County Water and Sewerage Plan and found it to be consistent with the Worcester County Comprehensive Plan.

Should you have any questions or require further information with regard to this matter, please do not hesitate to contact this office.

Sincerely,

Carolyn Cummins
Carolyn Cummins
Chairman

CC:dls

RESOLUTION ADOPTING COMPREHENSIVE
WATER AND SEWERAGE PLAN

WHEREAS, Section 9-503 through 9-509 of the Environment Article of the Annotated Code of Maryland and Section 26.03.01 of the Code of Maryland Regulations require that the County prepare and submit to the Maryland Department of the Environment a Comprehensive Water and Sewerage Plan for the County; and

WHEREAS, the County has prepared the Comprehensive Water and Sewerage Plan dated August 1994 and referred to herein and has conducted a public hearing on August 9, 1994 on said Comprehensive Water and Sewerage Plan.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that the revised Comprehensive Water and Sewerage Plan dated August 1994 is hereby approved and adopted; and

BE IT FURTHER RESOLVED the Comprehensive Water and Sewerage Plan shall be submitted to the Department of the Environment for approval by the Department as required by law and regulation; and

BE IT FURTHER RESOLVED that this Resolution will be effective on the date of its passage.

PASSED THIS 23rd day of August, 1994.

WITNESS:

Deborah G. Byrd
Deborah G. Byrd
Assistant to the Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS

Jeanne Lynch
Jeanne Lynch, President

Floyd F. Basset, Jr.
Floyd F. Basset, Jr., Vice-President

George M. Hurler
George M. Hurler

John E. Bloxom
John E. Bloxom

Reginald T. Hancock
Reginald T. Hancock



MARYLAND DEPARTMENT OF THE ENVIRONMENT
2500 Broening Highway • Baltimore, Maryland 21224
(410) 631-3000

William Donald Schaefer
Governor

David A.C. Carroll
Secretary

November 21, 1994

The Honorable Jeanne Lynch
President
Worcester County Commissioners
Room 112, Court House
Snow Hill MD 20863

Dear Ms. Lynch:

We have completed our review of the 1994 Update of the Worcester County Water and Sewerage Plan (Plan), adopted by the County Commissioners on August 23, 1994.

The Maryland Department of the Environment (MDE) approves the 1994 Update. This action completes our review, as required by Section 9-507 of the Environment Article of State law.

MDE appreciates the County's continued efforts in water and sewerage planning, especially the efforts of Ms. Phyllis Wimbrow and Mr. Rick Wells are truly appreciated. Ms. Wimbrow's contribution is particular outstanding in our experience of water and sewerage planning.

Thank you for giving us the opportunity to review the Plan. If you have any questions regarding this matter, please call me at (410) 631-3567 or Mr. Ray Anderson of my staff at (410) 631-3721.

Sincerely,

J. L. Hearn, Director
Water Management Administration

JLH:lp

cc: Ms. Phyllis Wimbrow ✓
Mr. Rick Wells
Mr. Ronald Kreitner

CHAPTER I

CHAPTER 1

1.1 GENERAL

1.1.1 Requirement

This Comprehensive Water and Sewerage Plan for Worcester County is prepared and submitted to satisfy the requirements of Section 9-503 through 9-509 of the Environment Article of the Annotated Code of Maryland and Code of Maryland Regulations 26.03.01.

1.1.2 Purpose

In addition to satisfying State requirements, the Worcester County Comprehensive Water and Sewerage Plan serves the following purposes:

- A. States overall County goals relating to water and sewer services and the organizational responsibilities for the provisions of such service.
- B. Serves as a tool for the proper and orderly implementation of the provisions of the Worcester County Comprehensive Development Plan.
- C. Identifies County laws, rules and policies concerning the planning, development, construction and operation of water and sewer facilities and service.
- D. Provides background information concerning physical features, population and land use.
- E. Inventories existing water and sewer facilities.
- F. Identifies planned water and sewer facilities.
- G. Identifies problem areas and recommends alternatives to solving these problems.

1.1.3 Disclamation

The inclusion of any water and sewer system in this plan does not legally obligate Worcester County or any of its political subdivisions to take any action to implement such project or to enforce the implementation of such projects. Any water and sewer system in the plan must meet all applicable County, State and Federal laws and regulations concerning the construction and operation of such systems and must secure all required County, State and Federal permits.

1.2 WATER AND SEWER SERVICE GOALS

1.2.1 Provision of Adequate and Appropriate Facilities

Water and sewer systems and facilities are to be planned, constructed and expanded in accordance with the public facilities goals and objectives of the Worcester County Comprehensive Development Plan.

- A. Existing public central water and sewer facilities should meet all appropriate standards. Existing permitted discharges must meet all current and future required State and Federal discharge standards.
- B. Developers shall be required to provide central public water and sewer service to approved and designated development areas.
- C. No shared facilities shall be permitted except where supervised by, owned by or operated by the Worcester County Commissioners.
- D. Water and sewer service should be considered where required to correct an existing public health hazard or environmental threat.
- E. New water and sewer service should be extended only to those areas where central sewer facilities are required to accommodate anticipated higher density growth. New central sewer service should not be extended to areas where the land is capable of supporting the anticipated or desired amount of residential growth with on-lot disposal systems (unless central service can be shown to be more economical). New sewer service should not be extended to areas where high density growth is not desired.
- F. Service area population must be great enough to support entirely the costs of water and sewer service to that area. Water and sewage systems should be sized only for the anticipated population.

1.2.2 Protection of the Environment

Water and sewer facilities should be planned and constructed in such a manner as to insure and protect the environment and natural resources of Worcester County. This includes the following goals:

- A. Protection and improvement of the water quality of the inland bays, Chesapeake Bay and its tributaries, and other surface waters.
- B. Preservation and protection of groundwater aquifers which are used for drinking water supplies.

- C. Preservation and protection of agricultural lands, natural resource and conservation areas, and sensitive areas. While encouraging economic growth, development is to be concentrated in suitable areas, with growth in rural areas to be directed to existing population centers.
- D. To the greatest possible extent, effluent should be discharged through ocean outfalls or treated/disposed on land (but not discharged into coastal bays, regardless of the level of treatment). Long-term discharges into the coastal bays should be prohibited from serving as the method of wastewater disposal for any new projects.
- E. Identification and categorization of sources of pollution from urban areas, agricultural areas, industrial wastes and soil erosion.
- F. Development of the problem area inventory for individual and community water and/or sewer systems and identification of the planned corrections for these areas.
- G. Resource conservation is to be practiced, including a reduction in resource consumption.

1.3 ORGANIZATIONAL RESPONSIBILITIES

1.3.1 County Organization

The following County agencies have responsibilities relating to the planning, development, maintenance, or regulation of water and sewer facilities or services in Worcester County.

A. County Commissioners

The Worcester County Commissioners are responsible for adopting and amending the Comprehensive Water and Sewerage Plan in accordance with applicable State requirements. The County Commissioners pass local laws, resolutions, and other general policies relating to water and sewer facilities. The County Commissioners must approve the creation of Service Areas. The Office of the County Commissioners is responsible for maintaining the Comprehensive Water and Sewerage Plan and for scheduling required public hearings for amendments.

B. Department of Planning, Permits and Inspections

The Worcester County Department of Planning, Permits and Inspections shall receive all applications for amendments to the Water and Sewerage Plan, shall insure that all required information is submitted, shall review applications for

to the County Commissioners. The Worcester County Planning Commission shall review all applications for amendments for consistency with the Comprehensive Development Plan and shall submit comments and recommendations to the County Commissioners. The Environmental Programs Section is responsible for granting construction permits for the water and sewer facilities (sub-surface septic tanks), inspecting those facilities and enforcing State and County laws and regulations concerning such facilities.

C. Department of Water and Wastewater Services

The Worcester County Department of Water and Wastewater Services is responsible for the planning, development, and construction of water and sewer facilities within the designated and approved service areas. The Department of Water and Wastewater Services reviews proposed amendments to the Water and Sewerage Plan. The Department of Water and Wastewater Services also serves as the Controlling Authority for shared water and sewer facilities as provided for in the County Shared Facility Law.

1.3.2 Responsibilities of Other Entities.

A. Municipal Governments

In Worcester County the municipal governments of Pocomoke City, Snow Hill, Berlin, and Ocean City own and operate water and sewer systems to provide services within the corporate limits of those municipalities. The municipal governments are responsible for planning, developing, constructing and establishing rules and policies for water and sewer facilities under their jurisdiction. Municipalities are required to submit reports to the Environmental Programs Section of the County Department of Planning, Permits and Inspections as required by State regulations.

B. Private Developers

Except such development that is within an existing service area or shared facility area, any community water and sewer system for any new development shall be constructed by the developer at the developer's expense. This includes all water production, treatment, storage, and distribution systems and all sewage collection, treatment and disposal facilities. Such facilities shall be constructed in accordance with the Share Facilities Agreements entered into between the developer and the Worcester County Commissioners. Where a development is located within an existing service area or shared facility area the developer shall be responsible for the extension of water and sewer facilities to serve the development and shall be required to pay the cost of any

expansion or enlargement of water production, treatment, or distribution facilities or any sewage treatment, disposal, or collection facilities as may be necessary to accommodate the new developments.

1.4 PROCEDURES FOR PLAN AMENDMENTS

1.4.1 General

Proposed amendments to the Water and Sewerage Plan will be considered by the County Commissioners only if the amendments are consistent with the provisions of the Comprehensive Development Plan and existing zoning classification. If a proposed water or sewage project is not consistent with the existing zoning classification, the amendment may be proposed in conjunction with an application for zoning reclassification. In such event the Water and Sewerage Plan amendment hearing shall be conducted jointly with the rezoning hearing.

1.4.2 Application for Amendments

All applications for amendments to the Comprehensive Water and Sewerage Plan shall be filed with the Department of Planning, Permits and Inspections. Applications shall contain such information and shall be submitted on such forms as promulgated by the Department (see Appendix D). In addition to the information required, the Department may require such additional information as determined necessary to properly evaluate the application. A fee, as set by Resolution of the County Commissioners, shall be submitted with the application.

1.4.3 Review

The application shall be reviewed by the Environmental Programs Section and the Planning Section of the Department of Planning, Permits and Inspections and shall be submitted to the Planning Commission for its review. If appropriate, the application shall also be forwarded to the Department of Water and Wastewater Services for review and comments. If additional technical review is required the Department of Planning, Permits and Inspections may, with the approval of the County Commissioners, arrange for independent technical advice on the application. The applicant shall be notified of the need for such additional technical advice and shall be required to reimburse the County for the cost of such. The Department of Planning, Permits and Inspections shall submit the application, along with the recommendation and comments of the Environmental Programs Section, the Planning Section and Planning Commission, to the County Commissioners for a public hearing.

1.4.4 County Commissioners' Approval

Upon submission of the application and recommendations, a public hearing on the requested amendment shall be advertised as required by law and regulation. Notices shall be sent to any affected municipality, the Department of Water and Wastewater Services, and the State Department of the Environment. The County Commissioners may approve, disapprove, or approve with amendments and conditions the requested amendments to the Comprehensive Water and Sewerage Plan. The approved amendments shall be forwarded to the State Department of the Environment for review and approval by that agency. Upon notification from the State Department of the Environment that the amendment has been approved by the State it shall be incorporated into the Worcester County Comprehensive Water and Sewerage Plan.

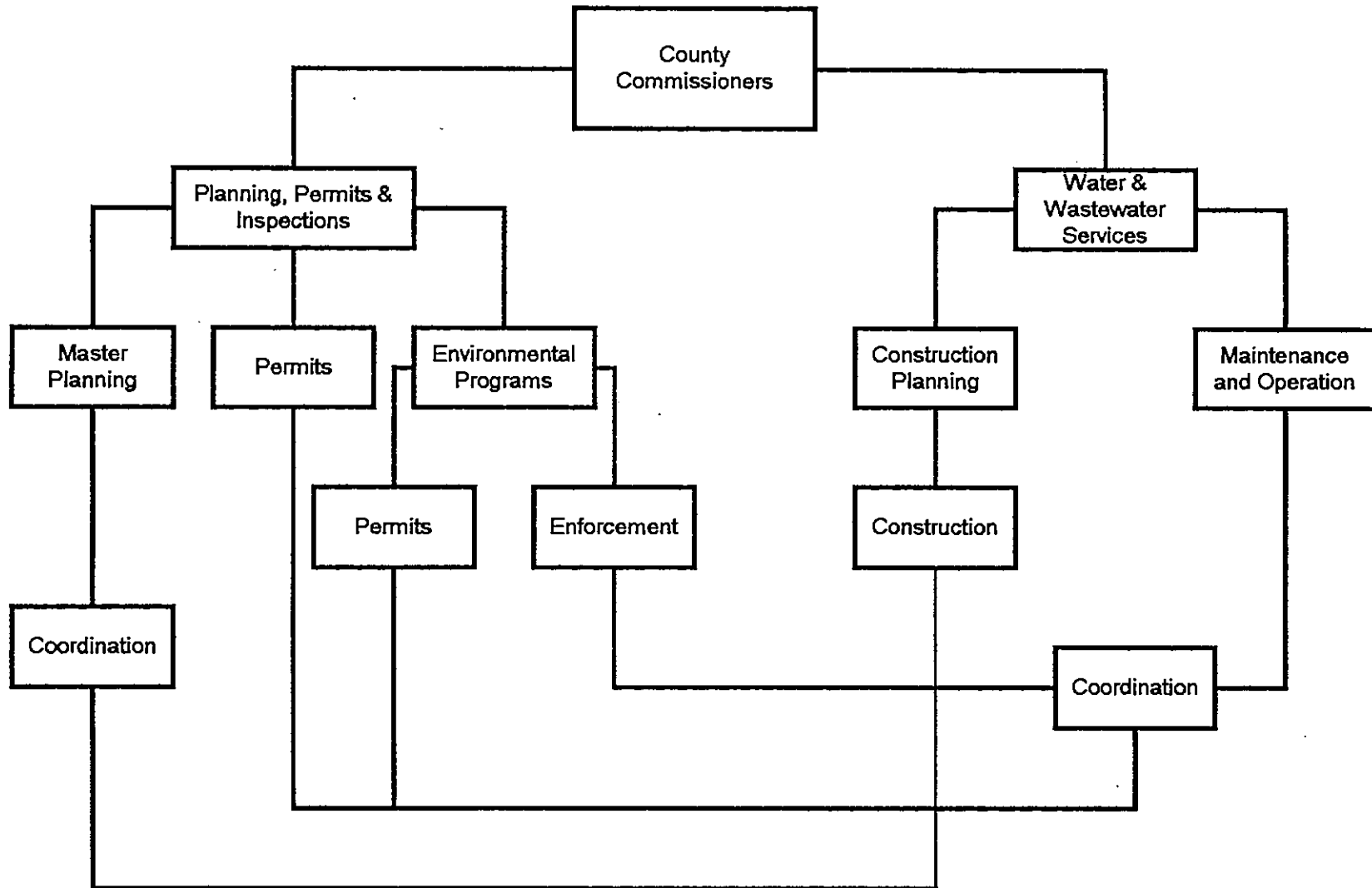
Amendments which do not pertain to the addition or deletion of water or sewer systems and which are considered to be relatively minor revisions, such as the upgrading of a water service area from W-3 to W-1, can be processed by administrative procedures delegated to the Department of Planning, Permits and Inspections as opposed to requiring a public hearing before the County Commissioners. Such minor amendments must go through the same review process at the local level as major amendments, as described in 1.4.3. They must be considered by the Planning Commission and found to be consistent with the County's Comprehensive Development Plan and must subsequently be reviewed and approved by the County Commissioners. The County Commissioners' Resolution officially approving such minor amendments as well as the pertinent revised narrative, charts, tables or maps, must be forwarded to the State Department of the Environment annually.

1.4.5 Biennial Update

As required by State regulation, the Water and Sewerage Plan shall be updated biennially. The Department of Planning, Permits and Inspections shall supply data forms to all owners and operators of water and sewerage systems for the submission of amendments or changes as may be required.

All amendments and changes shall be reviewed by the Department of Planning, Permits and Inspections, the Planning Commission and the Department of Water and Wastewater Services if appropriate. The County Commissioners shall hold a public hearing on the update and proposed changes.

Worcester County Water and Sewerage Facilities Management



CHAPTER II

CHAPTER II

2.0 BACKGROUND INFORMATION AND POLICIES

2.1 PHYSICAL FEATURES

2.1.1 Aquifers

A. General

Available groundwater is stored in water-yielding bodies of rock called aquifers. The aquifers of Worcester, Wicomico and Somerset counties are generally composed of fine to medium grained sand with occasional layers of shell beds, gravelly sand or silty sand. Aquifers are underlain by confining beds called aquicludes that contain water but yield it slowly due to their silt or clay composition. Water bearing beds are separated into confined and unconfined aquifers. Unconfined groundwater occurs under water table conditions and confined groundwater occurs under artesian conditions. Each will be explained in the following sections. Basic differences between water table and artesian conditions include the well production rate, the quantity derived from storage, and the area of influence for the well.

B. Water Table Aquifers

Water table aquifers are unconfined, and infiltrating water therefore has free access to the water surface below grade. Sources of recharge for water table aquifers are infiltrating rainfall, or the influent seepage of a nearby body of water. Generally, because the storage coefficient of water table aquifers is large, water table wells are capable of large yields without a large radius of influence.

1. Columbia Aquifer

In the Worcester County area, the Columbia Aquifer is the water table aquifer, and belongs to the Salisbury Formation Geological Unit and the Columbia Group. This aquifer has been referred to as the Pleistocene or unconfined aquifer in many previous studies; however, it is principally made up of Beaverdam Sand and is only one-half to one-third of the total thickness of the Pleistocene deposits. Figure 2-1 shows the approximate depth to the top of the Columbia Aquifer.

C. Artesian Aquifers

Artesian (confined) aquifers are enclosed above and below by impermeable or semi-permeable beds. All wells penetrating a confined aquifer are considered artesian due to the water pressure that forces the water towards the ground surface.

1. Pocomoke Aquifer

The Pocomoke Aquifer is separated from the Columbia Aquifer by an upper confining bed or upper aquiclude. The Pocomoke Aquifer is an extensive water bearing sand underlying the central and eastern parts of the tri-county area. Water quality is as follows: high iron content, low in bicarbonate, low in chloride, moderately hard, low in dissolved solids and little or no evidence of salt water contamination. Figure 2-2 shows the approximate depth to the top of the Pocomoke Aquifer.

2. Ocean City Aquifer

The Ocean City Aquifer was originally considered to be a part of the Manokin Aquifer but is separated by a confining unit. However, in the Ocean City area, the Manokin and Ocean City Aquifers are considered to act as a single hydrologic unit. The Ocean City Aquifer is composed mostly of fine to very coarse sand. Comprehensive mapping of this aquifer is not available at this time. Figure 2-3 will be reserved for this map.

3. Manokin Aquifer

The Manokin Aquifer is the deepest freshwater aquifer in the coastal areas of Delaware and Maryland. It is confined below by the St. Mary's Formation and above by an unnamed, locally leaking confining unit. Under non-pumping conditions along the coast, heads are higher in the Manokin Aquifer causing it to discharge into the overlying aquifers by upward vertical leakage. The Manokin Aquifer has a large range of pH values due to the variety of conditions of intake, confinement, and intrusion. Figure 2-4 shows the approximate depth to the top of the Manokin Aquifer.

2.1.2 Soil Drainage Characteristics

There are three main physiographic divisions of the County: the mainland, the coastal beaches and the wetland areas. The mainland soils are generally level. Many of the mainland areas are only a few feet above the normal high water level and in places are

adjacent to the marshland. The low coastal beaches are primarily on reefs or barrier islands. The islands range from a few hundred feet to a mile in width and extend the entire length of the County along the Atlantic Ocean. The wetland areas are mostly adjacent to the east side of the mainland, but there are several large areas in the southern and western parts of the County and along the bay side of the coastal beaches.

The eastern portion of the County is drained by streams that flow in a general southeasterly direction into tidewater embayments and then into the Atlantic Ocean. The western portion of the County drains into the Pocomoke River or its tributaries; this is part of the Chesapeake Bay Drainage Area. Thus, the County is split between Atlantic and Chesapeake drainage basins.

Only about 20% of the County's farmland can be worked without artificial drainage. Almost 75% of the soils in the County are poorly drained due to seasonal saturation and high or perched water tables. Figure 2-5 portrays the soil drainage characteristics throughout the County.

Due to increased environmental concerns and the need to protect wetland resources, the U.S. Army Corps of Engineers has begun regulating activity in non-tidal wetlands. Although the Corps has had these regulations "on the books" for several years enforcement has only begun with the acceptance of a new federal manual for jurisdictional wetlands delineation. The criteria used to determine whether an area is a wetland are found in the aforementioned "Federal Manual for Identifying and Delineating Jurisdictional Wetlands." The manual requires that the following criteria be present in order to classify an area as a jurisdictional wetland:

1. Hydrophytic Vegetation - plant life that grows in water, soil or on a substrata that is at least periodically deficient in oxygen as a result of excessive water content.
2. Hydric Soils - soils that are saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part.
3. Wetland Hydrology - permanent or periodic inundation or soil saturation for a significant period during the growing season.

Immediately after the implementation of these guidelines (per a U.S. Army Corps of Engineers Public Notice released in August 1988), hydric soils became a "red-flag indicator" for wetlands delineation. Presumably, if hydric soils are present on or near an area, additional testing should be made to identify any jurisdictional wetlands. A list of hydric soil map units was compiled for each county in Maryland to help determine wetlands eligible for protection under the Flood Security Act of 1985. This list, shown as Table 2-1, can also be used for a preliminary hydric soil determination to aide in the delineation of a jurisdictional

wetland in which filling or development activities are regulated by the U.S. Army Corps of Engineers.

Currently, the Maryland Department of Natural Resources has obtained approval from the Corps to accept permit applications for certain disturbances in jurisdictional wetlands. However, projects will be reviewed on a case-by-case basis and the Corps still entertains the right to review all permit applications processed by the State.

WORCESTER COMPREHENSIVE WATER AND SEWERAGE PLAN
 TABLE 2-1
 HYDRIC SOILS - WORCESTER COUNTY, MARYLAND

<u>Map Symbol</u>	<u>Mapping Unit</u>
Ek	Elkton sandy loam
El	Elkton loam
Em	Elkton silt loam
Fa	Fallsington sandy loam
Fg	Fallsington loam
Ls	Leon loamy sand
My	Mixed alluvial land
Mz	Muck
Ot	Othello silt loam
Pe	Plummer loamy sand
Pk	Pocomoke sandy loam
Pm	Pocomoke loam
Pr	Portsmouth sandy loam
Pt	Portsmouth silt
Ru	Rutledge loamy sand
St	St. John's loamy sand
Su	St. John's mucky loamy sand
Tm	Tidal marsh
*CbB	Coastal beaches
*CbC	Coastal beaches
*Gb	Gravel and borrow areas
*KsA	Klej loamy sand
*KsB	Klej loamy sand
*Ma	Made land
*MoA	Mattapex fine sandy loam
*MoB	Mattapex fine sandy loam
*MpA	Mattapex loam
*MpB	Mattapex loam, 2 to 5% slopes
*MtA	Mattapex silt loam
*MtB	Mattapex silt loam
*WdA	Woodstown sandy loam
*WdB	Woodstown sandy loam
*WoA	Woodstown loam
*WoB	Woodstown loam

*Mapping units with hydric soil inclusions - individual units may contain small inclusions of soils on the National Hydric Soil List.

2.1.3 Topography

Worcester County lies in the Atlantic Coastal Plain. The elevations range from sea level to approximately 57 feet above sea level. However, most of the County is less than 40 feet above sea level with an average of 35 feet above sea level. Basically, the eastern part of the County slopes towards the coastal bays, while the western portion slopes towards the Pocomoke River and its tributaries. Figure 2-6 portrays the major topographic changes throughout the County.

2.1.4 Groundwater

Groundwater is an important direct source of water supply when tapped by wells, and a significant indirect source of surface water supply. Large portions of the flow in streams is derived from subsurface water. The potable water supply, and most of the water used for irrigation, commercial and industrial purposes in Worcester County, is appropriated from the groundwater reservoir.

Groundwater is found in the zone of saturation directly below the zone of aeration. These two zones are separated by the phreatic surface or water table. At this level, the hydrostatic pressure in the groundwater is equal to the atmospheric pressure. Below the water table are strata which contain substantial amounts of readily available water, known as aquifers. Aquifers, discussed in Section 2.1.1, exist at differing depths below groundwater surface, each being separated by confining layers. However, the upper confining layers found in Worcester County are highly permeable in some areas, and protection from contamination is therefore of major importance. In order for Worcester County to continue its growth and development, conservation and protection of groundwater quality has become a priority.

Portions of the contamination problem can be attributed to salt water intrusion into the freshwater aquifers. According to U.S. Geological Survey, Water Resources Investigations Report 87-4229, these aquifers are susceptible to saltwater intrusion from (1) downward leakage from the ocean and bays, (2) upward leakage from the underlying St. Mary's Formations, and (3) inland movement of offshore waters. Contamination can also be caused through normal infiltration and recharge of the aquifers. Pollutants may enter the groundwater aquifer via agricultural or industrial practices, or from substandard septic practices. In some areas of Worcester County confined aquifers subcrop the unconfined aquifers, while in other areas, the confining units are locally absent. This allows downward percolation of the water from the overlying unconfined aquifer, taking with it any pollutants that may be present. Local groundwater conditions directly correlate to the future of development within Worcester County as adequate and usable water supplies are a prerequisite for new residential, commercial and industrial projects.

2.1.5 Surface Water

In Worcester County, principal streams in the eastern portion flow towards the bays adjacent to the Atlantic Ocean. In the western portion of the County the streams flow towards the Pocomoke River which empties into the lower Chesapeake Bay. Primary streams throughout the area are affected by tide in the lower reaches and often throughout the entire length of the water course. Water flow is generally sluggish with many swamp areas, including salt, brackish and fresh water wetlands.

Since the County is generally low and flat, and the bays and their tributaries are tidal, drainage is slow and the groundwater table is high. As shown on Figure 2-7, there are two major drainage basins within the County, the "Coastal Area Watershed" and the "Pocomoke River Area Watershed".

According to COMAR 26.08.02.08 the watershed covering the eastern portion of the County is "Sub-basin 02-13-01: Coastal Area". The western portion of the County is in the "Sub-basin 02-13-02: Pocomoke River Area" watershed. Within the separate watersheds are sub-areas with minor ridge lines and drainage directions. Due to the lack of topographic relief, drainage is relatively slow and is generally split between streams and/or their tributaries. Figure 2-7 depicts the two major watersheds and approximates surface water patterns in each sub-area.

2.1.6 Water Quality Criteria

Under COMAR 26.08.02 the waters of the State of Maryland are managed and regulated to protect the following water uses:

- a) Use I - Water Contact Recreation, Aquatic Life and Water Supply
- b) Use II - Shellfish Harvesting Waters
- c) Use III - Natural Trout Waters
- d) Use IV - Recreational Trout Waters

All waters of the State are required to meet at least the criteria for Use I waters in order to provide protection for water contact recreation and aquatic life. More restrictive criteria is applied for waters designated Use II, III or IV.

There are no Use III or Use IV waters in Worcester County. The Use II waters have rigid bacteriological standards for water quality. All water quality standards such as a bacteriological standard, dissolved oxygen, temperature, pH value and turbidity criteria that must be met within each designation. All portions of the territorial seas and the estuarine portions of bays and tributaries, except as noted below, are Use II waters. The Use I and II waters in Worcester County are as shown on Figure 2-8.

2.2 POPULATION

2.2.1 Present Distribution and Density

Due to the continued growth of the resort industry along the easterly portion of the County it is necessary to portray population in both year-round and peak seasonal values. The 1990 year-round population values are as tabulated by the Maryland Office of Planning while the 1990 peak seasonal figures and projections for 1995 and 2000 are as projected by the 1989 Comprehensive Development Plan prepared by Redman/Johnston Associates, Ltd.

A. Present Year-Round Population

While the 1989 update to the Worcester County Comprehensive Development Plan projected the 1990 year-round population to be 39,453 persons, the 1990 Census determined that there were 35,028 year-round residents in the County. Approximately 60% of the year-round residents are concentrated in the Ocean City, Berlin, St. Martins Neck and Sinepuxent Neck areas. The remainder of the population is scattered throughout various portions of the County with sizable concentrations near Pocomoke City and Snow Hill. Table 2-2 shows the year-round population as projected for 1990, 1995 and 2000.

B. Present Peak Seasonal Population

The peak seasonal population is directly related to the resort industry and its "market area." Nearly 50% of the tourist population comes from the Baltimore/Washington metropolitan area. As these areas grow, so does the tourist population. The estimated seasonal population for 1990 is 327,400 persons. This portrays a dramatic 830% increase over the year-round population. Ocean City is, and should remain, the primary center of the resort industry. Table 2-2 shows the peak seasonal population as broken down by election district. Figure 2-9 displays peak seasonal population distribution and densities throughout the County for 1990 as well as for the years 1995 and 2000.

2.2.2 Projected Population

Population projections throughout the County have been formulated in the 1989 Update to the Worcester County Comprehensive Development Plan. It is anticipated that the entire County will present growth opportunities. However, due to the near ultimate build-out capacity of Ocean City, and the strong development pressures along the waterfront areas, the bayfront areas are expected to experience the strongest development pressures.

In the past two decades, population within the County has increased dramatically. Although it is anticipated that increases of this magnitude will not be repeated, the resort industry is continually growing, along with continued year-round interest in the County as a retirement haven, and the increasing number of persons residing in the County for the water related lifestyle while working in neighboring Wicomico County.

A. Projected Year Round Population

Over the last 20 years, the year-round population in the County has increased approximately 160%. The largest increases occurred in Ocean City and the central bayfront areas of the County. This bayfront area is expected to continue to grow as the resort industry becomes more year-round in nature, and the County's attractiveness as a retirement community continues. Table 2-3 displays the projected year-round population in the year 2005.

B. Projected Peak Seasonal Population

The peak seasonal population is expected to continue to increase. Growth is expected to spread along the bayfront areas of the mainland. However, the main thrust of the seasonal population will remain in the Ocean City area. By the year 2005, the County is expected to have a population of 400,000 persons during peak seasonal periods.

Table 2-3 provides peak seasonal populations by the year 2005 by election district. Figure 2-10 displays projected population distribution and densities.

TABLE 2-2
PRESENT AND PROJECTED POPULATION
WORCESTER COUNTY, MARYLAND

<u>Election District</u>	<u>Year-Round</u>	<u>Peak Seasonal</u>	<u>Total</u>
	<u>1990</u>	<u>1990</u>	<u>1990</u>
1. Pocomoke	6,154	980	7,134
2. Snow Hill	4,802	6,000	10,802
3. Berlin	11,225	28,400	39,802
4. Newark	844	4,100	4,944
5. St. Martins	1,998	13,000	14,998
7. Atkinsons	786	4,700	5,486
8. Stockton	1,283	2,700	3,983
10. Ocean City	<u>7,936</u>	<u>267,520</u>	<u>275,456</u>
TOTAL	35,028	327,400	362,428

<u>Election District</u>	<u>Year-Round</u>	<u>Peak Seasonal</u>	<u>Total</u>
	<u>1995</u>	<u>1995</u>	<u>1995</u>
1. Pocomoke	6,218	1,100	7,318
2. Snow Hill	5,206	6,500	11,706
3. Berlin	10,752	31,000	41,752
4. Newark	1,221	4,500	5,721
5. St. Martins	2,236	14,000	16,236
7. Atkinsons	946	5,100	6,046
8. Stockton	1,734	2,900	4,634
10. Ocean City	<u>13,486</u>	<u>287,900</u>	<u>301,386</u>
TOTAL	41,799	353,000	394,799

TABLE 2-2
PRESENT AND PROJECTED POPULATION
WORCESTER COUNTY, MARYLAND

	<u>Year-Round</u>	<u>Peak Seasonal</u>	<u>Total</u>
<u>Election District</u>	<u>2000</u>	<u>2000</u>	<u>2000</u>
1. Pocomoke	6,248	1,200	7,448
2. Snow Hill	5,292	6,900	12,192
3. Berlin	11,207	33,000	44,207
4. Newark	1,273	4,800	6,073
5. St. Martins	2,330	15,000	17,330
7. Atkinsons	986	5,400	6,386
8. Stockton	1,816	3,100	4,916
10. Ocean City	<u>14,785</u>	<u>305,850</u>	<u>320,635</u>
TOTAL	43,937	375,250	419,187

Source: Maryland Office of Planning (1990 data) and 1989 Worcester County Comprehensive Development Plan (1995 and 2000 projections)

TABLE 2-3
PROJECTED POPULATION
WORCESTER COUNTY, MARYLAND

	<u>Year-Round</u>	<u>Peak Seasonal Additional Visitors</u>	<u>Peak Total</u>
<u>Election District</u>	<u>2005</u>	<u>2005</u>	<u>2005</u>
1. Pocomoke	6,334	1,300	7,634
2. Snow Hill	5,426	7,300	12,726
3. Berlin	11,605	35,000	46,605
4. Newark	1,318	5,100	6,418
5. St. Martins	2,413	16,000	18,413
7. Atkinsons	1,021	5,700	6,721
8. Stockton	1,886	3,300	5,186
10. Ocean City	<u>15,997</u>	<u>326,300</u>	<u>342,297</u>
TOTAL	46,000	400,000	446,000

Source: Comprehensive Development Plan - Worcester County, Maryland (1989)

2.3 LAND USE

2.3.1 Land Use Categories

The land use plan, an element of the County's Comprehensive Development Plan, divides the County into major land use categories to maintain appropriate densities and to aid in implementing the Comprehensive Development Plan. The major land use categories are planned to maintain the existing character of the County. By placing areas of the County into the following categories, growth and development can occur within the County while maintaining consistency in the towns, villages and rural areas. Figure 2-11 provides a pictorial representation of the land use areas.

A. Incorporated Areas

The incorporated towns each have their own plans for development. However, areas adjacent to each town should be managed in such a manner as to support and revitalize the existing town commercial areas.

B. Commercial Center

This designation encompasses the general location of concentrations of retail, service and office activities in the unincorporated areas in the county. These areas are primarily located near residential markets and existing commercial areas and are influenced by road access as well. Commercial Centers should be developed as commercial parks with appropriate clustering, bufferyards, and other miscellaneous controls.

C. Suburban

Areas such as the southern portion of West Ocean City will continue to grow as the resort industry develops. Growth in these areas will be at the highest permitted densities. Although major expenditures must be incurred to provide public facilities and services for development of this type, areas specifically designated for this intensity will help to maintain the more rural areas of the county. Design standards in these areas should permit residential development at moderate densities with suburban character. In areas where public facilities are available, six dwelling units per acre would be an appropriate density.

D. Suburban Residential

Areas such as Cape Isle of Wight, Ocean Pines and the Upper Sinepuxent Neck are intended to accommodate a large portion of the future county population. While moderate density residential development and suburban commercial uses are recommended for these areas, consideration must also be given to maintenance of open space. Such maintenance can be accomplished through the use of planned and cluster forms of development. Where adequate facilities are available, the residential density should be four units per acre.

E. Rural Estate

The rural estate form of development typifies a low density residential area. This area includes an area in the northeastern section of the County between Grays Creek and Assawoman Bay. Also included are all areas south of St. Martins Neck Road from near Bishopville to Salt Grass Point Road and east of US Rt. 113 to Beauchamp Road (excluding Ocean Pines and Pines Plaza Shopping Center) to MD Route 589 to MD Route 707. There is also a narrow strip adjacent to the west side of Berlin and an area on both sides of MD Route 376 leading into and including all of the Lower Sinepuxent Neck south of MD Route 376. This low density type of development is well suited for the environmentally sensitive inland bay areas. Large open space areas should be maintained with cluster developments creating a maximum development density of one dwelling unit per two acres.

F. Villages

The village designation is provided to protect the small crossroads type areas that are scattered throughout Worcester County. New development in these existing areas should be proportional and in keeping with the traditional nature of these communities. New village areas could be established to continue and preserve the non-incorporated populated areas of the County.

G. Agriculture

The farming and forestry industries of Worcester County are protected by this category. This designation targets productive agricultural lands and discourages development within these areas. Residential developments in these areas should be limited to minor subdivisions of not more than five lots.

H. Parkland

Recreation opportunities are numerous throughout Worcester County. Pocomoke State Forest, Milburn Landing and Shad Landing provide abundant State forest and parkland in addition to the State and Federally owned Assateague Island which provides camping and beach use. This category also provides for planning new facilities, such as Isle of Wight, where recreation and sporting activity areas can be developed and provide recreational opportunities for the expected future growth.

I. Conservation

This category provides for the environmentally sensitive areas such as the areas in and around the Pocomoke River. These areas are vital to the preservation of upland and aquatic wildlife.

J. Chesapeake Bay Critical Area

The Pocomoke River area watershed has been designated as an area in need of habitat and tidal water quality protection. The Chesapeake Bay Critical Area includes a 1,000 foot buffer extending landward from the mean high water mark of the tidal waters shoreline and wetlands. Within this category, the following classifications have been mapped:

- | | |
|--------------------------------|------------------------|
| 1. Intensely Developed Area: | 4 DU/Acre |
| 2. Limited Developed Area: | 1 DU/Acre to 4 DU/Acre |
| 3. Resource Conservation Area: | <1DU/5 Acres |

Maps of the County's Chesapeake Bay Critical Area are available for inspection at the Department of Planning, Permits and Inspections.

2.3.2 Zoning

The Worcester County Zoning Ordinance provides the means of implementing the land use plan. Generally, the zoning districts shall insure that future development follows the guidelines of the appropriate land use designation. Also, to effectively control the growth and development of the County and in order to produce desirable conditions, subdivision and development standards must also be adhered to.

2.3.3 Major Public Institutions

Table 2-4 show the populations of existing and proposed major public institutions such as schools, hospitals, correctional facilities, government complexes, etc. Table 2-5 breaks the public schools into separate elementary, middle, high and vocational schools. Various city and town government buildings are located in the respective municipalities. Most of the County public buildings are located in or near Snow Hill.

TABLE 2-4
APPROXIMATE POPULATION OF MAJOR PUBLIC INSTITUTIONS

<u>WORCESTER COUNTY</u>	
Courthouse	60
Board of Education	57
Detention Center	204
Liquor Control Board	6
Parks and Recreation Department	6
Roads Department	40
Water and Wastewater Services	53
Public Schools	6,144*
<u>TOWN OF BERLIN</u>	
Town Office	6
<u>TOWN OF OCEAN CITY</u>	
Mayor and Council Office	50
Ambulance and Fire Headquarters	8
Airport	200**
Convention Center	30**
Police Department	101/200
Solid Waste Department	10
Water Department	23
Wastewater Department	52
Transportation Department	110
Maintenance Department	20
Recreation Department	150
<u>TOWN OF POCOMOKE CITY</u>	
Mayor and Council Office	10
Fire Department	2
Police Department	21
Maintenance Department	13
Winter Quarters Golf Course	40
<u>TOWN OF SNOW HILL</u>	
Mayor and Council Office	5
Fire Department	1
Public Library	115
Street Department	5
Water and Sewer Department	3

* See Table 2-6 for Public School Populations

**Peak Season Value (Estimated)

TABLE 2-5
PUBLIC SCHOOL POPULATIONS
AS OF MAY, 1994

<u>Elementary Schools</u>	<u>Students</u>	<u>Employees</u>	<u>Total</u>
1. Pocomoke	521	54	575
2. Snow Hill	445	50	495
3. Buckingham	589	58	647
4. Ocean City	485	48	533
5. Cedar Chapel (Special)	58	23	81
6. Showell	716	56	772
TOTAL	2,814	289	3,103
<u>Middle School</u>	<u>Students</u>	<u>Employees</u>	<u>Total</u>
7. Pocomoke	509	62	571
8. Snow Hill	506	65	571
9. Berlin	723	68	791
TOTAL	1,738	195	1,933
<u>High Schools</u>	<u>Students</u>	<u>Employees</u>	<u>Total</u>
10. Pocomoke	382	45	427
11. Snow Hill	346	47	393
12. Stephen Decatur	873	82	955
TOTAL	1,601	174	1,775
<u>Vocational Schools</u>	<u>Students</u>	<u>Employees</u>	<u>Total</u>
Worcester Vocational	280	23	23
TOTAL	*	23	23
Central Office		77	77
TOTAL PUBLIC SCHOOL POPULATION			6,611**

* Students come from County High Schools

**This figure does not include number of students attending vocational center.

TABLE 2-6
 LAND AREA BY ZONING CATEGORY
 WORCESTER COUNTY, MARYLAND

<u>ZONING CATEGORY</u>	<u>SQUARE FEET</u>	<u>ACRES</u>	<u>SQUARE MILES</u>	<u>% OF ZONED AREA</u>
A-1, Agricultural	9,074,191,601	208,315	325.49	69.77%
E-1, Estate	594,442,637	13,647	21.32	4.57%
V-1, Village	44,321,358	1,017	1.59	0.34%
R-1, Rural Residential	353,074,555	8,105	12.66	2.71%
R-2, Suburban Residential	190,699,588	4,378	6.84	1.47%
R-3, Multi-Family Residential	13,554,414	311	0.49	0.10%
R-4, General Residential	41,547,546	954	1.49	0.32%
R-5, Mobile Home	26,190,964	601	0.94	0.20%
B-1, Neighborhood Business	19,434,655	446	0.70	0.15%
B-2, General Business	121,387,377	2,787	4.35	0.93%
M-1, Light Industrial	78,731,811	1,807	2.82	0.61%
M-2, Heavy Industrial	21,205,404	487	0.76	0.16%
C-1, Conservation	2,426,954,588	55,715	87.06	18.66%
TOTAL ZONED AREA	13,005,736,498	298,571	466.52	100.00%
Incorporated Towns	306,911,710	7,046	11.01	
Water Area	6,053,884,000	138,978	217.15	
TOTAL COUNTY AREA	19,366,532,208	444,594	694.68	

2.4 WATER & SEWER PLANS & POLICIES (SUMMARIES)

In order to carefully plan and direct the future of the County, several planning documents have been prepared. These plans provide a basis for regulations and control of development within the County. Through these planning documents, management strategies can be developed in order to preserve the character of the County. Executive summaries of these plans, policies and guidelines are outlined below.

2.4.1 Worcester County Comprehensive Development Plan

The Comprehensive Development Plan (1989 update by Redman/Johnston Associates) serves as a guide for the County to control growth and development in order to maintain the desired character of the area. This plan provides a medium for an official statement of the County's goals for growth and development. The plan addresses present problems as well as future needs while coordinating the growth and development in order to achieve the County's goals for the future. This plan sets goals, objectives and recommendations for the following categories:

1. Development Philosophies
2. Land Use
3. Natural Resources
4. Economic Development
5. Housing
6. Public Facilities and Services
7. Transportation
8. Implementation

The first category, "Development Philosophies", provides the following guidelines:

The County will continue to grow as long as it can:

1. Implement proper controls which insure that today's land development is not tomorrow's liability;
2. Maintain a plentiful supply of high quality natural resources;
3. Expand its services economically; and
4. Require developers to bear a substantial portion of the service costs associated with their projects.

Through these guidelines, the remaining portions of the plan are preliminarily established and a general overview of the County's goals for the future is developed. The remaining chapters specify the details of the plan and guidelines for implementation. A complete copy

of this plan can be reviewed at the Department of Planning, Permits and Inspections.

2.4.2 Critical Areas Plan

The Chesapeake Bay Critical Area Program (Maryland Natural Resources Article 8-180-1816) was passed by the General Assembly in 1984, because of a growing concern about the decline of the water quality and the natural resources of the Chesapeake Bay. The General Assembly designated a geographical area around the Bay's tidal waters and tributaries as a Critical Area.

In November 1985, Subtitle 15 Chesapeake Bay Critical Area Commission Criteria for Local Critical Area Program Development was published. Final Proposed Regulations (COMAR 14.15.01 through 14.15.11) were published in December 1986 to provide guidance to the counties and municipalities, who must ultimately implement the program. Worcester County's Program is in compliance with the minimum requirements of the Critical Area Commission Criteria and the law (Article 8-180-1816).

The purpose of the program is to accommodate future growth of manmade environments, while providing for conservation of fish, wildlife and plant habitats, and minimizing adverse water quality impacts. Criteria require the County to plan a land management strategy which places all lands in the critical area into one of three land use categories which are:

- a. Intensely Developed Areas (IDA)
- b. Limited Development Areas (LDA)
- c. Resource Conservation Areas (RCA)

Each individual area above has its own objectives. For example, IDA's are areas where residential, commercial, institutional, and/or industrial areas dominate. The criteria place limits on the extent to which these intense land disturbances can expand. There is some development present in the LDA's but at a lower density. Development can occur here in the future, under certain restrictions. The criteria provide the types of development activities that are to be grandfathered, that is the development that has already been started prior to the final passage of the program. In the RCA's the purpose is to conserve natural resource values and to maintain agricultural and forestry land uses. Some new low density growth may be provided for, if it complies with the requirements and criteria of the program.

The Worcester County Critical Area begins 1000 feet beyond the head of the tide at Whiton Crossing. According to the State Department of Planning (Magi System, 1985), of the 14,000 acres in the Critical Area, 74 percent of the area is forested, with 21 percent of the Critical Area in agricultural land use. The Critical Area of Worcester County is defined as:

"All waters of and lands under the Chesapeake Bay and its tributaries to the head of tide as indicated on the State wetlands maps, and all State and private wetlands designated under Title 9 of the Annotated Code of Maryland;"

"All land and water areas within 1,000 feet beyond the landward boundaries of State or private wetlands and the heads of tides designated under Title 9 of the Code."

The Worcester County Critical Area is delineated on two sets of maps on file in the County Planning, Permits and Inspections Office: Department of Natural Resources Wetlands Maps dated 1972 at a scale of 1" = 200' and Resource Inventory Maps dated 1989 at a scale of 1" = 600'. These are the Official Critical Area Maps. The Critical Area has also been defined as an Overlay Zoning District in the County Zoning Ordinance.

2.4.3 Shared Facilities Law

All shared facilities in Worcester County are regulated by County Law reference Title 5, Subtitle 1. These regulations provide design criteria, permit application processes and operating standards relating to the creation and operation of shared facilities that provide any or all of the following: water supply, water distribution, water treatment, sewage collection, wastewater transmission and/or wastewater treatment and disposal. Copies of the Shared Facilities Law as originally adopted and subsequent amendments to the regulations are on file in the County Commissioners' Office.

2.4.4 Wastewater Laws

The Worcester County Commissioners have adopted numerous laws governing various aspects of wastewater. These include laws which set forth special rules governing spray irrigation projects, underground wastewater treatment facilities, sewage sludge and wastewater disposal areas and alterations of subsurface conditions. Copies of each of these laws are on file in the County Commissioners' Office. The Worcester County Zoning Ordinance also establishes zoning rules, setback requirements and other standards relating to wastewater facilities. Copies of those rules can be found in the Zoning Ordinance.

2.4.5 Groundwater Protection Report

The Worcester County Groundwater Protection Report (GPR) was developed in response to the November 18, 1985 State of Maryland Regulations governing the installation of private sewage disposal systems (COMAR 26.04.02, formerly 10.17.02). Through assessments of the groundwater resources available, the GPR provides a means for developing management strategies for near surface groundwater and its current and potential use as water supplies. On January 17, 1989 the Worcester County Commissioners approved an amendment to include the GPR in the Water and Sewer Plan in order to establish conditions and standards for ground disposal of wastewater including individual septic systems.

The GPR further outlines two management areas within the County. These areas, as shown on Figure 2-12, are delineated as follows:

Area A

Areas with little or no shallow confining material which therefore require maximum protection of on-site water supply sands (see Figure 2-12).

Area B

Areas where more than 5 feet of shallow confining material separates shallow permeable layers used for disposal of sewage effluent from deeper, water bearing sands.

Area B is divided into two subareas: Area B1 has thinner surface confining beds where systems may have a reduced treatment zone, but must be shallow to avoid contaminating the underlying aquifers (see Figure 2-12). Area B2 has thick surface confining beds where deep septic systems may penetrate groundwater (see Figure 2-12).

Each management area has specific sewage disposal and water supply requirements that must be addressed according to on-site conditions. However, hydrogeologic evaluations may be conducted to support altered area designations. A partial copy of this plan is included as Appendix A to this Plan.

2.4.6 Ocean Pines Water & Sewerage Master Plan

The Ocean Pines Master Plan was prepared to identify the present capacities of the water and wastewater systems, project the anticipated growth and demands upon the systems, and develop a plan of action to handle the expected growth.

This plan identifies both existing residential and commercial development served by the water supply and sewage disposal systems. Also included are projected development and improvements for ultimate build-out condition so that the water supply and wastewater systems can be efficiently updated. Data from this Master Plan has been used in preparing sections describing in detail the Ocean Pines water and sewerage utilities. A complete copy of this Plan can be reviewed at the Administrative Office of the Department of Water and Wastewater Services.

2.4.7 Other Related Policies & Plans

A. Sludge Management Program

The Worcester County Department of Water and Wastewater Services utilizes a Sludge Management program. For details see the Worcester County Solid Waste Management Plan.

B. North Central Ocean Basin Wastewater Facilities Plan

A Wastewater Facilities Plan was prepared in 1978 to address the expected growth in the North Central Ocean Basin. This particular growth area was identified by the Worcester County Comprehensive Development Plan to facilitate desired growth patterns. The Facilities Plan never received complete formal approval from the State of Maryland or the EPA. However, Amendment No. 1 to the Facilities Plan was approved which allowed the creation of the West Ocean City Service Area.

A November 1988 supplement (revised January 1989) to the North Central Ocean Basin Wastewater Facilities Plan was prepared to update and evaluate the wastewater disposal problems and needs of North Central Worcester County. This plan's development was guided by the Worcester County Wastewater Advisory Task Force, in addition to the engineering consultant. However, the Supplement was never approved nor implemented by the County Commissioners.

C. West Ocean City Consent Order

The Consent Order is an agreement entered into and approved by the Maryland Department of the Environment (previously the Maryland Department of Health and Mental Hygiene - Office of Environmental Programs) and the former Worcester County Sanitary Commission on June 28, 1983.

The Consent Order requires that the Worcester County Department of Water and Wastewater Services comply with the stipulations contained therein, in return for the EPA construction grant which was used to construct sewage facilities in the West Ocean City Service Area. This Consent Order is administered by the Worcester County Department of Water and Wastewater Services and the Worcester County Health Officer. A copy of the signed Consent Order is included in the Appendix B to this Plan.

D. Ocean Coastal Basin Water Quality Management Plan

1. For that section of the County within the coastal basin, officials of the State and the County have agreed that basic policy should be to eliminate, where possible, any new discharges to the coastal bays, regardless of how well treated. The basic long range policy, therefore, is to plan for the discharge of properly treated wastewater effluent to the Atlantic Ocean. The State of Maryland, in its "Ocean Coastal Basin Water Quality Management Plan", delineates its Ocean Coastal Basin Discharge Policy as follows:

In order to enhance and preserve the quality of the coastal bays, including Assawoman, Isle of Wight, Sinepuxent, Newport and Chincoteague, and other bays and their respective tributaries, all existing and future treated wastewater dischargers in the Ocean Coastal Basin shall:

- a. Consider the allocable waste handling capacity of the coastal bays to be minimal;
- b. Be advised that no new direct surface discharges of treated wastewater nor increase in wasteloads beyond existing discharge permits will be allowed to the coastal bays;
- c. Meet stringent effluent discharge limitations as determined through wasteload allocation analysis and testing by Maryland Water Resources Administration and required in existing and properly renewed NPDES permits;
- d. Utilize Section 201 facility planning for publicly-owned facilities to thoroughly assess the cost effectiveness of land disposal and other ground discharge alternatives over existing surface discharges to the bays and tributaries and the proper treatment and wastewater discharge to the Atlantic Ocean.

Further, any pollution load from Delaware and Virginia sources which may adversely affect water quality of the coastal bays should be minimized through applying stringent effluent limitations or avoided to the maximum extent practicable.

Worcester County, in its "Comprehensive Development Plan" adopted in 1989, states the following policy concerning discharge of effluent:

"To the greatest possible extent, effluent should be discharged through ocean outfalls or treated/disposed on land (but not discharged into coastal bays, regardless of the level of treatment). Long-term discharges into the coastal bays should be prohibited."

For the inland portion of the County, which is drained by the Pocomoke River, the intent is to upgrade existing municipal and industrial wastewater treatment plants to meet water quality criteria.

Alternatives to river or ocean discharge of treated wastewater in any significant volume are minimal. Disposal to ground surface or subsurface has been tried, with generally poor results because of wet ground, high groundwater table and/or poor soils.

With proper erosion control, adverse environmental impact of constructing wastewater collection and treatment systems should be negligible. Long range impact on water quality, particularly the bays and river, would be beneficial.

2. Conformance with water quality criteria and NPDES permits:

Municipal

In order to meet the conditions for final effluent limitations imposed upon them by NPDES permits, all four municipalities within the County have already or will be required to upgrade their existing wastewater treatment plants. Each of these areas have been or are presently involved in Facilities Planning efforts.

Service Area

The Service Area for West Ocean City, in order to meet water quality standards, designed and constructed a collection system which discharges to the Ocean City treatment plant for treatment and disposal through the ocean outfall.

Private Community and Institutional

No existing private community systems, except Ocean Pines and Assateague Island National Seashore Headquarters, presently discharge to surface waters. All other private community and institutional facilities discharge wastewater effluent to subsurface soils. Treatment prior to discharge ranges from septic tanks for small systems to tertiary processes for larger systems.

Future Concepts

It is anticipated that water quality criteria and NPDES permit conditions will become increasingly stringent in the future. Accordingly, it is expected that all facilities discharging to inland waters will be required to provide a tertiary level of treatment and that all facilities along the bays and ocean will be required to provide a secondary level of treatment with effluent discharge to the ocean.

In support of these concepts, the Commissioners for Worcester County have recently decided to limit the discharge of effluent from the Ocean Pines treatment plant into the St. Martins River to a maximum of 11,000 equivalent dwelling units, which at 250 gallons per unit per day would equate to a maximum of 3.0 million gallons per day.

E. Septage Plan

Septage haulers in Worcester County are licensed annually by the Environmental Programs Section of the Department of Planning, Permits and Inspections. Land

application of the untreated septage is prohibited. Disposal of the septage is required to be at approved wastewater treatment plants. Currently the only plants approved to receive septage are the Town of Snow Hill and the City of Salisbury.

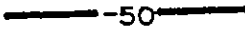


F. County Plan Review Policy for Projects Adjacent to Municipalities.

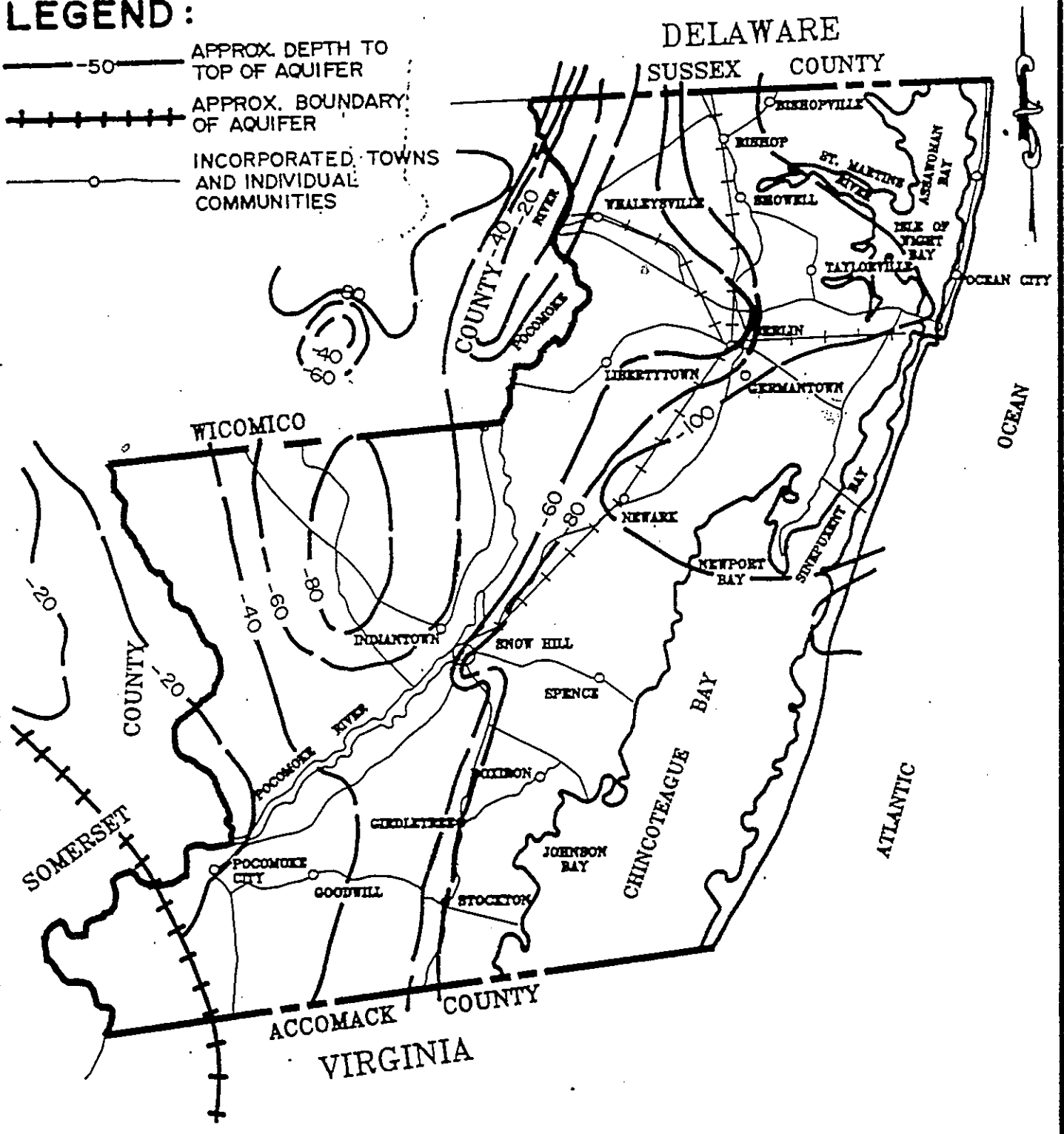
In order to encourage efficient and environmentally compatible land use, to direct higher density growth to locales near the county's municipalities which constitute the existing population and service centers, to ensure the economical and wise utilization of the municipalities' water and wastewater system and to provide a mechanism whereby the municipalities can participate in land use transitions around their corporate boundaries, the county should promote a plan review policy for major subdivisions, multi-family developments, commercial developments and industrial developments proposed to be located within one mile of a municipality's corporate limits. Such policy shall be applicable only to municipalities which have established by means of a feasibility study or other appropriate method that water and/or sewer service is adequate to serve the existing and anticipated development within the municipality itself and that excess capacity beyond that level is available for allocation to other developments outside of the current corporate limits. Said study must also have ascertained the location of appropriate connection lines.

If a municipality has done so the county shall refer all applications for the above referenced developments to the adjacent municipality for a determination as to whether or not the specific project could be adequately served by the municipality's existing water and/or sewer utility or extension thereof. The municipality must respond to the county's referral and developer's inquiry within sixty (60) days after receipt of said referral. Nothing herein shall prohibit the developer from proceeding as his/her own risk with obtaining other necessary project approvals during that sixty (60) day period. Regardless of availability of excess capacity, connection to the municipality's water and/or sewer system is not mandatory. However, connection to the municipality's system is the preferred means of providing service for those types of projects referenced above and is strongly encouraged.

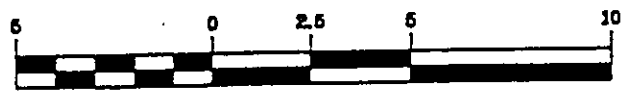
If such service is determined to be unwarranted or unfeasible by the municipality, the county will be advised and will then proceed to review and process the project in accordance with the county's plans and other applicable regulations. If the municipality determines that it has, or expects to have in a reasonable amount of time, sufficient water and/or sewer capacity to serve the project and is agreeable to annex the proposed project site and if the developer consents to do so, the county will be advised and the county plan review process will terminate and further plan review and processing will be the responsibility of the municipality pursuant to its plans and applicable regulations.

LEGEND:

-  -50 APPROX. DEPTH TO TOP OF AQUIFER
-  APPROX. BOUNDARY OF AQUIFER
-  INCORPORATED TOWNS AND INDIVIDUAL COMMUNITIES



GRAPHIC SCALE



1 inch = 5 MILES

COLUMBIA AQUIFER

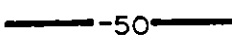
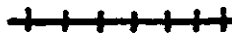
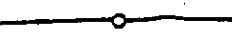
WORCESTER COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN

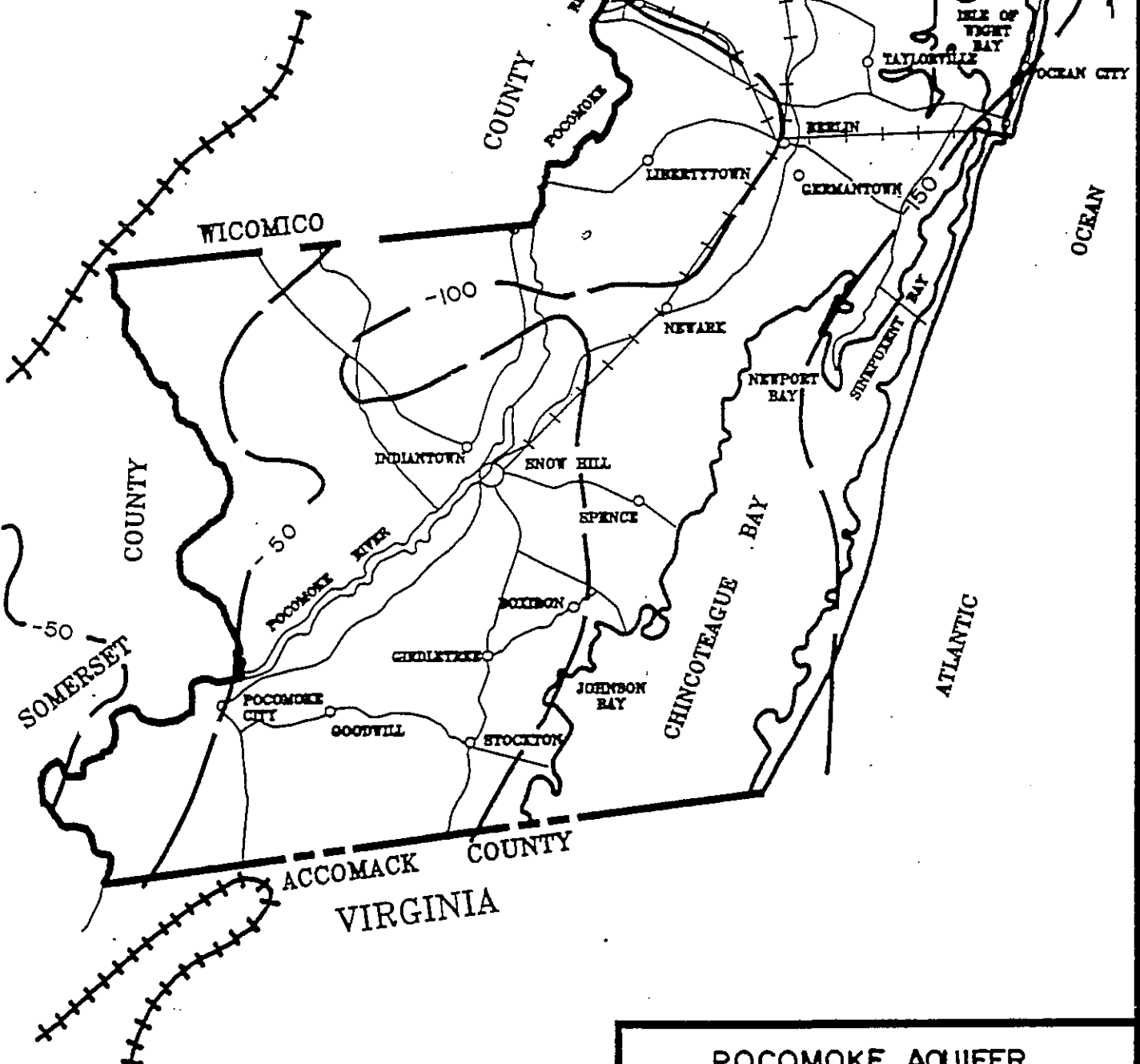


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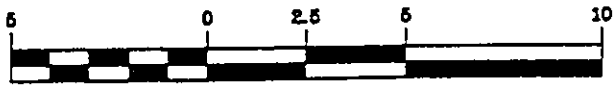
DATE : JUNE , 1990 FIGURE NO. : 2-1

LEGEND:


-  -50 APPROX. DEPTH TO TOP OF AQUIFER
-  APPROX. BOUNDARY OF AQUIFER
-  INCORPORATED TOWNS AND INDIVIDUAL COMMUNITIES



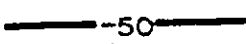


GRAPHIC SCALE

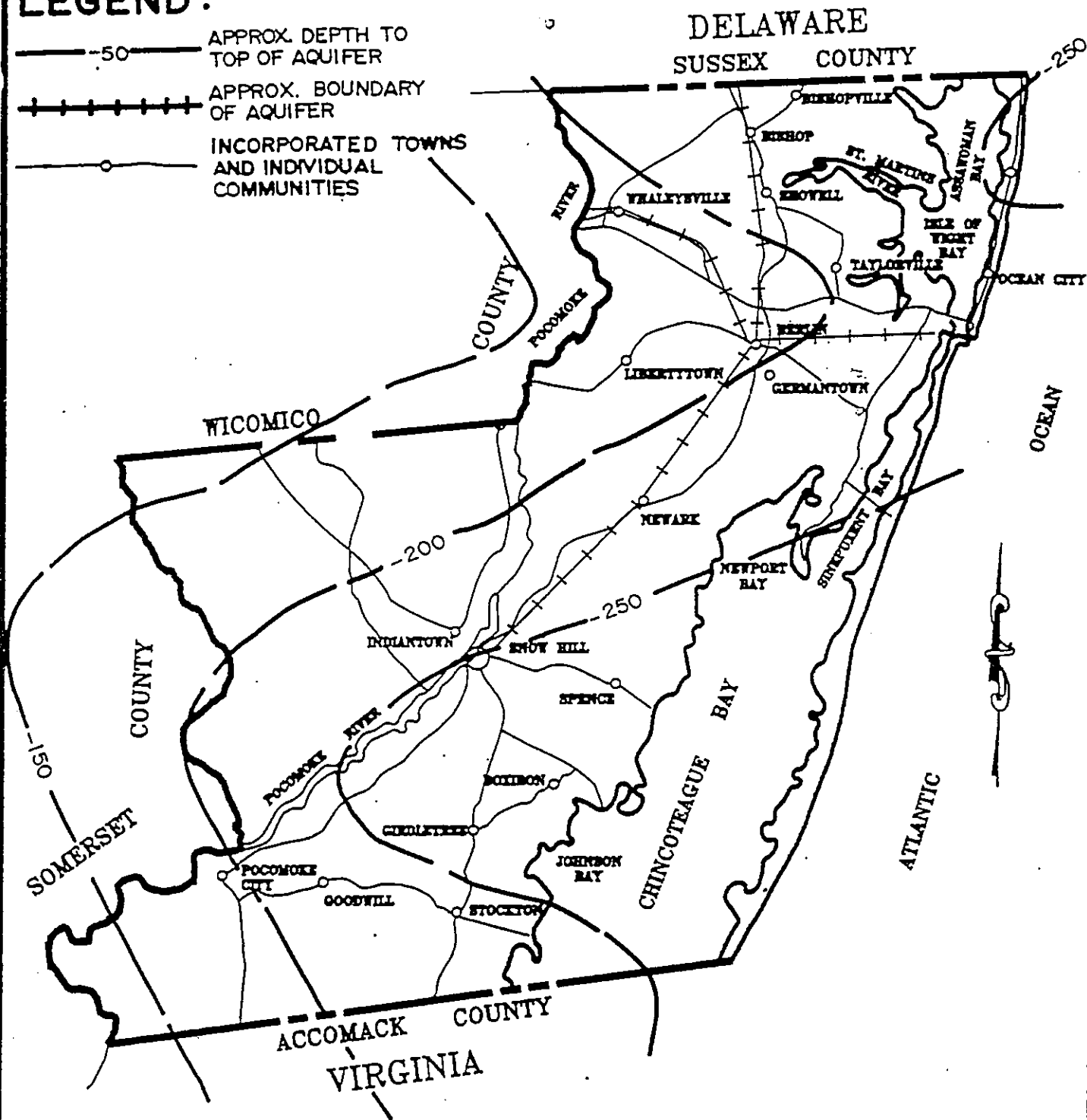


1 inch = 5 MILES

POCOMOKE AQUIFER
WORCESTER COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN
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DATE : JUNE , 1990 FIGURE NO. : 2-2

LEGEND:

-  APPROX. DEPTH TO TOP OF AQUIFER
-  APPROX. BOUNDARY OF AQUIFER
-  INCORPORATED TOWNS AND INDIVIDUAL COMMUNITIES



GRAPHIC SCALE



1 inch = 5 MILES

MANOKIN AQUIFER

WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN



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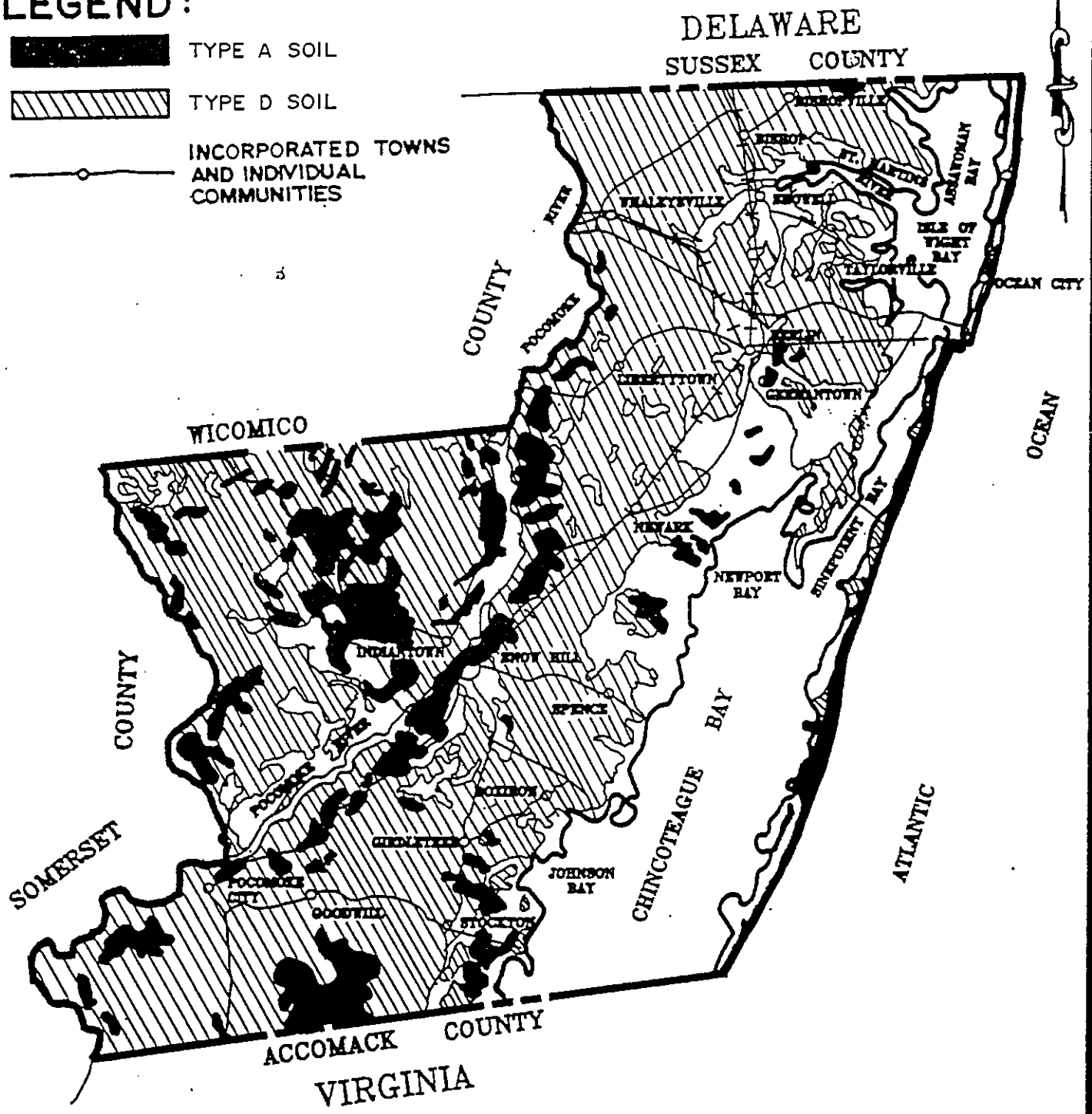
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DATE : JUNE , 1990 FIGURE NO. : 2 - 4

LEGEND :

-  TYPE A SOIL
-  TYPE D SOIL
-  INCORPORATED TOWNS AND INDIVIDUAL COMMUNITIES



GRAPHIC SCALE



1 inch = 5 MILES

WORCESTER COUNTY SOIL DRAINAGE CHARACTERISTICS

WORCESTER COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN



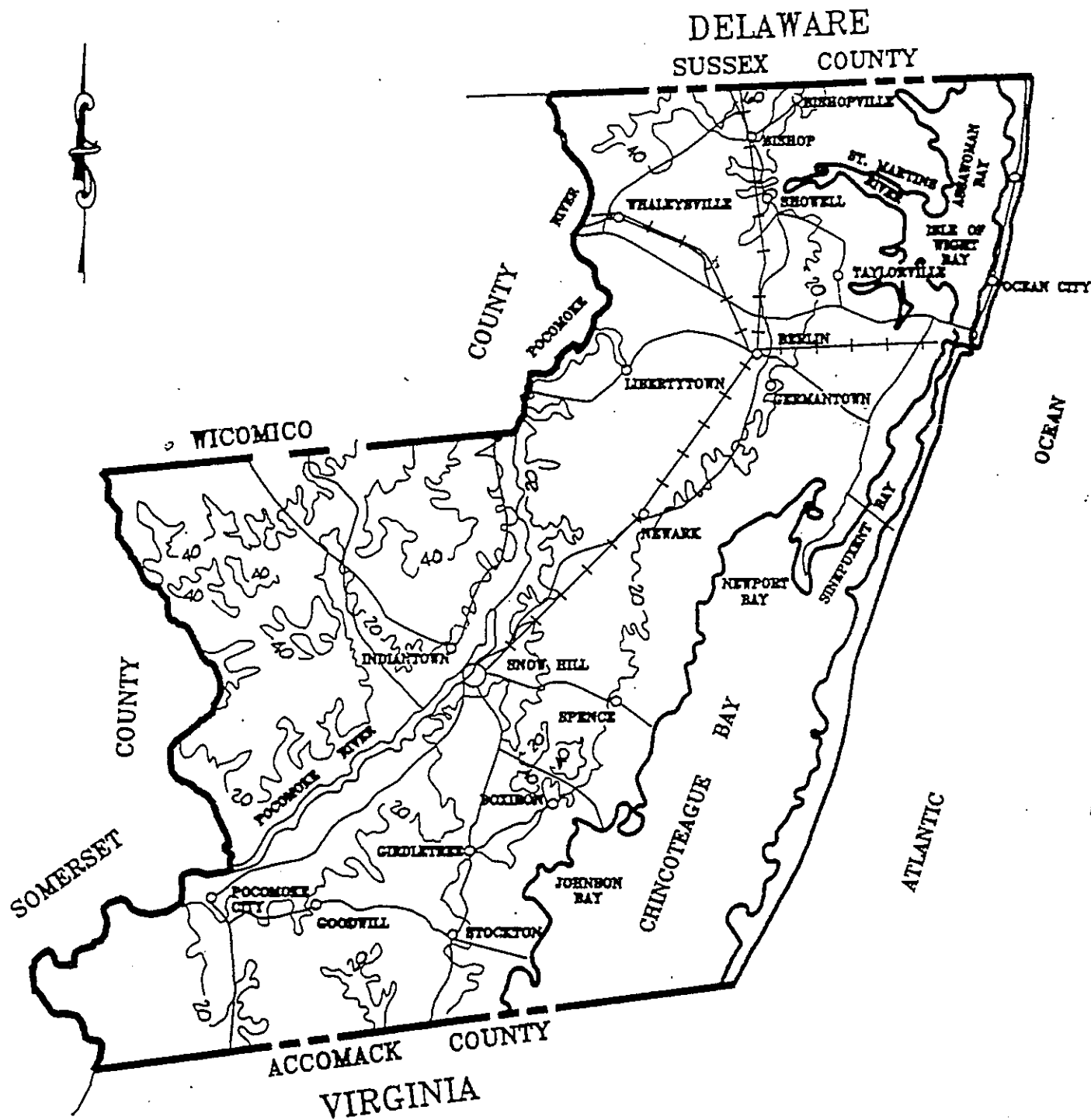
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DATE : JUNE , 1990 FIGURE NO. : 2-5





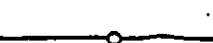
GRAPHIC SCALE

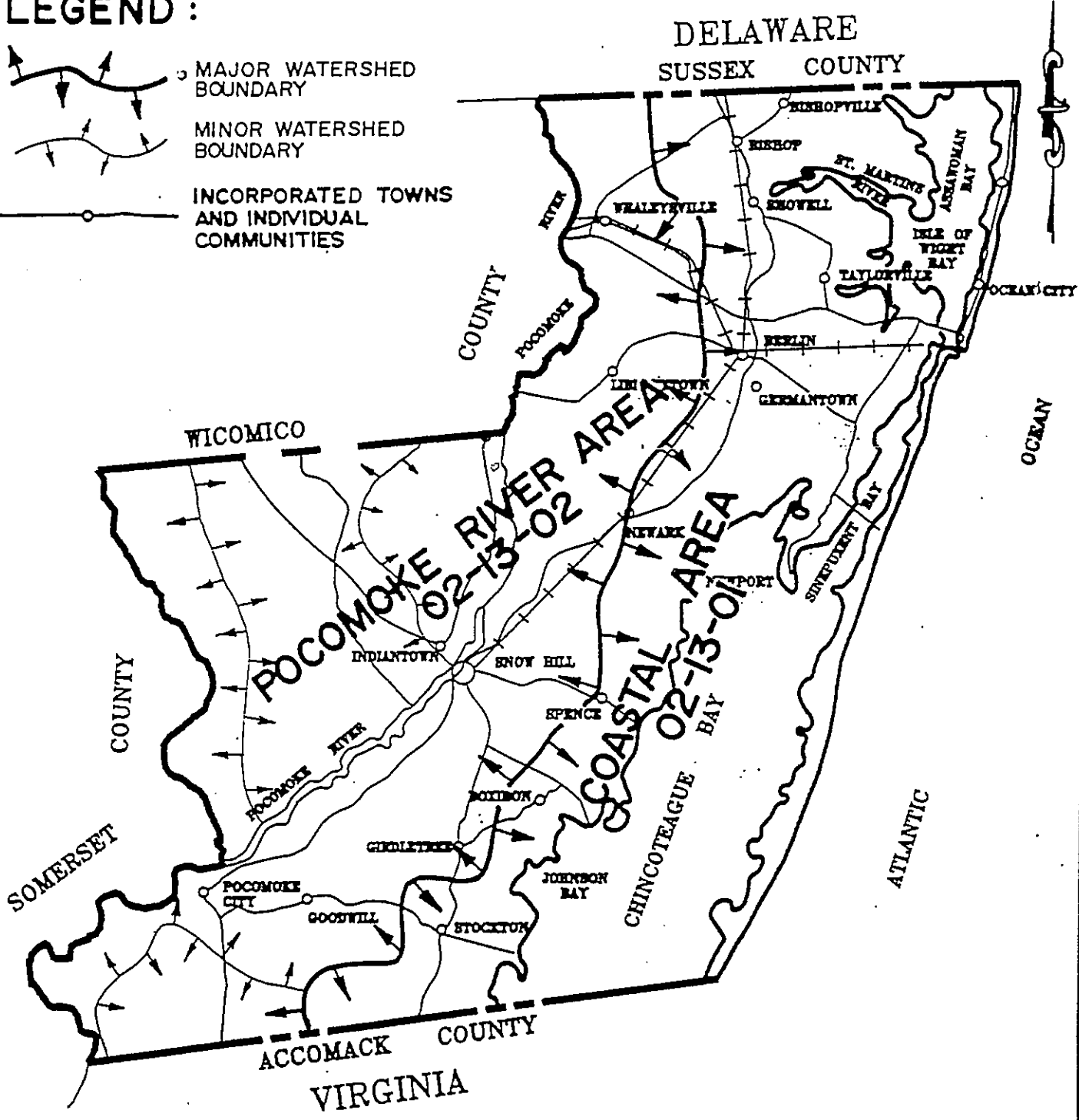


1 inch = 5 MILES

<p>WORCESTER COUNTY TOPOGRAPHY</p>
<p>WORCESTER COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN</p>
 <p>CONSULTING ENGINEERS AND SURVEYORS Andrews, Miller & Assoc., Inc. 506 MARYLAND AVENUE • CAMBRIDGE, MARYLAND • 21613 PHONE (301) 228 - 7117</p>
<p>DATE : JUNE , 1990 FIGURE NO. : 2-6</p>

LEGEND :

-  MAJOR WATERSHED BOUNDARY
-  MINOR WATERSHED BOUNDARY
-  INCORPORATED TOWNS AND INDIVIDUAL COMMUNITIES



GRAPHIC SCALE



1 inch = 5 MILES

DRAINAGE PATTERNS

WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN



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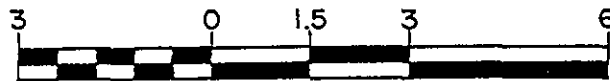
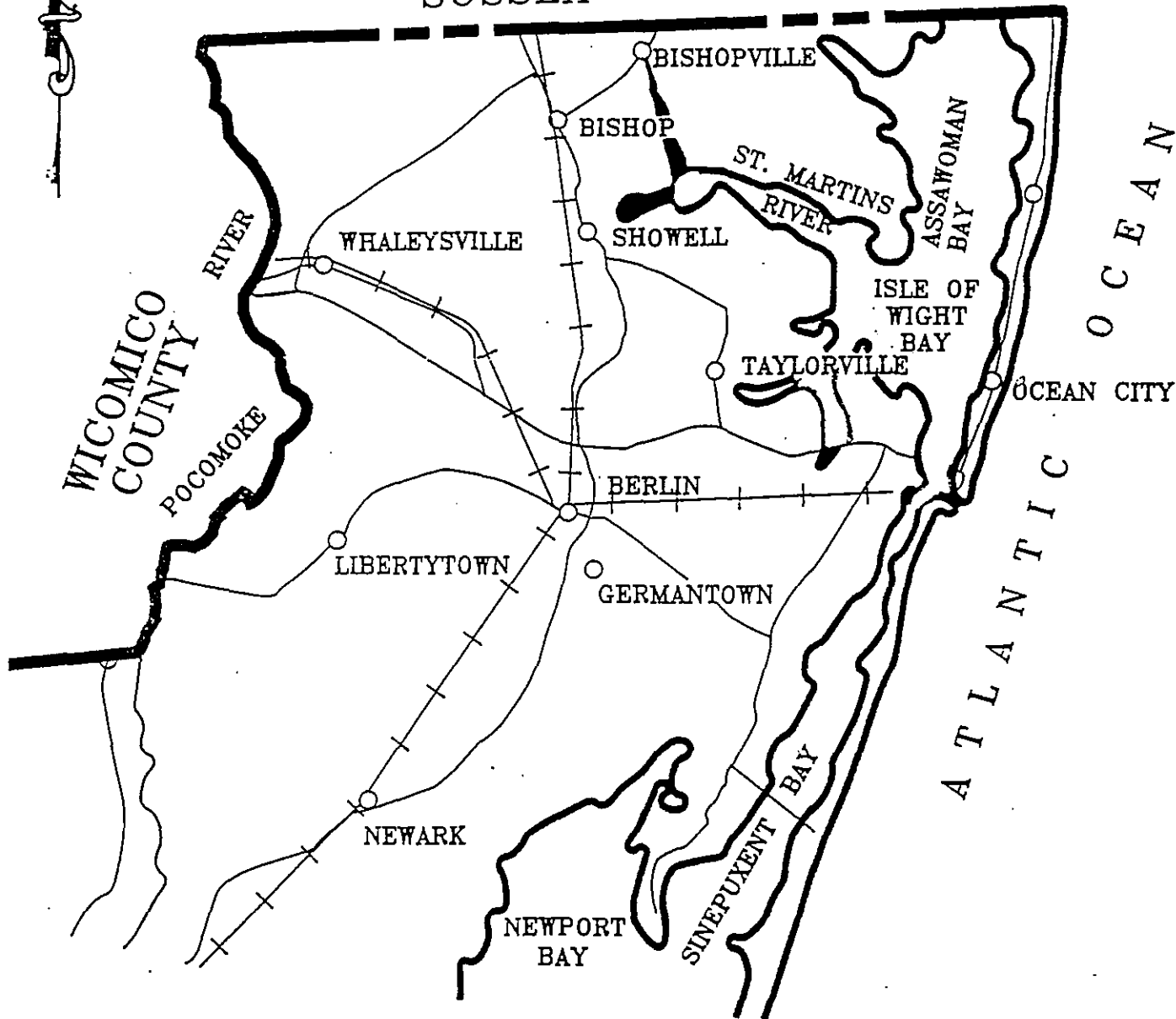
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DATE : JUNE , 1990 FIGURE NO. : 2-7

DELAWARE

SUSSEX COUNTY



1 inch = 3 MILES

LEGEND :

CLASS I WATERS
 ALL OTHER SURFACE WATERS
 IN THE COUNTY ARE CLASS II
 WATERS.

**INCORPORATED TOWNS
 AND INDIVIDUAL
 COMMUNITIES**

WATER QUALITY
 DESIGNATIONS

WORCESTER COUNTY
 COMPREHENSIVE WATER
 AND SEWERAGE PLAN



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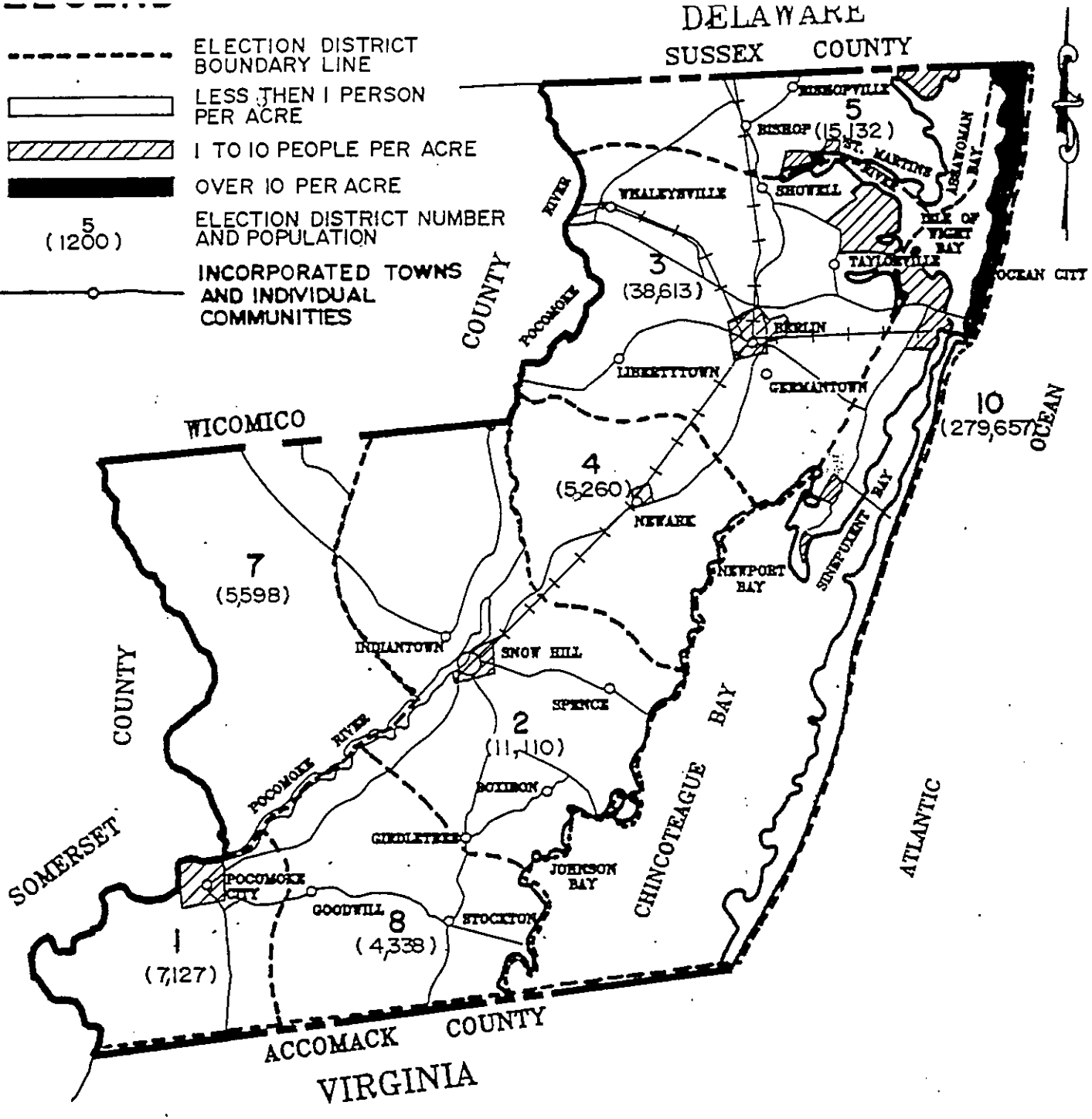
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DATE : JUNE, 1990

FIGURE NO. : 2 - 8

----- ELECTION DISTRICT BOUNDARY LINE
 [White Box] LESS THAN 1 PERSON PER ACRE
 [Hatched Box] 1 TO 10 PEOPLE PER ACRE
 [Black Box] OVER 10 PER ACRE
 5 (1200) ELECTION DISTRICT NUMBER AND POPULATION
 [Line with Circle] INCORPORATED TOWNS AND INDIVIDUAL COMMUNITIES



GRAPHIC SCALE



1 inch = 5 MILES

PRESENT PEAK SEASONAL POPULATION DISTRIBUTION & DENSITY

WORCESTER COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN

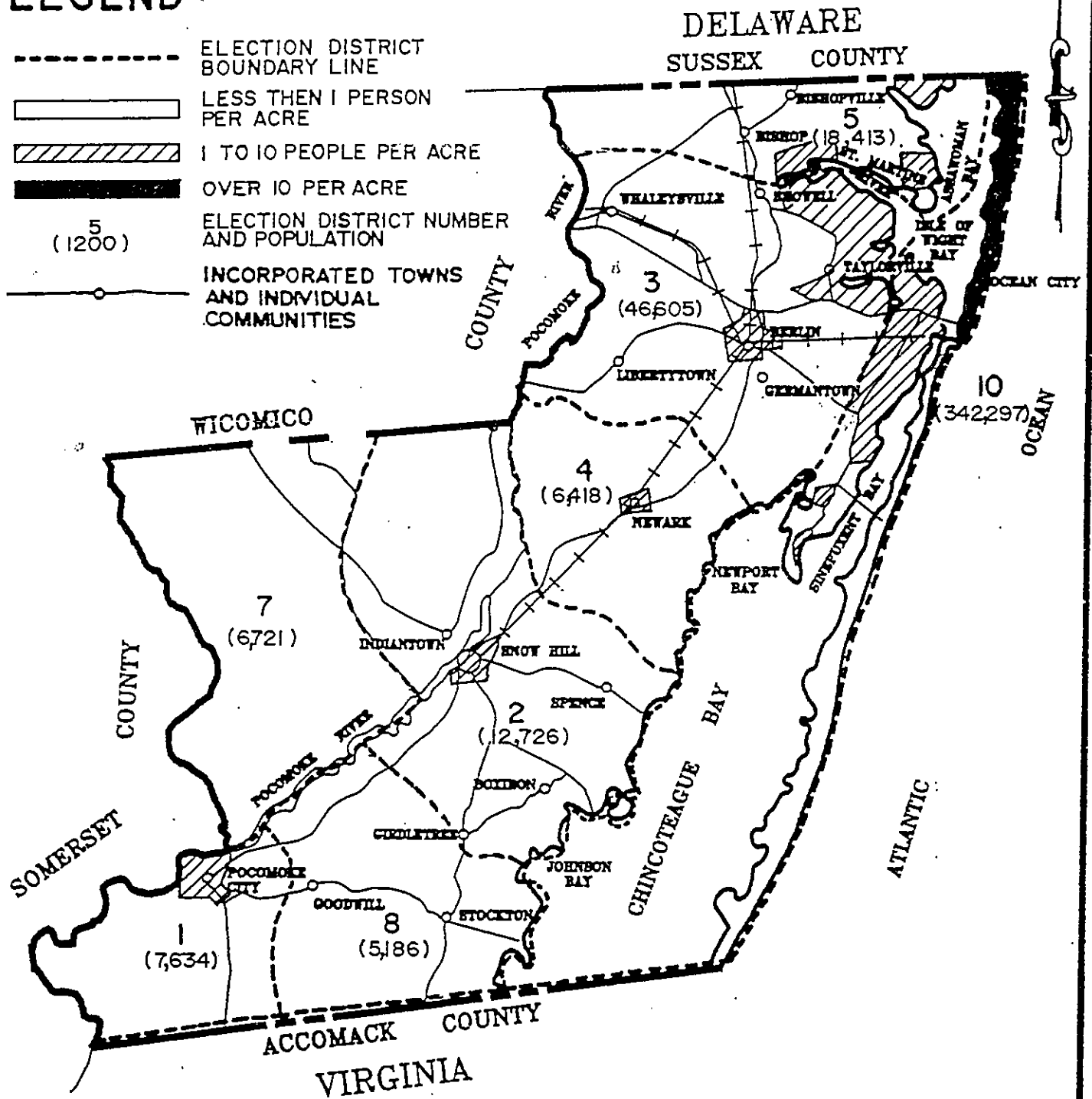


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DATE : JUNE , 1990 FIGURE NO. : 2-9

LEGEND :

- ELECTION DISTRICT BOUNDARY LINE
- ▭ LESS THEN 1 PERSON PER ACRE
- ▨ 1 TO 10 PEOPLE PER ACRE
- ▩ OVER 10 PER ACRE
- 5
(1200) ELECTION DISTRICT NUMBER AND POPULATION
- INCORPORATED TOWNS AND INDIVIDUAL COMMUNITIES



GRAPHIC SCALE



1 inch = 5 MILES

PROJECTED YEAR 2005 PEAK SEASONAL
POPULATION DISTRIBUTION & DENSITY

WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN



CONSULTING ENGINEERS AND SURVEYORS




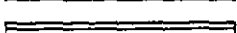
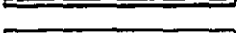
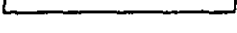
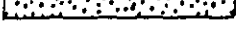


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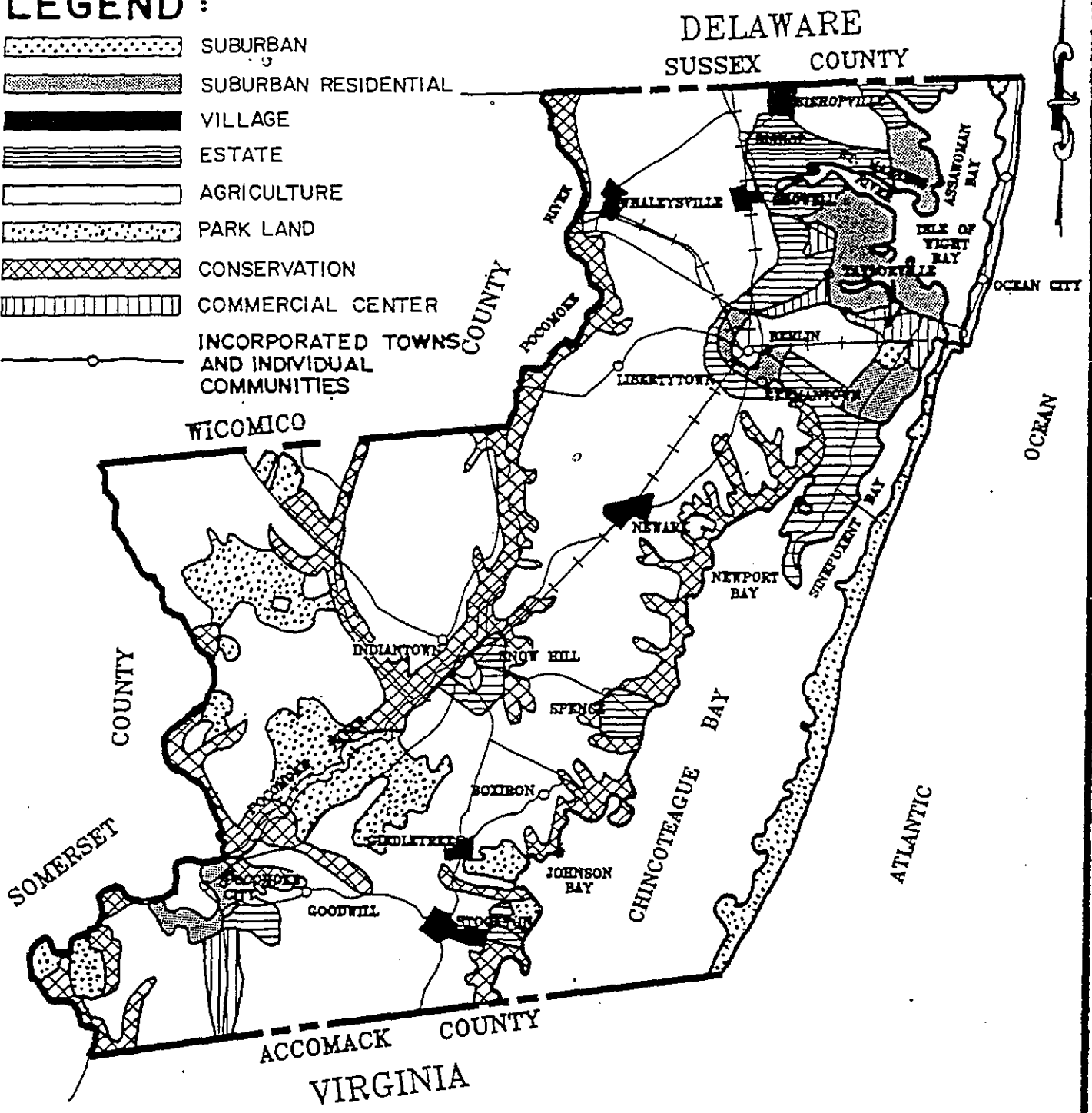
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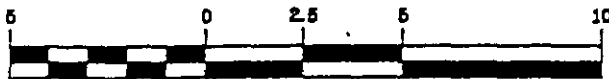
DATE : JUNE , 1990 FIGURE NO. : 2-10

LEGEND :

-  SUBURBAN
-  SUBURBAN RESIDENTIAL
-  VILLAGE
-  ESTATE
-  AGRICULTURE
-  PARK LAND
-  CONSERVATION
-  COMMERCIAL CENTER
-  INCORPORATED TOWNS AND INDIVIDUAL COMMUNITIES



GRAPHIC SCALE



1 inch = 5 MILES

LAND USE PLAN

WORCESTER COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN



CONSULTING ENGINEERS AND SURVEYORS

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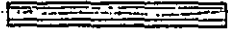
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DATE : JUNE , 1990 | FIGURE NO. : 2-11

LEGEND :



A



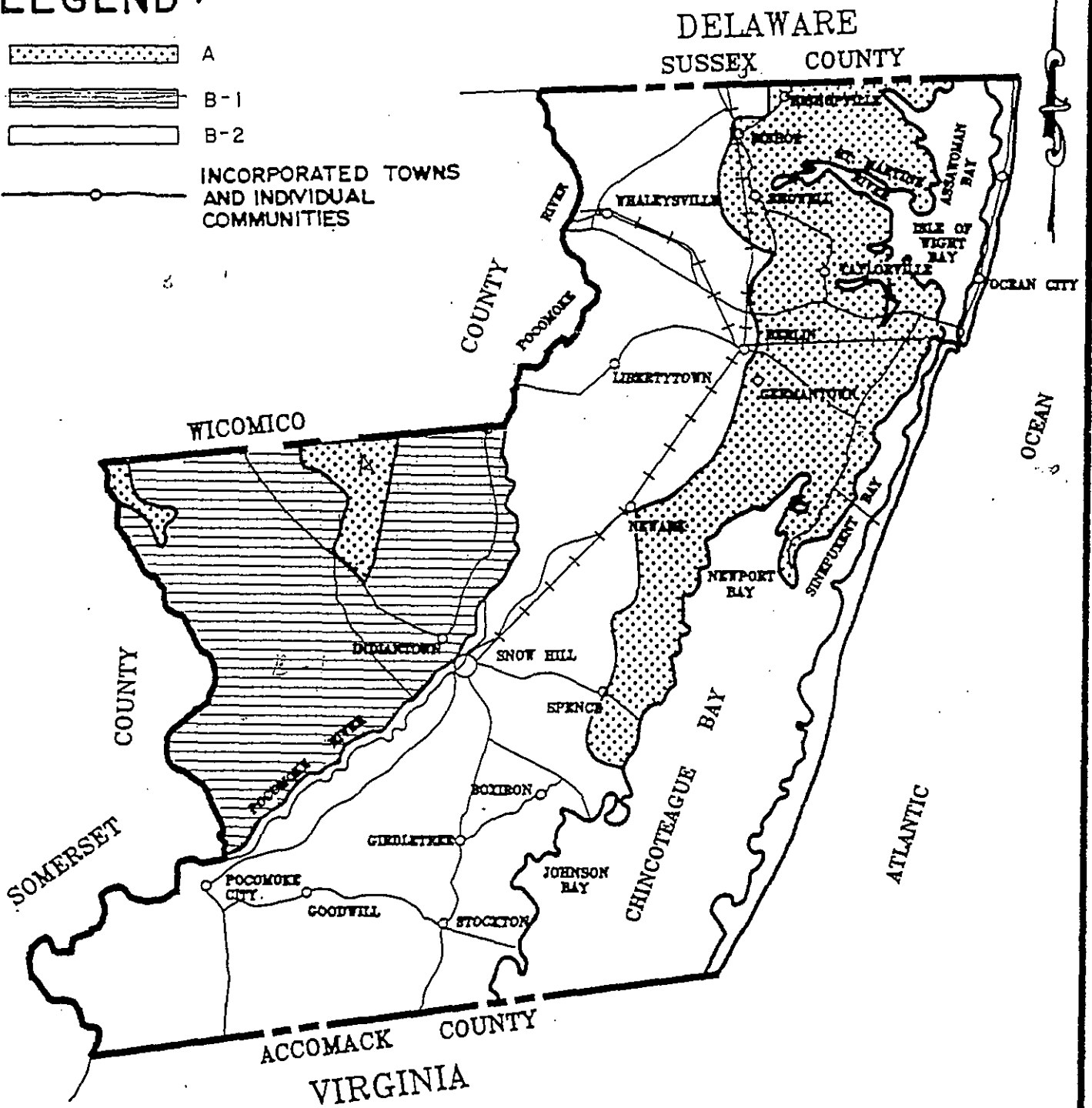
B-1



B-2



INCORPORATED TOWNS
AND INDIVIDUAL
COMMUNITIES



GRAPHIC SCALE



1 inch = 5 MILES

GROUNDWATER MANAGEMENT AREAS

WORCESTER COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN



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DATE : JUNE , 1990 FIGURE NO. : 2-12

CHAPTER III

CHAPTER III

3.1 WATER RESOURCES

3.1.1 Quality & Quantity of Water Resources

In Worcester County, a major portion of the potable water supply is taken from groundwater supplies. The groundwater resources in this area provide a reliable quantity of water while maintaining an acceptable level of costs involving quality, treatment, collection and distribution costs. Generally, water is obtained by drilling wells into subsurface aquifers, as discussed in Section 2.1.1.

According to COMAR 26.08.02, only designated Use I waters of the State can serve as surface water supplies. These supplies are protected and classified in order to provide protection for their basic uses. The Use I water in Worcester County are as listed in Section 2.1.6 of this plan. However most of these bodies of water are salt or brackish and therefore of no use as potable supply.

Regardless of the source a sufficient supply of water is required to maintain many processes such as manufacturing, cooling and basic everyday functions. Therefore, it is necessary to plan for quantitative and qualitative water supply and transmission for all areas of the County.

COMAR 26.04.01 regulates the quality of drinking water for each public water system in the State of Maryland based on regulations promulgated by the EPA. This criteria sets guidelines for maximum containment levels, sampling and analytical requirements, monitoring and reporting requirements, maintenance, and plant provisions.

Since the implementation of this law, all non-exempt public water systems have been inspected for heavy materials, radioactive monitoring and analysis. The public served by these supplies is more aware of water quality, and the water supply is protected from incremental toxicity.

3.1.2 Sources of Pollution & Contamination

Increased water demands in the north-central portion of the County may increase the chances for salt water intrusion. This could happen in the Ocean City area during peak season. As water is pumped from artesian wells, it lowers the water pressure in the aquifer surrounding the wells. This allows water to move from other parts of the aquifer, possibly from the "leaky" confining areas that are susceptible to salt water intrusion.

Stringent governmental regulations have been developed to help protect our water supply sources. However, items such as backflow preventers, vacuum breaks and proper construction techniques can help to prevent contamination of public water supply systems.

3.1.3 Water Supply Alternatives

Water systems in Worcester County consist of groundwater wells, water storage, and distribution systems. Community systems often contain some type of treatment facility to improve the water quality and include water storage such as hydro-pneumatic tanks or elevated storage tanks.

Water uses throughout the County vary from simple irrigation systems to industrial uses such as food processing. Surface water is generally unusable and non-potable. Therefore, the primary source of potable water in Worcester County is groundwater. Although this source has served the area quite adequately, conservation and protection practices must be implemented to protect this valuable resource.

Public water supply systems have several functional elements. These include the source of supply, storage facilities, transmission, treatment and distribution. In each of these elements, the principal concerns in the facilities design are quality and quantity. In the development of future public water supply systems in Worcester County, alternative sources of water may need to be investigated. The availability of fresh groundwater in Worcester County is a prime concern as it relates directly to its growth and development.

Future public water systems must be required to incorporate alternate designs in order to allow for adequate aquifer recharge. By protecting and conserving the valuable groundwater resources of Worcester County, the desired growth and development patterns may be achieved.

3.1.4 Demand Reduction Efforts

Various demand reduction efforts can be implemented in public and community water systems in order to conserve water and prolong the life of the water supply source. Several measures that are relatively easy to implement include metering, rate changes and plumbing codes. Metering can also make customers more aware of water consumption, possibly reducing demand.

Standard Rate Fee Schedules and local plumbing codes can be structured to promote water conservation. Each county in Maryland is required to comply with the Maryland Water Conservation Plumbing Fixtures Act (MWCPFA). Basically, this act is implemented by the Department of Water and Wastewater Services and the Environmental Programs Section of the Planning, Permits and Inspections Department to ensure that only water-conserving plumbing fixtures are installed and that occupancy permits cannot be obtained until compliance with MWCPFA is documented.

The Maryland Plumbing Code requires the use of water conservation devices or fixtures. Worcester County has officially adopted the Maryland Plumbing Code.

3.2 EXISTING WATER SYSTEMS

Municipal

All of the four municipalities within the County, namely Snow Hill, Berlin, Pocomoke City and Ocean City, are served by central water systems which are owned, operated and maintained by the municipal governments. For a description of system facilities, see Table 3-1 through 3-6 and appropriate Drawings at the end of this chapter.

Service Areas

The Newark Service Area is served by a central water system, under the auspices of the County-wide authority of the Worcester County Department of Water and Wastewater Services. The system is owned by the Worcester County Commissioners, with operation and maintenance by the aforementioned Department. For a description of system facilities, see Tables 3-1 through 3-6 and appropriate Drawings at the end of this chapter.

Department of Water and Wastewater Services

The Worcester County Department of Water and Wastewater Services is responsible for the planning, development, and construction of water and sewer facilities within the designated and approved service areas. The Worcester County Commissioners serve as the Controlling Authority for shared water and sewer facilities as provided for in the County Shared Facility Law.

Shared Facilities

The Worcester County Shared Facilities Law was enacted by the County Commissioners on March 31, 1987 and amended on July 28, 1992 and March 8, 1994.

The Law defines a Shared Facility as a water or sewer system serving more than one (1) lot or single family residence held in separate ownership. A Limited Shared Facility serves less than twenty (20) units, and a Community Shared Facility serves twenty (20) units or more.

A Limited Shared Facility may be privately owned but is designed, constructed and operated under the supervision of the Worcester County Department of Water and Wastewater Services. A Community Shared Facility is owned by the Worcester County Commissioners and for developments is typically designed and constructed by developers under the supervision of the Department of Water and Wastewater Services and subsequently operated by that Department.

All Shared Facilities are required to be included in the Worcester County Water and Sewerage Plan and to have established Service Areas. The Worcester County Commissioners are responsible for establishing both Limited Shared Facility Service Areas and Community Shared Facility Service Areas. All Shared Facilities (Limited and Community) are required to enter into a Shared Facility Agreement with the Worcester County Commissioners and to obtain Construction Permits from the Maryland Department of Environment.

Private Community and Institutional

A number of private community developments, schools, parks, etc. within the County have constructed water systems to serve residents and users. These facilities are listed in Tables 3-1 through 3-6 and appropriate Drawings at the end of this chapter.

Industrial

A number of industries within the County provide their own water systems for processing and cooling. These facilities are listed in Tables 3-1 through 3-6 and appropriate Drawings at the end of this chapter.

Drawing Designation

"WATER SERVICE AREA" means areas currently served or planned to be served by a community, multi-use or shared water facilities, or for which service is allocated or reserved.

"W-1" means areas served or planned to be served by community, multi-use, or shared facilities which are either existing, under construction, or are planned to be built **WITHIN TWO YEARS.**

"W-2" means areas where improvements or extension, or construction of new, community, multi-use, or shared facilities are planned within a **THREE TO FIVE YEAR PERIOD.**

"W-3" means areas where improvements or extension, or construction of new, community, multi-use, or shared facilities are planned within **SIX TO TEN YEAR PERIOD.**

3.2.1 OCEAN CITY WATER SYSTEM

A. Existing Water System (Figures 3-11, 3-12, 3-13)

Ownership

The Ocean City community water system is owned and operated by the Town of Ocean City Municipal Water Department. The system is comprised of 21 production wells, 4 treatment plants, 7 water storage tanks and 6 pumping facilities. The community water system also serves the commercial area of Ocean City.

Supply and Demand

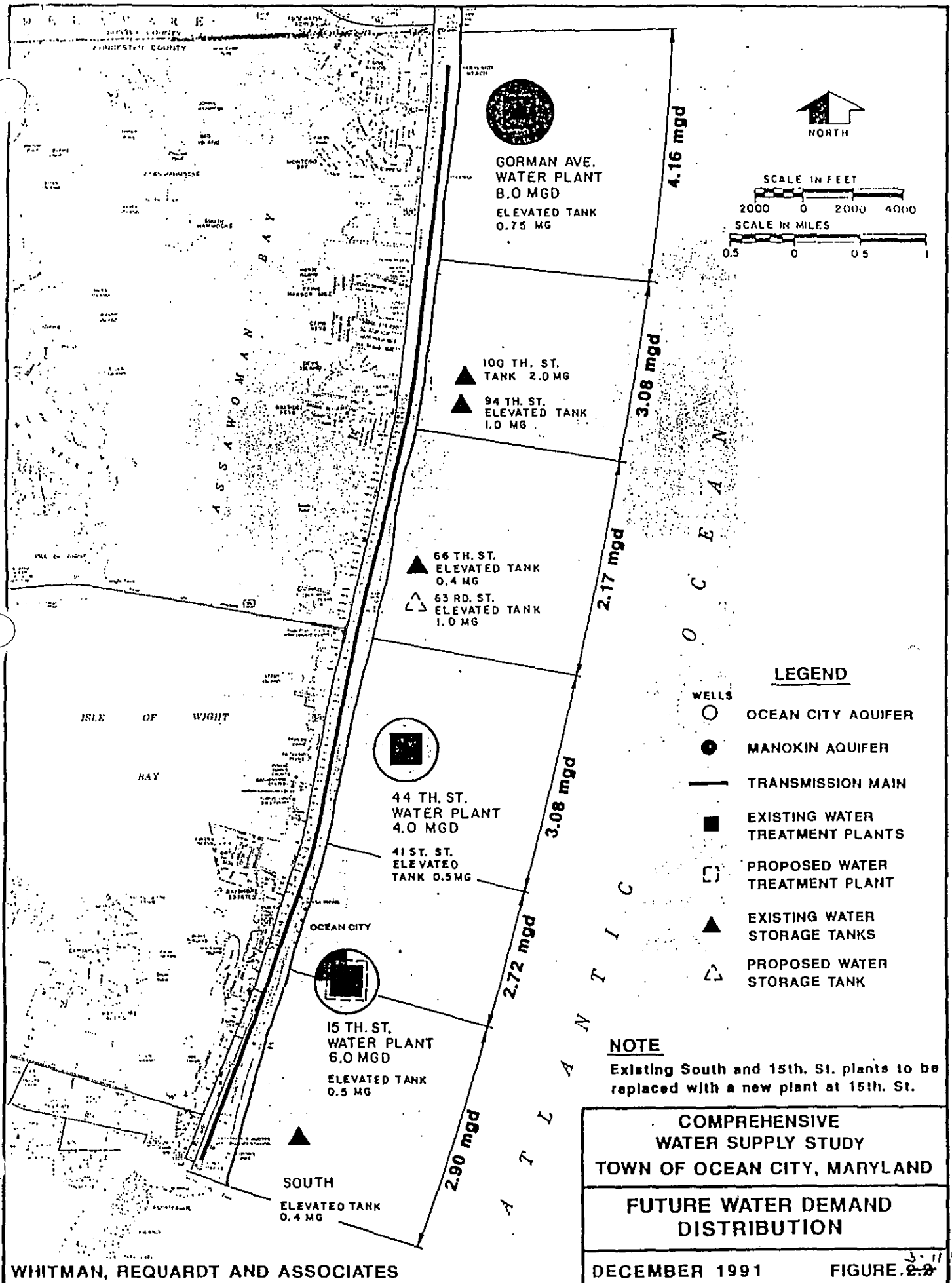
The Ocean City water system must have adequate capacity to serve the peak season population. In 1991 the system served an estimated population of 224,410 during the peak season. The maximum day demand was estimated to be 13.05 mgd. The ultimate build-out population has been projected to be approximately 312,700 per Department of Planning and Development. Historical data for recent years indicate the maximum day per capita demand of 58-gpd. The corresponding maximum day system demand at build-out is projected to be 18.1 mgd.

The existing raw water supply consists of 13 wells in the Ocean City aquifer and 8 wells in the Manokin aquifer. New wells are planned for 123rd Street in the Manokin and 33rd Street, 28th Street, North Division Street, 3rd Street and two wells near 15th Street in the Ocean City aquifer to provide safe capacity and to meet maximum demands at build-out. Construction of new wells will be phased to match increasing demands.

Water Quality, Capacity and Treatment

The Ocean City water system consists of four water treatment plants. The South Street Water Treatment Plant (WTP) is a 3.0 mgd plant with an iron removal filter system and water softening. The 15th Street WTP is also a 3.0 mgd plant with iron removal and water softening. Both treatment plants were built in 1955. They are the oldest of the four plants and need to be replaced. The third plant is located on 44th Street and is a 4.0 mgd plant with iron removal filter system and pH adjustment. The fourth WTP is located in North Ocean City on Gorman Avenue and is an 8.0 mgd plant with pretreatment by clarification and aeration, an iron removal filtration system, and pH adjustment.

The Comprehensive Water Supply Study, prepared for the Town of Ocean City by Whitman, Requardt and Associates, recommended that the first two plants be replaced by a new 8 mgd treatment plant located at 15th Street. The new plant, in conjunction with the 4 mgd 44th Street plant and the 8.0 mgd Gorman Avenue plant, will provide the total required 20 mgd maximum day capacity. The 44th Street plant and the Gorman Avenue plant will require upgrading in the FYE 2000 and 2020 respectively, and an emergency generator will be required at the 100th Street facility in FYE 1994 to improve its reliability.



Storage

The town has 7 water storage tanks, 6 elevated tanks and 1 ground level tank with a total useable storage capacity of 5.30 mg.

WATER STORAGE TANKS

<u>Location</u>	<u>Type of Storage</u>	<u>Rated</u>	<u>Capacity (mg)</u> <u>Useable</u>
South Street	Elevated	0.40	0.40
15th Street	Elevated	0.50	0.50
41st Street	Elevated	0.50	0.50
66th Street	Elevated	0.40	0.40
94th Street	Elevated	1.0	1.0
Gorman Avenue	Elevated	0.75	0.75
100th Street	Ground Level	<u>2.0</u>	<u>1.75</u>
	Total	5.55	5.30

The present storage facilities have adequate capacity to support a maximum day demand of 14.36 mgd with a fire flow of 4,000 gpm for 4 hours. The estimated maximum day build-out demand of 18.1 mgd is projected to occur in 2015, and the required useable storage at that time would be 5.49 mgd. Hence, a new 1 MG elevated storage tank will be required and should be located between 63rd and 80th Streets. Availability of land will dictate the actual location. The Town is considering the acquisition of property at 63rd Street which could serve several Town needs including water storage.

Distribution System

The main water distribution piping system consists of a 20" water main running parallel to Coastal Highway from 10th Street to 100th Street. There is also a 12" main running parallel to the 20" main along Coastal Highway from the 44th Street WTP to 100th Street. From 100th Street to the northern boundary of the municipal water system there is a 16" main running parallel to Coastal Highway. The southern part of Ocean City is served by a 24" main extending along Philadelphia Avenue from 33rd Street to 15th Street, and a 10" main from 15th Street to the Ocean City Inlet.

A 12" main runs along Baltimore Avenue from Caroline Street to 9th Street and a 10" main along the beach from the Inlet to 10th Street. There are also 6" and 8" water mains serving as lateral supply mains throughout the service area.

The recommended improvements to the raw water system include completion of a raw water manifold system that will interconnect all of the wells between the inlet and the 44th Street WTP as well as interconnecting piping for a new well to serve the Gorman Avenue plant. Finished water main improvements include new piping in Baltimore Avenue and at the Gorman Avenue WTP to improve hydraulic conditions.

Water Quality

Rising chloride levels in the Ocean City aquifer wells serving the 44th Street plant have raised concerns about intrusion of salt water into the fresh water aquifers, but the chloride in both aquifers at the other three plants appear to be stabilized.

A new well field was proposed on the west shore of the bay to establish a new fresh water source should salt water intrusion occur. However, continuing improvements in desalination technology have led to a change in philosophy with respect to the possible salt water intrusion problem. The preferred approach at present would be to continue to pump water from the existing well fields if the water becomes brackish, and to treat it by using either the reverse osmosis or the electro dialysis reversal process installed only when and where needed. This approach is judged to be more cost-effective, and more environmentally acceptable because it would prevent further westward movement of the salt water front, thus protecting the ground water supply on the mainland. At present, State regulations would prohibit withdrawals of salty water from the fresh water aquifers; however, the Water Resources Administration has indicated that it will give the plan consideration for future acceptance.

Desalination, if required in the future, could be constructed at the new 15th Street Plant on the site now occupied by the Library. Additional land would be required to add desalination at 44th Street. At the Gorman Avenue plant, desalination facilities could be constructed on the site now occupied by the police station, or they could be located offsite.

B. Potential Service Area

The Town of Ocean City extends from the Ocean City Inlet to the Maryland/Delaware line and is separated from West Ocean City by the Isle of Wight Bay. The existing Ocean City water system covers the entire municipal area, but is not planned to be extended into Delaware at present. A water system for West Ocean City is currently in the feasibility stage, although connection to the Ocean City system does not seem necessary or likely.

C. Water System Development

To meet the Year 2015 water demand of 18 mgd the system-wide improvements have been scheduled for implementation beginning FYE 1992 and ending FYE 2020. Project costs have been estimated for each improvement based on FYE 1992 prices. Project costs include a 25% allowance for legal, administrative and engineering costs.

The following table summarizes the estimated cost for entire program:

<u>Facilities</u>	<u>FYE 1992-1997</u>	<u>FYE 1998-2020</u>	<u>Total</u>
Well Fields	\$1,705,000	\$ 750,000	\$ 2,455,000
Raw Water Mains	1,425,000	700,000	2,125,000
Treatment	7,900,000	2,500,000	10,400,000
Storage	1,475,000	1,250,000	2,725,000
Finished Water			
Mains	1,920,000	-----	1,920,000
Miscellaneous			
Projects	<u>250,000</u>	<u>750,000</u>	<u>1,000,000</u>
Total	\$14,675,000	\$ 5,950,000	\$ 20,625,000

The following table lists the Schedule of Improvements for the Town of Ocean City Water System:

SCHEDULE OF IMPROVEMENTS

<u>FYE</u>	<u>IMPROVEMENTS</u>	<u>PROJECT COSTS</u>
1994	Construct Test Well at 3rd Street and St. Louis Avenue	\$30,000
	Construct Well House - 141st Street	25,000
	Install Emergency Generator for 100th Street Pumping Station	125,000
	Paint Water Storage Tanks	125,000
	Construct Airport Well	400,000
	Construct 8 mgd Water Treatment Plant at 15th Street	<u>3,325,000</u>
	TOTAL 1994	\$4,030,000

1995	Construct 6 mgd Water Treatment Plant at 15th Street	\$3,325,000
	Paint Water Storage Tanks	125,000
	Construct Raw Water Main from Caroline Street to 15th Street	<u>620,000</u>
	TOTAL 1995	\$4,070,000
1996	Construct Two 1 mgd Wells for New 15th Street Water Plant (at North Division and 3rd Streets)	\$500,000
	Construct 1 mgd Well at 28th Street for 44th Street Plant	250,000
	Construct Raw Water Main - 28th to 33rd Streets	250,000
	Land Acquisition for 44th Street Plant	<u>750,000</u>
	TOTAL 1996	\$1,750,000
1997	Construct 1 mgd Well at 123rd Street for Gorman Avenue Plant	\$250,000
	Construct Raw Water Main - 123rd to 125th Streets	100,000
	Miscellaneous Projects	<u>250,000</u>
	TOTAL 1997	\$600,000
1998	Construct 1 MG Elevated Storage Tank at 63rd Street	\$1,250,000
	Miscellaneous Projects	<u>250,000</u>
	TOTAL 1998	\$1,500,000
1999	Upgrade 44th Street Water Plant	\$1,000,000
	Miscellaneous Projects	<u>250,000</u>
	TOTAL 1999	\$1,250,000
2000	Land Acquisition for Gorman Avenue Plant	\$500,000
	Miscellaneous Projects	<u>250,000</u>
	TOTAL 2000	\$750,000

2010	Construct Raw Water Manifold Pipeline From 15th to 28th Streets	<u>\$700,000</u>
	TOTAL 2010	\$700,000
2020	Construct Two 1 mgd Wells for 15th Street Plant	\$750,000
	Rehabilitate Filters at Gorman Avenue, South Plant	<u>\$1,000,000</u>
	TOTAL 2020	\$1,750,000
	TOTAL FOR PROGRAM	\$20,625,000

3.2.2 OCEAN PINES WATER SYSTEM

A. Existing Water System (Figure 3-6)

Ownership

The community water system at Ocean Pines is owned by the Worcester County Commissioners and operated by the Worcester County Department of Water and Wastewater Services. Ocean Pines currently has an off-season population of more than 6,000 and a peak season population of approximately 12,000. Both Phase One and Phase Two water systems were constructed and put into use as the initial part of a multi-staged construction plan. See Figure 3-6 for service area mapping.

Supply and Demand

Four operational wells in Phase One supply water to Ocean Pines. All four wells have a rated capacity of 500 gpm and were drilled into the Pleistocene Aquifer. Wells 16, 17, 18 and 19 are currently in use and are operated on a rotating basis. All operational wells, well pump controls and treatment equipment are housed in masonry structures. There are hydro-pneumatic tanks installed outside of the structures but they are currently not in use. Well 1 (1988 Ocean Pines Master Plan for Water and Wastewater Facilities) in Phase One was drilled and capped. There is no structure, well pump or controls with this well. In 1971, a well was drilled in Phase Two but abandoned because of brackish water. The Groundwater Appropriation Permit allocates 1.0 mgd daily average on a yearly average and 1.667 mgd daily average for maximum month.

Storage

Water storage is provided by a 500,000 gallon elevated steel tank, a 250,000 gallon elevated steel tank, and a 250,000 gallon steel ground storage tank. Phase Two water is stored in the 500,000 gallon elevated tank located on Ocean Parkway and adjacent to Section 15A. It has an operating range of 38'. In addition, the water is stored in a 250,000 gallon steel ground storage tank located near the intersection of Ocean Parkway and King Richard Road. The 250,000 gallon elevated tank is located in Phase One near the intersection of Ocean Parkway and Sandyhook Road. It has an

operating range of 28.5'. The ground tank is equipped with pressure switch actuated pumps which discharge into the distribution system at 52 PSI and cuts off at 62 PSI to allow the storage tank to refill. These tanks are shown on Figure 3-6.

Water Quality and Treatment

Water from the four wells currently in use is treated with chlorine for disinfection and both lime and soda ash for adjustment of the acidic groundwater. In addition to the domestic water supply wells owned by the Worcester County Commissioners, the Ocean Pines Association owns and operates two irrigation wells for the golf course and one at the entrance lake.

Distribution

The Phase One water distribution system was put into service in 1970. Phase Two became operational in 1973. Overall the distribution system contains approximately 87 miles of transmission mains ranging in size from 1 1/2" to 12" in diameter. The piping consists of both polyvinyl chloride (PVC) and asbestos cement. All service connections include individual water meters housed in molded plastic pits. As of January 1993, there were 160 fire hydrants located within the distribution system. All new sections and River Run are served by 8" mains.

Adequacy

The July 1988 Ocean Pines Master Plan for Water and Wastewater Facilities determined that the existing Ocean Pines water system was capable of meeting the peak hour demand. However, this was only possible by utilizing a portion of the fire flow reserve. Therefore, the existing system is incapable of meeting a 2,000 gpm, 4 hour fire during maximum day demand periods. This situation has been resolved by placing the two standby wells into regular service.

B. Potential Service Area

There are approximately 4,800 existing developed lots and 2,269 platted building lots that are undeveloped. Private developers own ten unplatted sections within Ocean Pines which contain approximately 2,150 additional equivalent dwelling units (EDU). It is estimated that by the year 2005, approximately 8,000 of the potential 9,219 EDU's will have been developed within Ocean Pines. Ocean Pines also serves 408 units of the River Run development with projected water demand of 0.102 mgd.

C. Water System Development

Future improvements of the Ocean Pines Water System should include the upgrading of existing wells, the installation of new wells, construction of additional water storage facilities, the replacement of undersized water mains, and the installation of additional fire hydrants.

1. Wells

It is contemplated that additional water production necessary will be provided by new wells in Ocean Pines. The "1988 Ocean Pines Master Plan for Water and Wastewater Facilities" provides information for the expansion of water production in Ocean Pines; however, this information is now considered outdated and unuseful. A new master plan or a revised 1988 Plan for the water system in Ocean Pines is needed.

2. Storage

The 1988 Master Plan recommended water storage capacities to meet the projected equalization and fire flow storage requirements to the year 2005. According to the Master Plan, the existing 1 MG of storage should be adequate up until 2005. No analysis was performed for need beyond this date.

3. Distribution Mains

The 4" diameter distribution mains throughout parts of Ocean Pines restrict the system's ability to deliver fire flows to those areas served by the 4" mains. These portions of undersized pipe should be replaced with either 6" or 8" mains. Also, an additional 200 fire hydrants should be installed to meet the Building Officials Congress of America (BOCA) recommendation of 500 feet maximum spacing between hydrants within residential areas. All new sections are served by 8" mains and properly spaced fire hydrants.

3.2.3 BERLIN AND ENVIRONS WATER SYSTEM

A. Existing Water System (See Figure 3-7)

Ownership

The municipal water system in the Town of Berlin is owned and operated by the Town of Berlin and serves a population of 2,656.

Supply and Demand

The three wells that supply the water system range in depth from 115' to 134' and all tap into the Pleistocene Aquifer. The wells are 18", 12" and 10" in diameter with pump capacities of 1,100 gpm, 500 gpm, and 240 gpm, respectively, for a combined total of 2,340 gpm. By including the commercial and industrial consumption figures, the average daily gallons per capita is 190 gpcd. This creates a 0.57 mgd demand on the water system. An additional well was drilled and subsequently abandoned near the treatment facility. (Wells #20-23, Table 3-3)

Storage

Water for the system is stored in two storage tanks in order to provide adequate pressure and supply to all connections. A 117,000 gallon standpipe is located on Williams and Powellton Streets and a 250,000 gallon elevated storage tank is located on Franklin Street.

Water Quality and Treatment

Chemical treatment processes provided at each well include chlorination for disinfection and lime addition to soften the water.

Distribution System

The distribution piping ranges in size from 6" to 10" in diameter. The piping is located in or adjacent to street rights-of-way throughout the Town.

Adequacy

Gross well capacity is considered adequate for Berlin. No complaints of insufficient pressure or quantity of water have been recorded. Also, the Town of Berlin has a planned water capacity of 0.89 mgd which should provide sufficient capacity for any intense development that may occur.

B. Potential Service Area

Immediate Priority

If annexed, the Town of Berlin will extend service to areas along MD Route 346 west and east of MD Route 818. The Town will also extend service north along Route MD Route 818. Other areas east of US Route 113 noted for service are a hospital located north of MD Route 346 and an industrial area north of Flower Street.

Up to Five Years

If annexed, areas west of Town will be provided service. An additional area east of Route 113 to Bottle Branch is a potential growth site.

Five to Ten Years

The Town of Berlin will extend service to areas annexed during this period.

C. Water System Development

The pump capacity of wells 20 and 21 may be increased to the maximum safe yield of the wells if necessary to accommodate increased growth and water demand. Replacement of older and undersized distribution piping would increase the efficiency of the system. In an effort to conserve water and monitor system flows and possible problems, the Town is in the process of installing water meters. Installation is

approximately 60% complete and should be accomplished by late 1993 or early 1994. To improve storage capacity the Town is planning a 0.300 MG elevated tank in the next 2-3 years. Once the new tank is on-line, the existing standpipe will be retired.

3.2.4 MYSTIC HARBOUR WATER SYSTEM

A. Existing Water System (Figure 3-14)

Ownership

Mystic Harbour Corporation

Population

Peak Season: 300

Off-Season: 100

Water Supply

Wells: Two at 140' Deep, 10" in Diameter

Pump Capacity: 335 gpm each (670 gpm total)

Aquifer: Pleistocene

Average Demand: 0.015 mgd

Average Per Capita Rate: 50 gpcd

Storage

500,000 gallon Elevated Storage Tank

Water Quality and Treatment

Type of Treatment: Chlorine Disinfection, pH Adjustment and Iron Removal
(Greensand Filter)

Average Production: 0.015 mgd

Peak Production: 0.025 mgd

Plant Capacity: 0.200 mgd

Sludge Disposal: Backwash through community sewage system

Quality: Good after treatment

Distribution System

Distribution Mains: 12" Diameter

Problems Recorded

None Recorded

B. Potential Service Area

Mystic Harbour is a private community with its own water supply, treatment, storage and distribution system sized and designed for the ultimate build out condition of the proposed development. However, because of its location near the growing West Ocean City area, the existing treatment facilities could provide an initial base that could be expanded to provide a community water system for West Ocean City. A contract agreement between the developers of the Mystic Harbour Service Area and the Captain's Point Service Area has been made with regard to the extension of water service to the latter development.

C. Water System Development

To comply with the Shared Facilities Law, the former Sanitary Commission and the developer of Mystic Harbour entered into an agreement on July 14, 1987. This agreement allows the facilities to remain privately owned until build-out of the development. The Department of Water and Wastewater Services provides general supervision of the operation. At build-out, ownership and operational responsibility shall be transferred to the Worcester County Commissioners. The Developer shall continue to construct various on-site lines and to operate and maintain the systems until the transfer is made.

3.2.5 NEWARK WATER SYSTEM

A. Existing Water Systems (See Figure 3-18)

Ownership

The Newark Service Area water system is owned by the Worcester County Commissioners and operated by the Worcester County Department of Water and Wastewater Services. The system serves 75 residential service connections along Bowen Road and Patey Woods Road.

Supply and Demand

The well (#81) serving the Newark Service Area is 202' deep, and taps into the Pocomoke Aquifer. The well has an 8" steel casing and has a pumping capacity of 78 gpm. The Department of Water and Wastewater Services estimates the daily per capita demand at 44 gpcd (11,000 gpd). Also located adjacent to the service area is an 8" well serving Masons Cannery at Newark. This well produces an average of 15,000 gpd with a 96,000 gpd average daily flow during peak season. However, at this time, there are no plans to connect this well to the Newark Service Area water system.

Storage

Water for the community system is stored in a 15,000 gallon hydropneumatic tank at the treatment facility. The water is introduced into the distribution system from this tank.

Water Quality and Treatment

The treatment system for the Community of Newark incorporates the following chemicals/components for treatment of raw well water: preaeration, caustic soda, potassium permanganate, two green sand filters, and post chlorination.

The treatment of the raw well water reduces the iron concentration from 6 mg/l to lower concentrations. The treatment facility is rated for 15,000 gpd. The average flow is 11,000 gpd with a maximum peak flow of 14,000 gpd. The sludge is backwashed to the community wastewater treatment facility.

Distribution System

The water distribution system for Newark is comprised of 8" water mains which transport potable water along Patey Woods Road and Bowen Road. These 8" mains feed 3 fire hydrants within the community. Waterlines leaving the hydrants are reduced to lines 6", 4" and 3" in diameter. The size of the water service laterals vary in size from 3/4" to 1".

Adequacy

The water production and storage capacity for the community's water system is adequate. The water treatment facility is treating raw water for peak flows up to 14,000 gpd. The rated capacity of the treatment system is 15,000 gpd, thus the plant is treating well water at its upper limit. The quality of the treated water is adequate.

B. Potential Service Area

Geographically, the Newark Service Area is not in an area of targeted development. However, if any development were to occur it would probably be along US Route 113. The service area could be extended to include a portion of US Route 113 and any concentration of new development adjacent to existing served areas. Also, the community of Newark has a population of approximately 250 residents, yet has only 75 service connections; therefore, all residents are not connected to the municipal supply. Should development along US Route 113 occur and/or several residents desire to tie into the community water supply, the existing treatment plant would have to be upgraded accordingly, as it is now functioning at near full capacity.

C. Water System Development

There are no plans for expansion or upgrading of the existing facilities at this time.

3.2.6 SNOW HILL WATER SYSTEM

A. Existing Water Systems (Figure 3-22)

Ownership

The municipal water service for Snow Hill is owned by the City of Snow Hill and

serves approximately 2200 residents. The supply system includes three water production wells, three water treatment facilities, an elevated water storage tank, and a distribution system composed of water mains and laterals.

Supply and Demand

Currently, three production wells supply the water for Snow Hill. Each of these wells is supplied with individual treatment systems. The wells are drilled into confined aquifers and have yields ranging from 350 to 600 gpm. The Ross Street well is a ten inch diameter well drilled to a depth of 365'. The Washington Street well is ten inches in diameter, drilled to a depth of 350'. The Coulbourne Lane well is twelve inches in diameter drilled to a depth of 367'.

The current average daily water demand for the City is approximately 350,000 gallons.

Storage

Storage for the City's water supply is accomplished in a 200,000 gallon elevated water storage tank located on Washington Street.

Water Quality and Treatment

A water treatment system is provided for each of the wells. The treatment process consists of chlorination and fluoridation.

Distribution System

The distribution system of the Snow Hill water supply is composed of mains, sizes 2" to 8", and service laterals, sizes 1" to 2".

Adequacy

The well production of water to serve the residents appears to be sufficient at the current 1500 gpm total. The existing storage tank, however, is insufficient to supply adequate storage capacity for fire protection and emergency water supply. A minimum guideline for water storage capacity would provide a volume equal to one day's water demand. General engineering practices suggest that storage capacity be equal to approximately two day's water demand.

The distribution system is generally adequate to provide the appropriate volume and pressure to all areas served. However, there are isolated areas where service could be improved through replacement of small diameter mains and elimination of dead ends.

B. Potential Service Area

The City of Snow Hill currently has no bonafide plan to extend the municipal water system to areas adjacent to the City.

Areas adjacent to the City that are being evaluated for potential service include the following:

Market Street East to US Route 113
Bay Street East to US Route 113
Washington Street South to US Route 113
Church Street South to US Route 113
Approximately one mile North on MD Route 12

3.2.7 POCOMOKE CITY WATER SYSTEM

A. Existing Water Systems (Figure 3-27)

Ownership

The Pocomoke City Municipal Water System is owned and operated by Pocomoke City, and services approximately 4,100 residents. The system includes two water supply wells, two water treatment plants, two elevated storage tanks and a water distribution system.

Supply and Demand

The system has two production wells screened in the Pocomoke Aquifer, approximately 150' deep, with one located on 6th Street and another on 8th Street. Historically, these wells have required chemical rehabilitation to maintain yield and efficiency with each producing approximately 300 gpm. In 1992, the 6th Street well did not respond to rehabilitation and now produces about 130 gpm. A new Pocomoke aquifer well began production in mid 1994. It is located on Clarke Avenue near Oak Street and produces approximately 225 gallons per minute.

Storage

Two elevated water storage tanks, one located at 7th St. and the second on the Beltway, are used to provide adequate storage and sufficient operating head for the water system. The elevated storage tanks have a capacity of 300,000 gallons each.

Water Quality and Treatment

The City of Pocomoke is equipped with two water treatment plants to improve the quality of the water from the supply wells. The treatment plants are located adjacent to the production wells on 6th Street and 8th Street. The raw water from the supply wells has high concentrations of iron and manganese. Each treatment plant uses the following chemicals/components to improve the quality of the raw well water: ferro sand filters, chlorination, sodium fluoride, zinc polyphosphate, and potassium permanganate.

Distribution System

The distribution system is comprised of a network of water mains and distribution laterals sufficient to service the 4,100 residents. The water mains vary in size from 4" to 10" and the smaller laterals vary in size from 5/8" to 4". The system experiences rust and corrosion problems caused by iron bacteria. The City has maintained an ongoing flushing program accompanied by periodic superchlorination of the entire distribution system.

Adequacy

The Pocomoke City Water System is considered to be inadequate, due to the loss of supply sources and unacceptable levels of iron after treatment. Iron bacteria in the distribution network also requires attention. Circulation improvements are needed within the distribution system and service laterals require replacement.

B. Potential Service Area

The City has experienced an increased demand for water usage especially at the southern end and in the commercial corridor along U.S. Rt. 13. Additionally an increased emphasis on downtown revitalization, including residential and townhouse construction, will require system improvements. Pocomoke City is also considering expansion of the utility to bordering areas of the community.

C. Water System Development

The City of Pocomoke is currently in the final preconstruction stages of a major water system upgrade. This upgrade includes the construction of the Oak Street production well, two other new wells, replacement of the two existing water treatment facilities with a single new facility, and improvements to the distribution system.

In 1992, the City was experiencing a shortfall of ground water supply due to a drop in production at the 6th Street well. On an emergency basis, one Pocomoke Aquifer well was installed on City property at Clarke Avenue and Oak Street and connected to the system. This well is one of three wells to be installed along Clarke Avenue.

The wells will be approximately 140' deep and screened in the Pocomoke Aquifer. Treatment will consist of iron and manganese removal, disinfection and corrosion/deposition control.

A new Manokin Aquifer well and treatment facility is proposed along US Rt. 13 at the southern end of Town. Water quality data from other wells in the same strata suggest that required treatment will be limited to disinfection. A Pocomoke well may also be needed at this location if the Clarke Avenue sources are less than the demand.

Proposed distribution system improvements consist of installing 6, 8, and 10 inch water mains to improve system looping and eliminate dead ends. Connections from the Broad Street main to the rest of the system will be increased to enhance flow from the Industrial Park (Beltway) elevated storage tank. Older undersized lines in

several areas will be upgraded to provide increased fire protection and better distribution of the treated water from the proposed Clarke Avenue facility. In lieu of replacement, some larger water mains will be cleaned to restore capacity. Another element of the \$3.8 million project will be the installation of new service lines (laterals) to each of the City's approximately 1,500 residential and commercial water customers. Funding for the project will be provided by grants and loans from FmHA and the Maryland Department of the Environment.

3.2.8 RIVER RUN SERVICE AREA

The River Run Service Area receives bulk water service from the Ocean Pines Service Area. At the present time, the developer is constructing the first phase (41 units) as well as the off-site water extensions to the project. Ultimately, upward of 408 units in this development shall receive bulk water service from the Ocean Pines Service Area.

3.2.9 THE LANDINGS SERVICE AREA

The Landings shall be established as a service area. The developer shall build the system and transfer ownership to the Worcester County Commissioners. The project is scheduled to serve 240 units. The developer is also required to extend water lines and provide service to an estimated 60 units in the Lewis Road area.

3.2.10 WEST OCEAN CITY AND ENVIRONS WATER SERVICE AREA

Figure 3-10 illustrates the West Ocean City and Environs Water Service Area. This area has twenty-two (22) water providers. Two (2) providers (Oyster Harbor and Sunset Village) are Community Shared Facilities and eight (8) (Fisherman's Haven, West Ocean City Business Center I and II, Marlin Park Plaza, South Point Village and Myers Siding I & II) are Limited Shared Facilities. The others are privately owned and operated without public supervision. Additionally, the Isle of Wight Development, Captain's Hill Development and other areas with small lots have individual wells. No public water with fire service exists. A regional approach was evaluated in 1985 and is not included in the plan. From a reliability of service, assurance of quality water and a fire protection viewpoint, a regional approach is recommended. The proliferation of small water systems in a relatively small area shall be discouraged.

3.2.11 OYSTER HARBOR

The Oyster Harbor development owns and operates the water system serving the development. The Department of Water and Wastewater Services plans to recommend the establishment of a service area with an agreement to transfer ownership to the Worcester County Commissioners and operation to the Department of Water and Wastewater Services.

3.2.12 BRIDDELLTOWN SERVICE AREA

The Briddelltown Water system is owned by the Worcester County Commissioners and operated by the Department of Water and Wastewater Services. The system serves 48 residential connections in the Briddelltown Community. The service area is not planned for any growth and the existing facilities are considered adequate. Back-up water service for

emergencies is provided by interconnection to the Berlin Water System.

3.2.13 SOUTH POINT VILLAGE

The South Point Village project is currently a Limited Shared Facility serving fourteen (14) units. The facility is privately owned and supervised by the Worcester County Department of Water and Wastewater Services. A planned expansion to serve a total of thirty-six (36) units shall cause the project to become a Community Shared Facility. At that time, a service area and shared facility agreement with the Worcester County Commissioners is required. The County Commissioners shall own this Community Shared Facility which shall be operated by the Department of Water and Wastewater Services.

3.2.14 SUNSET VILLAGE SERVICE AREA

The Sunset Village Water System is owned by the Worcester County Commissioners and operated by the Worcester County Department of Water and Wastewater Services as a Community Shared Facility. The treatment facility consists of a well with softening, Ph adjustment and disinfection. No expansion of the system is planned.

3.2.15 EDGEWATER ACRES SERVICE AREA

A. Existing Water System (See Figure 3-13)

Ownership

The Edgewater Acres water treatment facilities are owned by the Worcester County Commissioners and operated by Richard Rau under a contract with the Worcester County Department of Water and Wastewater Services.

Supply and Demand

A 6 inch diameter well supplying the water system is installed to a depth of 360 feet into the Manokin Aquifer. The maximum yield from the well is 200 GPM. The current pumping capacity, limited by the pump size, is at 70 GPM.

Storage

Water for the system is stored in a single ground level storage tank. In order to provide adequate pressure and supply to all connections, a boosted pump is used to pressurize the distribution system. The existing facilities were designed to serve 36 EDU's in the Nantucket Point Subdivision. It is currently serving 8 EDU's in that subdivision plus an additional 27 EDU's in the Townes of Nantucket townhouse development.

Water Distribution System

The distribution piping ranges in size from 6" to 8" diameter. The piping is located in or adjacent to the street rights-of-way through the Nantucket Point subdivision and the first phase of the Townes of Nantucket development.

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The distribution piping ranges in size from 6" to 8" diameter. The piping is located in or adjacent to the street rights-of-way through the Nantucket Point subdivision and the first phase of the Townes of Nantucket development.

The developer of the Townes of Nantucket, by agreement with the Worcester County Commissioners, plans to expand the existing plant (or construct a separate plant) to provide capacity for the remainder of their development which is currently planned to be a total of 103 EDU's. In addition there are approximately 15 single family lots located along Madison Avenue which were part of the Glenn Acres 2 subdivision, which are also to be served once the additional capacity is available. Thus, the total EDU's to be served is 154.

3.2.16 HOMEPORT SERVICE AREA

The Mystic Harbour Service Area water system is planned to provide water service to the Homeport Marina and other commercial customers such as restaurants and offices plus thirty-two (32) residential lots.

3.2.17 ASSATEAGUE POINTE SERVICE AREA

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The Assateague Pointe Service Area water system is a Community Shared Facility owned by the Worcester County Commissioners and operated under contract by the Assateague Pointe Homeowners Association. The system consists of two (2) wells, water treatment with pH adjustment and disinfection, and a distribution system. Presently, approximately 200 recreational vehicle lots are served and the system is adequate for the build out of 350 lots.

WATER SYSTEM PROFILES

EXISTING WATER SYSTEMS

SYSTEM NAME : OCEAN CITY
 AREA SERVED : OCEAN CITY INLET/DELAWARE LINE
 OWNED BY : MAYOR AND COUNCIL
 OPERATED BY : OCEAN CITY MUNICIPAL WATER DEPARTMENT

POPULATION	:	1990	2000	2010
SERVED (EDU)	:	224,410	261,120	291,510
UNSERVED (EDU)	:	0	0	0
GPCD (EDU)	:	58	58	58

CAPACITY (MGD)	:			
DEMAND	:	13.0	15.1	17.1
PLANNED	:	18.1	18.0	18.1

PRODUCTION WELL(S) :
 WELL NUMBER : 38-45
 AQUIFER : 8 WELLS - MANOKIN; 13 WELLS - OCEAN CITY
 LOCATION :
 DEPTH (FEET) : 280-450
 DIAMETER (") : 10"-16"
 MAX YIELD (GPM) : 495-1400
 WATER QUALITY :

TREATMENT PLANT(S) : FOUR
 TYPE : IRON REMOVAL, WATER SOFTENING, PH ADJUSTMENT,
 AERATION, FILTRATION, COAGULATION AND
 SEDIMENTATION

LOCATION	:	SOUTH ST.	15TH ST.	44TH ST.	GORMAN ST.
RATED CAPACITY	:	3.0 MGD	3.0 MGD	4.0 MGD	8.0 MGD
AVG PRODUCTION	:				
MAX PEAK FLOW	:				
STORAGE CAPACITY	:	TOTAL RATED: 5.55 MG, USEABLE: 5.3 MG			
SLUDGE DISPOSAL	:	SANITARY SEWER			

COMMENTS :
 EXPANSION PLANS : SEE SCHEDULE OF IMPROVEMENTS, SECTION 3.2.1
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENTS, POLICIES :
 ALLOCATION :

EXISTING WATER SYSTEMS

SYSTEM NAME	:	SNOW HILL		
AREA SERVED	:	2200 RESIDENCES IN TOWN		
OWNED BY	:	TOWN OF SNOW HILL		
OPERATED BY	:	RICHARD RAU		
POPULATION	:	1990	2000	2010
SERVED (EDU)	:	2200	2535	2841
UNSERVED (EDU)	:	0	0	0
GPCD (EDU)	:	205	205	205
CAPACITY (MGD)	:			
DEMAND	:	0.45	0.57	0.58
PLANNED	:	1.87	1.87	1.87
PRODUCTION WELL(S)	:			
WELL NUMBER	:	91	92	93
AQUIFER	:	MANOKIN	MANOKIN	MANOKIN
LOCATION	:	129,400/1,261.320	128/1,260	129,1,262
DEPTH (FEET)	:	290	365	370
DIAMETER (")	:	6	10	10
MAX YIELD (GPM)	:	246		
PUMPING CAP (GPM)	:	250-300		
WATER QUALITY	:	GOOD		
TREATMENT PLANT(S)	:			
TYPE	:	CHLO.&FLUOR.	CHLOR.&FLOUR.	
LOCATION	:	AT WELL #92	AT WELL #93	
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:		0.2	
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PLANS	:	MARKET STREET EAST TO U.S. ROUTE 113		
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENTS, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME : NEWARK
 AREA SERVED : 75 RESIDENCES ALONG BOWEN & PATEY WOODS ROADS
 OWNED BY : WORCESTER COUNTY COMMISSIONERS
 OPERATED BY : DEPARTMENT OF WATER AND WASTEWATER SERVICES,
 GARY SERMAN

POPULATION	:	1990	2000	2010
SERVED	:	250	284	322
UNSERVED	:	0	0	0
GPCD (EDU)	:	44	44	44

CAPACITY (MGD)	:			
DEMAND	:	0.011	0.013	0.014
PLANNED	:	0.015	0.015	0.015

PRODUCTION WELL(S) :
 WELL NUMBER : 81 (25) PERMIT #0710098
 AQUIFER : POCOMOKE
 LOCATION : 156,495/1,290,685
 DEPTH (FEET) : 202
 DIAMETER (") : 8
 MAX YIELD (GPM) : 100
 PUMPING CAPACITY : 78 (200)
 WATER QUALITY : GOOD

TREATMENT PLANT(S) :
 TYPE : IRON REM., PH ADJ. & CHLORINATION
 LOCATION : 156,495/1,290,685
 RATED CAPACITY : 0.015
 AVG PRODUCTION : 0.011
 MAX PEAK FLOW : 0.014
 STORAGE CAPACITY : 0.015
 SLUDGE DISPOSAL : PUBLIC SEWER

COMMENTS :
 EXPANSION PLANS : NONE
 PROBLEMS : NONE
 PLANNED IMPROVEMENTS : NONE
 AGREEMENTS, POLICIES :
 ALLOCATION :

EXISTING WATER SYSTEMS

SYSTEM NAME	:	MYSTIC HARBOUR		
AREA SERVED	:	MYSTIC HARBOUR - PRIVATE COMMUNITY		
OWNED BY	:	MYSTIC HARBOUR CORPORATION		
OPERATED BY	:	MYSTIC HARBOUR UTILITIES CORP./RICHARD RAU		
POPULATION	:	1990	2000	2010
SERVED	:	201	590	720
UNSERVED	:	58		
GPCD (EDU)	:	250	250	250
CAPACITY (MGD)	:	0.05	0.148	0.180
DEMAND	:	0.20	0.200	0.200
PLANNED	:			
PRODUCTION WELL(S)	:			
WELL NUMBER	:	61	62	
AQUIFER	:	PLEISTOCENE	PLEISTOCENE	
LOCATION	:	185,337/1,339,873	184,646,1,339,609	
DEPTH (FEET)	:	149 (150+)	140 (139+)	
DIAMETER (")	:	10	10	
MAX YIELD (GPM)	:	357	351	
PUMPING CAP (GPM)	:	335	335	
WATER QUALITY	:	GOOD AFTER TREATMENT		
TREATMENT PLANT(S)	:			
TYPE	:	CHLOR. & PH ADJUSTMENT		
LOCATION	:	185,805/1,339,504		
RATED CAPACITY	:	0.35		
AVG PRODUCTION	:	0.015		
MAX PEAK FLOW	:	0.025		
STORAGE CAPACITY	:	0.5		
SLUDGE DISPOSAL	:	PUBLIC SEWER		
COMMENTS	:			
EXPANSION PROBLEMS	:	NONE		
PROBLEMS	:	NONE		
PLANNED IMPROVEMENTS	:	NONE		
AGREEMENT, POLICIES	:	CONTRACT AGREEMENT TO PROVIDE WATER TO CAPTAIN'S POINT SERVICE AREA		
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME	:	OCEAN PINES			
AREA SERVED	:	OCEAN PINES, RIVER RUN			
OWNED BY	:	WORCESTER COUNTY COMMISSIONERS			
OPERATED BY	:				
POPULATION	:	1990	2000	2010	
SERVED	:	4500	7500	9000	
UNSERVED	:	0			
GPCD (EDU)	:	250	250	250	
CAPACITY (MGD)	:				
DEMAND	:	.50	.672	.682	
PLANNED	:	2.0	2.5	2.5	
PRODUCTION WELL(S)	:				
WELL NUMBER	:	16	17	18	19
AQUIFER	:	PLEISTOCENE	PLEISTOCENE		
LOCATION	:	206/1,325	208/1,324	208/1,322	209/1,324
DEPTH (FEET)	:	110	117	105	105
DIAMETER (")	:		20		20
MAX YIELD (GPM)	:		500		500
PUMPING CAP (GPM)	:	500	500		500
WATER QUALITY	:	ACIDIC	ACIDIC		
PRODUCTION WELLS	:				
WELL NUMBER	:	LAKE WELL	G.C. WELL #1	G.C. WELL #2	
ACQUIFER	:	PLEISTOCENE	PLEISTOCENE	PLEISTOCENE	
LOCATION (N/E)	:	206/1323	204/1337	203/1338	
DEPTH (FEET)	:	91'	110'	110'	
DIAMETER (")	:	4' DIAMETER	8" DIAMETER	8" DIAMETER	
MAX YIELD (GPM)	:	60 GPM	503 GPM	503 GPM	
TREATMENT PLANT(S)	:				
TYPE	:	PH ADJ. & DISINFECTION		DISINFECTION	
LOCATION	:	AT WELLS			
RATED CAPACITY	:	2.0	(APPROPRIATION PERMIT ALLOWS 1.0 MGD AVERAGE AND 1.66 MGD FOR MAXIMUM MONTH)		
AVG PRODUCTION	:	.70			
MAX PEAK FLOW	:	5 EST.			
STORAGE CAPACITY	:	.765 (0.5)			
SLUDGE DISPOSAL	:				
COMMENTS	:				
EXPANSION PROBLEMS	:	.5 MG STORAGE TANK			
PROBLEMS	:				
PLANNED IMPROVEMENTS	:				
AGREEMENT, POLICIES	:	CONTACT AGREEMENT TO SERVE 408 EDU OF RIVER RUN			
ALLOCATION	:				

EXISTING WATER SYSTEMS

SYSTEM NAME	:	BERLIN		
AREA SERVED	:	1118 CONNECTIONS		
OWNED BY	:	TOWN OF BERLIN		
OPERATED BY	:	TOWN OF BERLIN - CHARLES JOHNSON		
POPULATION	:	1990	2000	2010
SERVED	:	2656	3500	5100
UNSERVED	:	0		
GPCD (EDU)	:	218	218	218
CAPACITY (MGD)	:			
DEMAND	:	0.57	0.76	1.11
PLANNED	:	0.89	0.89	0.89
PRODUCTION WELL(S)	:			
WELL NUMBER	:	20	21	22
AQUIFER	:	PLEISTOCENE	PLEISTOCENE	PLEISTOCENE
LOCATION	:	185,280/1,311,320	184,700/1,312,375	186,180/1,310
DEPTH (FEET)	:	122 FT.	115 FT.	134 FT.
DIAMETER (")	:	18"	12"	10"
MAX YIELD (GPM)	:	1500 GPM	600 GPM	344 GPM
PUMPING CAP (GPM)	:	1100 GPM	500 GPM	240 GPM
WATER QUALITY	:	GOOD; NITRATES 4.0 PPM		
TREATMENT PLANT(S)	:			
TYPE	:	CHLOR (LIME)		
LOCATION	:	AT EACH WELL		
RATED CAPACITY	:	0.89		
		0.57		
AVG PRODUCTION	:	0.86		
MAX PEAK FLOW	:	.117 & .250		
STORAGE CAPACITY	:	N/A		
SLUDGE DISPOSAL	:	N/A		
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME	:	POCOMOKE CITY		
AREA SERVED	:	ENTIRE POCOMOKE CITY		
OWNED BY	:	POCOMOKE CITY		
OPERATED BY	:	POCOMOKE CITY		
POPULATION SERVED	:	1990	2000	2010
	:	4100	6700	6700
UNSERVED	:	0		
GPCD (EDU)	:	118	118	118
CAPACITY (MGD)	:			
DEMAND	:	0.45	0.51	0.58
PLANNED	:	1.00	1.00	1.00
PRODUCTION WELL(S)	:			
WELL NUMBER	:	101-103	104	
AQUIFER	:	POCOMOKE	POCOMOKE	
LOCATION	:	88,980/1,21,745	89,630/1,214,540	
DEPTH (FEET)	:	160	140	
DIAMETER (")	:		10	
MAX YIELD (GPM)	:	300	380	
PUMPING CAP (GPM)	:	645	280	
WATER QUALITY	:	IRONY		
TREATMENT PLANT(S)	:			
TYPE	:	AER., IRON REM., FLOUR. CHLOR. ZN. POLYPHOSPHATE		
LOCATION	:	88,980/1,212,745 ;	89,630/1,214,540	
RATED CAPACITY	:	1.97		
AVG PRODUCTION	:	0.5		
MAX PEAK FLOW	:	0.6		
STORAGE CAPACITY	:	0.3	0.3	
SLUDGE DISPOSAL	:	N/A	N/A	
COMMENTS	:			
EXPANSION PROBLEMS	:	NONE		
PROBLEMS	:	WELL #6 COLLAPSED		
PLANNED IMPROVEMENTS	:	REPLACE WELL #6 WITH THE NEW WELL; REPLACE TWO EXISTING TREATMENT FACILITIES WITH ONE TO TREAT 1.0 MGD.		
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME : MILL POND
 AREA SERVED : 26 SINGLE FAMILY LOTS
 OWNED BY : SELBYVILLE, DELAWARE MUNICIPAL WATER SYSTEM
 OPERATED BY :

POPULATION	:	1990	2000	2010
SERVED	:	26	26	26
UNSERVED	:	0		
GPCD (EDU)	:	300	300	300

CAPACITY (MGD)	:			
DEMAND	:	0.0078	0.0078	0.0078
PLANNED	:	0.0078	0.0078	0.0078

PRODUCTION WELL(S) :
 WELL NUMBER : 1
 AQUIFER :
 LOCATION : 230,000/1,312,000
 DEPTH (FEET) :
 DIAMETER (") :
 MAX YIELD (GPM) :
 PUMPING CAP (GPM) :
 WATER QUALITY :

TREATMENT PLANT(S) :
 TYPE : 230,000/1,312,000
 LOCATION :
 RATED CAPACITY :
 AVG PRODUCTION :
 MAX PEAK FLOW :
 STORAGE CAPACITY :
 SLUDGE DISPOSAL :

COMMENTS :
 EXPANSION PROBLEMS :
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENT, POLICIES :
 ALLOCATION :

EXISTING WATER SYSTEMS

SYSTEM NAME	:	FRONTIER TOWN		
AREA SERVED	:	FRONTIER TOWN CAMPGROUND AND AMUSEMENT FACILITIES		
OWNED BY	:	PARKEL CORPORATION (5/85)		
OPERATED BY	:			
POPULATION SERVED	:	1990	2000	2010
UNSERVED	:	584	584	584
GPCD (EDU)	:	0		
	:	90	90	90
CAPACITY (MGD)	:			
DEMAND	:	0.053	0.053	0.053
PLANNED	:	0.053	0.053	0.053
PRODUCTION WELL(S)	:			
WELL NUMBER	:	65 (W061G010)	66 (W061G210)	67 (W061G210)
AQUIFER	:	PLEISTOCENE	PLEISTOCENE	PLEISTOCENE
LOCATION	:	172/1,333	173/1,332	171/1331
DEPTH (FEET)	:	110'	115'	115'
DIAMETER (")	:	4"	4"	4"
MAX YIELD (GPM)	:			
PUMPING CAP (GPM)	:			
WATER QUALITY	:	IRONY		
TREATMENT PLANT(S)	:			
TYPE	:	IRON REMOVAL		
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME	:	SHANTYTOWN		
AREA SERVED	:	SHANTYTOWN SHOPPING AREA		
OWNED BY	:	SHANTYTOWN LIMITED PARTNERSHIP		
OPERATED BY	:			
POPULATION SERVED	:	1990	2000	2010
UNSERVED	:			
GPCD (EDU)	:			
CAPACITY (MGD)	:			
DEMAND	:			
PLANNED	:			
PRODUCTION WELL(S)	:			
WELL NUMBER	:	153 (W075G006)	154 (W089G026)	
AQUIFER	:	PLEISTOCENE	PLEISTOCENE	
LOCATION	:	187,000/1,346,000	187,000/1,346,000	
DEPTH (FEET)	:	?	93'	
DIAMETER (")	:	6"	4"	
MAX YIELD (GPM)	:			
PUMPING CAP (GPM)	:			
WATER QUALITY	:			
TREATMENT PLANT(S)	:			
TYPE	:			
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:		0.01	
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME : EDGEWATER ACRES
 AREA SERVED : NANTUCKET POINT/TOWNES OF NANTUCKET
 OWNED BY : WORCESTER COUNTY COMMISSIONERS
 OPERATED BY : RICHARD RAU BY CONTRACT WITH AND UNDER THE
 SUPERVISION OF THE DEPARTMENT OF WATER AND
 WASTEWATER SERVICES

POPULATION	:	1992	2000	2010
SERVED	:	36	154	154
UNSERVED	:			
GPCD (EDU)	:	300	300	300

CAPACITY (MGD)	:			
DEMAND	:	0.018	0.06	0.12
PLANNED	:	0.05	0.108	0.12

PRODUCTION WELL(S) :
 WELL NUMBER : W082GAP016
 AQUIFER : MANOKIN
 LOCATION : NANTUCKET
 DEPTH (FEET) : 360
 DIAMETER (") : 6
 MAX YIELD (GPM) : 200
 PUMPING CAP (GPM) : 70
 WATER QUALITY : IRON, LOW PH

TREATMENT PLANT(S) :
 TYPE : IRON REM., PH & CHLOR.
 LOCATION : NANTUCKET
 RATED CAPACITY : 192
 AVG PRODUCTION : 70
 MAX PEAK FLOW : 150
 STORAGE CAPACITY : .010 EXIS. - .050 PLND.
 SLUDGE DISPOSAL : N/A

COMMENTS :
 EXPANSION PROBLEMS : TO 150 GPM WITHIN 2 YEARS
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENT, POLICIES :
 ALLOCATION :

EXISTING WATER SYSTEMS

SYSTEM NAME	:	ST. MARTINS BY THE BAY		
AREA SERVED	:	RESIDENTIAL		
OWNED BY	:	ST. MARTINS GROUP		
OPERATED BY	:	BILL KILLROY		
POPULATION	:	1990	2000	2010
SERVED	:	17	52	65
UNSERVED	:			
GPCD (EDU)	:		300	300
CAPACITY (MGD)	:			
DEMAND	:	0.005	0.0156	0.02
PLANNED	:	0.02	0.02	0.02
PRODUCTION WELL(S)	:			
WELL NUMBER	:	63 (W083G006)		
AQUIFER	:	POCOMOKE		
LOCATION	:	213,000/1,325,000		
DEPTH (FEET)	:	158'		
DIAMETER (")	:	6"		
MAX YIELD (GPM)	:			
PUMPING CAP (GPM)	:			
WATER QUALITY	:			
TREATMENT PLANT(S)	:			
TYPE	:	DISIN. & CORR. CONT. IRON EXCHANGE		
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:	0.004		
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME : OYSTER HARBOR
 AREA SERVED : 244 CONNECTIONS
 OWNED BY : BMI INVESTMENT INC. (WEST OCEAN CITY DEVELOPMENT)
 OPERATED BY : DEVELOPER

POPULATION	:	1990	2000	2010
SERVED	:	90	242	242
UNSERVED	:	0	0	0
GPCD (EDU)	:	280		

CAPACITY (MGD)	:			
DEMAND	:	0.06	0.06	0.06
PLANNED	:	0.061	0.061	0.061

PRODUCTION WELL(S) :
 WELL NUMBER : W0088G028 (5/910) EXPIRATION 05/01/2003
 AQUIFER : MANOKIN
 LOCATION : 193,000/1,341,000
 DEPTH (FEET) : 362'
 DIAMETER (") : 8"
 MAX YIELD (GPM) : 143
 PUMPING CAP (GPM) :
 WATER QUALITY : HIGH IRON

TREATMENT PLANT(S) :
 TYPE :
 LOCATION :
 RATED CAPACITY :
 AVG PRODUCTION :
 MAX PEAK FLOW :
 STORAGE CAPACITY : 0.042
 SLUDGE DISPOSAL : TO SEWER

COMMENTS :
 EXPANSION PROBLEMS :
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENT, POLICIES :
 ALLOCATION :

EXISTING WATER SYSTEMS

SYSTEM NAME	:	BRIDDLTOWN		
AREA SERVED	:	MUNICIPAL SUPPLY AND PARK IRRIGATION		
OWNED BY	:	WORCESTER COUNTY COMMISSIONERS		
OPERATED BY	:	DEPARTMENT OF WATER AND WASTEWATER SERVICES, GARY SERMAN		
POPULATION SERVED	:	1990	2000	2010
UNSERVED	:	48	48	48
GPCD (EDU)	:	0		
	:	300	300	300
CAPACITY (MGD)	:			
DEMAND	:	0.014	0.014	0.014
PLANNED	:	0.03	0.03	0.03
PRODUCTION WELL(S)	:			
WELL NUMBER	:	25 (W086G026) (1/91)		
AQUIFER	:	PLEISTOCENE		
LOCATION	:	187,000/1,316,000		
DEPTH (FEET)	:	175'		
DIAMETER (")	:	6"		
MAX YIELD (GPM)	:			
PUMPING CAP (GPM)	:			
WATER QUALITY	:			
TREATMENT PLANT(S)	:			
TYPE	:	IRON REM. & PH ADJUSTMENT		
LOCATION	:			
RATED CAPACITY	:	0.3		
AVG PRODUCTION	:	0.014		
MAX PEAK FLOW	:	0.016		
STORAGE CAPACITY	:	.001 HPT		
SLUDGE DISPOSAL	:	SEPTIC FIELD		
COMMENTS	:			
EXPANSION PROBLEMS	:	NONE		
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:	BACK-UP WATER SERVICE FOR EMERGENCIES IS PROVIDED BY INTERCONNECTING TO THE BERLIN WATER SYSTEM		
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME : SOUTH POINT VILLAGE
 AREA SERVED : CONDOMINIUMS, 36 UNITS
 OWNED BY : AL MELSON
 OPERATED BY : PRIVATE, WITH SUPERVISION BY DEPARTMENT OF WATER AND WASTEWATER SERVICES

POPULATION SERVED	:	1990	2000	2010
UNSERVED	:	14	36	36
GPCD (EDU)	:	0		
	:	280	280	280

CAPACITY (MGD) DEMAND	:			
PLANNED	:	0.009	0.01	0.01
	:	0.01	0.01	0.01

PRODUCTION WELL(S) :
 WELL NUMBER : 107 (GAP W086/G207, EXPIRES 5/1/1999)
 AQUIFER : POCOMOKE
 LOCATION : 188,000/1,340,000
 DEPTH (FEET) : 140'
 DIAMETER (") : 4"
 MAX YIELD (GPM) : 70+
 PUMPING CAP (GPM) :
 WATER QUALITY :

TREATMENT PLANT(S) :
 TYPE :
 LOCATION : 188,000/1,340,000
 RATED CAPACITY : 0.01
 AVG PRODUCTION : 0.009
 MAX PEAK FLOW : 0.0017
 STORAGE CAPACITY : 0
 SLUDGE DISPOSAL :

COMMENTS :
 EXPANSION PROBLEMS : PLANNED WTP
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENT, POLICIES :
 ALLOCATION :

EXISTING WATER SYSTEMS

SYSTEM NAME : SUNSET VILLAGE
 AREA SERVED : SUNSET VILLAGE CONDOMINIUM, 84 UNITS
 OWNED BY : WORCESTER COUNTY COMMISSIONERS
 OPERATED BY : DEPARTMENT OF WATER AND WASTEWATER SERVICES,
 GARY SERMAN

POPULATION	:	1992	2000	2010
SERVED	:	84	84	84
UNSERVED	:			
GPCD (EDU)	:	280	280	280

CAPACITY (MGD)	:			
DEMAND	:	0.0035	0.02	0.025
PLANNED	:	0.02	0.025	0.025

PRODUCTION WELL(S) :
 WELL NUMBER : W00660078 (GAP W088G007, EXPIRES 8/7/2001)
 AQUIFER : OCEAN CITY
 LOCATION : 185,000/1,340,000
 DEPTH (FEET) : 301'
 DIAMETER (") : 6"
 MAX YIELD (GPM) :
 PUMPING CAP (GPM) :
 WATER QUALITY :

TREATMENT PLANT(S) :
 TYPE :
 LOCATION :
 RATED CAPACITY :
 AVG PRODUCTION :
 MAX PEAK FLOW :
 STORAGE CAPACITY : 0.015
 SLUDGE DISPOSAL :

COMMENTS :
 EXPANSION PROBLEMS :
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENT, POLICIES :
 ALLOCATION :

EXISTING WATER SYSTEMS

SYSTEM NAME : SUNSET WEST
 AREA SERVED : SUNSET WEST TWO-FAMILY DEVELOPMENT (10 UNITS)
 OWNED BY : PURNELL, INC.
 OPERATED BY : RICHARD RAU

POPULATION	:	1990	2000	2010
SERVED	:	0	10	10
UNSERVED	:			
GPCD (EDU)	:	280	280	280

CAPACITY (MGD)	:			
DEMAND	:	.0028	.0028	.0028
PLANNED	:			

PRODUCTION WELL(S) :
 WELL NUMBER : W089G014
 AQUIFER : OCEAN CITY/MANOKIN
 LOCATION : 189,000/1,338,000
 DEPTH (FEET) : 260
 DIAMETER (") : 4
 MAX YIELD (GPM) : 20
 PUMPING CAP (GPM) :
 WATER QUALITY : GOOD, ORN .69 PPM

TREATMENT PLANT(S) : #0024
 TYPE : IRON EXCHANGE/DISINFECTION
 LOCATION :
 RATED CAPACITY :
 AVG PRODUCTION :
 MAX PEAK FLOW :
 STORAGE CAPACITY : PNEUMATIC TANKS
 SLUDGE DISPOSAL :

COMMENTS :
 EXPANSION PROBLEMS :
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENT, POLICIES :
 ALLOCATION :

EXISTING WATER SYSTEMS

SYSTEM NAME	:	ASSATEAGUE POINTE		
AREA SERVED	:	ASSATEAGUE POINTE		
OWNED BY	:	WORCESTER COUNTY COMMISSIONERS		
OPERATED BY	:	DEPARTMENT OF WATER AND WASTEWATER SERVICES		
POPULATION SERVED	:	1992	2000	2010
UNSERVED	:	201	583	583
GPCD (EDU)	:	0		
	:	110	110	110
CAPACITY (MGD) DEMAND	:	0.003	0.021	0.032
PLANNED	:	0.022	0.035	0.064
PRODUCTION WELL(S)	:			
WELL NUMBER	:	114 (127) (W088G018) (9/2003)		115 (128)
AQUIFER	:	OCEAN CITY		
LOCATION	:	172,000/1,335,000		
DEPTH (FEET)	:	306		
DIAMETER (")	:	8		
MAX YIELD (GPM)	:	150		150
PUMPING CAP (GPM)	:			
WATER QUALITY	:			
TREATMENT PLANT(S)	:			
TYPE	:			
LOCATION	:	172,000/1,335,000		
RATED CAPACITY	:			
AVG PRODUCTION	:	.064 PROP.		
MAX PEAK FLOW	:			
STORAGE CAPACITY	:	.005 (AMMD. SHOW .018)		
SLUDGE DISPOSAL	:			
COMMENTS	:	GAP PERMIT NO. W088G018 (EXPIRES 9/1/2003)		
EXPANSION PROBLEMS	:	2 WELLS - MANOKIN		
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:	PROBLEMS APPARENTLY EXIST IN THE AREA WITH GROUNDWATER POLLUTION FROM FAILING SEPTIC SYSTEMS, IN PARTICULAR THE SUBDIVISION OF SNUG HARBOR. THE COUNTY COMMISSIONERS SHOULD INVESTIGATE POTENTIAL ALTERNATIVE SERVICE ARRANGEMENTS, INCLUDING THE POSSIBILITY OF SERVICE UTILITIZING THE ASSATEAGUE POINTE TREATMENT PLANT.		
ALLOCATION	:	522 EDUs ARE FOR INDIVIDUAL LOTS, WITH REMAINING 61 EDUs ALLOCATED TO THE SITE'S COMMERCIAL PROPERTY.		

EXISTING WATER SYSTEMS

SYSTEM NAME : SEA GULL TRAILER COURT
 AREA SERVED : TRAILER PARK
 OWNED BY : DR. ARMAND HALL
 OPERATED BY :

POPULATION	:	1990	2000	2010
SERVED	:	45	45	45
UNSERVED	:	0		
GPCD (EDU)	:	280	280	280

CAPACITY (MGD)	:			
DEMAND	:	0.0135	0.0135	0.0135
PLANNED	:	0.0135	0.0135	0.0135

PRODUCTION WELL(S) :
 WELL NUMBER : 32
 AQUIFER : PLEISTOCENE
 LOCATION : 189,240/1,341,637
 DEPTH (FEET) : 100
 DIAMETER (") : 2
 MAX YIELD (GPM) : 20
 PUMPING CAP (GPM) :
 WATER QUALITY :

TREATMENT PLANT(S) :
 TYPE :
 LOCATION :
 RATED CAPACITY :
 AVG PRODUCTION :
 MAX PEAK FLOW :
 STORAGE CAPACITY :
 SLUDGE DISPOSAL :

COMMENTS :
 EXPANSION PROBLEMS :
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENT, POLICIES :
 ALLOCATION :

EXISTING WATER SYSTEMS

SYSTEM NAME	:	SUNSET LAKES MOBILE HOME PARK		
AREA SERVED	:			
OWNED BY	:	ROBERT L. CLARK		
OPERATED BY	:	NO CERTIFIED OPERATOR		
POPULATION	:	1990	2000	2010
SERVED	:	34	34	34
UNSERVED	:	0		
GPCD (EDU)	:	300	300	300
CAPACITY (MGD)	:			
DEMAND	:	0.0102	0.0102	0.0102
PLANNED	:	0.0102	0.0102	0.0102
PRODUCTION WELL(S)	:			
WELL NUMBER	:	146 (W086G008) (4/86)		
AQUIFER	:	MANOKIN	QUATERNARY	QUATERNARY
LOCATION	:	173,000/1,316,000	179,000/1,315,000	179,000/1,315,000
DEPTH (FEET)	:	270'	76'	76'
DIAMETER (")	:	4"	2"	2"
MAX YIELD (GPM)	:			
PUMPING CAP (GPM)	:	40	40	
WATER QUALITY	:	UNKNOWN		
TREATMENT PLANT(S)	:			
TYPE	:	ION EXCHANGE		
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:	2-100 GALLON TANKS		
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME	:	VILLA NOVA CONDO		
AREA SERVED	:			
OWNED BY	:	VILLA NOVA CONDOMINIUM ASSOCIATION		
OPERATED BY	:			
POPULATION	:	1990	2000	2010
SERVED	:	36	36	36
UNSERVED	:	0		
GPCD (EDU)	:	280	280	280
CAPACITY (MGD)	:			
DEMAND	:	0.009	0.009	0.009
PLANNED	:	0.009	0.009	0.009
PRODUCTION WELL(S)	:			
WELL NUMBER	:	106 (W063G0005) (3/86)		
AQUIFER	:	QUATERNARY		
LOCATION	:	187,000/1,342,000		
DEPTH (FEET)	:	85'		
DIAMETER (")	:	4"		
MAX YIELD (GPM)	:			
PUMPING CAP (GPM)	:			
WATER QUALITY	:			
TREATMENT PLANT(S)	:			
TYPE	:			
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME	:	EAGLE'S NEST BY THE BAY TRAILER PARK		
AREA SERVED	:			
OWNED BY	:	NEST, INC. (5/91) - ROBERT FENTON		
OPERATED BY	:			
POPULATION SERVED	:	1990	2000	2010
UNSERVED	:	42	42	42
GPCD (EDU)	:	0		
	:	300	300	300
CAPACITY (MGD) DEMAND	:	0.013	0.013	0.013
PLANNED	:	0.013	0.013	0.013
PRODUCTION WELL(S)	:			
WELL NUMBER	:	77/78 (W091G009)		
AQUIFER	:	MANOKIN		
LOCATION	:	176,230/1,339,821		
DEPTH (FEET)	:	300'		
DIAMETER (")	:	4"		
MAX YIELD (GPM)	:			
PUMPING CAP (GPM)	:			
WATER QUALITY	:			
TREATMENT PLANT(S)	:			
TYPE	:	DISINFECTION		
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:	250 GAL (2 HYDRO)		
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME	:	DELMARVA DOWNS		
AREA SERVED	:			
OWNED BY	:	OCEAN DOWNS RACING ASSOCIATION (6/87)		
OPERATED BY	:			
POPULATION SERVED	:	1990	2000	2010
UNSERVED	:			
GPCD (EDU)	:			
CAPACITY (MGD)	:			
DEMAND	:	0.01	0.01	0.01
PLANNED	:	0.01	0.01	0.01
PRODUCTION WELL(S)	:			
WELL NUMBER	:	28 (W067G005)	29 (W067G105)	
AQUIFER	:	PLEISTOCENE	PLEISTOCENE	POCOMOKE
LOCATION	:	193,538/1,324,758	194/1326	
DEPTH (FEET)	:	100'	97 96	210'
DIAMETER (")	:	6"	4 4	8"
MAX YIELD (GPM)	:		200 65	
PUMPING CAP (GPM)	:	70	50 50	
WATER QUALITY	:	UNKNOWN		
TREATMENT PLANT(S)	:			
TYPE	:	NONE		
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:	2-100 GALLON TANKS		
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME	:	DELMARVA TRAILER PARK		
AREA SERVED	:			
OWNED BY	:	JERRY CAUFMAN, DELMARVA PARK, INC. (8/84)		
OPERATED BY	:			
POPULATION	:	1992	2000	2010
SERVED	:	83	83	83
UNSERVED	:	0		
GPCD (EDU)	:	280	280	280
CAPACITY (MGD)	:			
DEMAND	:	0.01-.02	0.013	0.013
PLANNED	:	0.01-.02	0.013	0.013
PRODUCTION WELL(S)	:			
WELL NUMBER	:	147 (W081G022)		148
AQUIFER	:	QUATERNARY		
LOCATION	:	185,000/1,342,000		
DEPTH (FEET)	:	63		112
DIAMETER (")	:	2		4
MAX YIELD (GPM)	:			200 65
PUMPING CAP (GPM)	:	40		30
WATER QUALITY	:	UNKNOWN		UNKNOWN
TREATMENT PLANT(S)	:			
TYPE	:	DISINFECTION, IRON		
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:	250 GAL (2 HYDRO)		
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME : GREENRIDGE TRAILER PARK
 AREA SERVED :
 OWNED BY : ROBERT L. CLARK (8/81)
 OPERATED BY :

POPULATION	:	1990	2000	2010
SERVED	:	66	66	66
UNSERVED	:	0		
GPCD (EDU)	:	280	280	280

CAPACITY (MGD)	:			
DEMAND	:	0.018	0.018	0.018
PLANNED	:	0.018	0.018	0.018

PRODUCTION WELL(S) :
 WELL NUMBER : 150 (W081G013)
 AQUIFER : QUATERNARY
 LOCATION : 188,000/338,000
 DEPTH (FEET) : 80
 DIAMETER (") : 4
 MAX YIELD (GPM) :
 PUMPING CAP (GPM) : 50
 WATER QUALITY : UNKNOWN

TREATMENT PLANT(S) :
 TYPE : DISINFECTION, ION
 LOCATION :
 RATED CAPACITY :
 AVG PRODUCTION :
 MAX PEAK FLOW :
 STORAGE CAPACITY : 250 GAL (2 HYDRO)
 SLUDGE DISPOSAL :

COMMENTS :
 EXPANSION PROBLEMS :
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENT, POLICIES :
 ALLOCATION :

EXISTING WATER SYSTEMS

SYSTEM NAME	:	EAGLES NEST TRAILER PARK		
AREA SERVED	:			
OWNED BY	:	THE NEST, INC. (5/91) - ROBERT FENTON		
OPERATED BY	:			
POPULATION	:	1990	2000	2010
SERVED	:	324	324	324
UNSERVED	:	0		
GPCD (EDU)	:	300/TRLR	300/TRLR	300/TRLR
	:	140/CMPS	140/CMPS	140/CMPS
CAPACITY (MGD)	:			
DEMAND	:	0.058	0.058	0.058
PLANNED	:	0.058	0.058	0.058
PRODUCTION WELL(S)	:			
WELL NUMBER	:	73 (W071G002	74/75/76	
AQUIFER	:	MANOKIN	MANOKIN	
LOCATION	:	188,000/388,000	176,864/1,339,504	
DEPTH (FEET)	:	300	300	
DIAMETER (")	:	4"	4"	
MAX YIELD (GPM)	:	70	62/64/64	
PUMPING CAP (GPM)	:			
WATER QUALITY	:	GOOD; LOW IRON		
TREATMENT PLANT(S)	:			
TYPE	:	DISINFECTION		
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:	250 GAL (2 HYDRO)		
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME	:	RIVERVIEW MOBILE HOME PARK		
AREA SERVED	:	RIVERVIEW MOBILE HOME PARK		
OWNED BY	:	JAMES LATCHUM (10/89)		
OPERATED BY	:	RICHARD RAU		
POPULATION	:	1990	2000	2010
SERVED	:	66 (56)	66	66
UNSERVED	:	0		
GPCD (EDU)	:	300 (90)	300	300
CAPACITY (MGD)	:			
DEMAND	:	0.0198	0.0198	0.0198
PLANNED	:	0.0198	0.0198	0.0198
PRODUCTION WELL(S)	:			
WELL NUMBER	:	3 (W083G011)		
AQUIFER	:	MANOKIN		
LOCATION	:	221,000/1,319,000		
DEPTH (FEET)	:	295		
DIAMETER (")	:	4		
MAX YIELD (GPM)	:	40		
PUMPING CAP (GPM)	:	30 (30)		
WATER QUALITY	:			
TREATMENT PLANT(S)	:			
TYPE	:	FILTRATION		
LOCATION	:			
RATED CAPACITY	:	(MGD) 0.043		
AVG PRODUCTION	:	0.005		
MAX PEAK FLOW	:	(MGD) 0.0013		
STORAGE CAPACITY	:	(MG) 0.004		
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME	:	NASSAWANGO GOLF COURSE		
AREA SERVED	:			
OWNED BY	:	NASSAWANGO COUNTRY CLUB, INC.		
OPERATED BY	:			
POPULATION	:	1990	2000	2010
SERVED	:			
UNSERVED	:			
GPCD (EDU)	:			
CAPACITY (MGD)	:			
DEMAND	:	0.005	0.005	0.005
PLANNED	:	0.005	0.005	0.005
PRODUCTION WELL(S)	:			
WELL NUMBER	:	159	160	
AQUIFER	:	MANOKIN		
LOCATION	:	116,000/1,242,999	115,000/1,240,000	
DEPTH (FEET)	:	300	57	
DIAMETER (")	:	4	6	
MAX YIELD (GPM)	:			
PUMPING CAP (GPM)	:	35	50	
WATER QUALITY	:			
TREATMENT PLANT(S)	:			
TYPE	:			
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME : PINE SHORES GOLF COURSE
 AREA SERVED :
 OWNED BY : AL JANIS
 OPERATED BY :

POPULATION : 1990 2000 2010
 SERVED :
 UNSERVED :
 GPCD (EDU) :

CAPACITY (MGD) :
 DEMAND : 0.0075 0.0075 0.0075
 PLANNED : 0.0075 0.0075 0.0075

PRODUCTION WELL(S) :
 WELL NUMBER : 141 (W079G004) (10/) 142
 AQUIFER : QUATERNARY QUATERNARY
 LOCATION : 209,000/1,321,000 205,000/1,320,000
 DEPTH (FEET) : 115 97
 DIAMETER (") : 4 4
 MAX YIELD (GPM) :
 PUMPING CAP (GPM) : 50 80
 WATER QUALITY :

TREATMENT PLANT(S) :
 TYPE :
 LOCATION :
 RATED CAPACITY :
 AVG PRODUCTION :
 MAX PEAK FLOW :
 STORAGE CAPACITY :
 SLUDGE DISPOSAL :

COMMENTS :
 EXPANSION PROBLEMS :
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENT, POLICIES :
 ALLOCATION :

EXISTING WATER SYSTEMS

SYSTEM NAME	:	BAY CLUB GOLF COURSE		
AREA SERVED	:			
OWNED BY	:	HANK MAJEWSKI (2/89)		
OPERATED BY	:			
POPULATION SERVED	:	1990	2000	2010
UNSERVED	:			
GPCD (EDU)	:			
CAPACITY (MGD) DEMAND	:	0.005	0.005	0.005
PLANNED	:	0.005	0.005	0.005
PRODUCTION WELL(S)	:			
WELL NUMBER	:	143 (W088G005)	144 (W088G105)	CLUBHOUSE
AQUIFER	:	QUATERNARY	QUATERNARY	
LOCATION	:	185,000/1,301,000	186,000/1,301,000	
DEPTH (FEET)	:	70'	110'	
DIAMETER (")	:	8"	4"	
MAX YIELD (GPM)	:			
PUMPING CAP (GPM)	:			
WATER QUALITY	:	IRONY		
TREATMENT PLANT(S)	:			
TYPE	:			
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME : EAGLES LANDING GOLF COURSE
 AREA SERVED :
 OWNED BY : MAYOR AND COUNCIL OF OCEAN CITY
 OPERATED BY :

POPULATION : 1990 2000 2010
 SERVED :
 UNSERVED :
 GPCD (EDU) :

CAPACITY (MGD) :
 DEMAND : 0.005 0.005 0.005
 PLANNED : 0.005 0.005 0.005

PRODUCTION WELL(S) :
 WELL NUMBER : 157 (W089G030) 150 (W089G130 & W089G030)
 AQUIFER : OCEAN CITY PLEISTOCENE - IRRIGATION WELL
 LOCATION : 177,000/1,337,000 177,000/1,337,000
 DEPTH (FEET) : 280' 95'
 DIAMETER (") : 4" 6"
 MAX YIELD (GPM) :
 PUMPING CAP (GPM) :
 WATER QUALITY : GOOD; IRON .33 PPM

TREATMENT PLANT(S) :
 TYPE :
 LOCATION :
 RATED CAPACITY :
 AVG PRODUCTION :
 MAX PEAK FLOW :
 STORAGE CAPACITY :
 SLUDGE DISPOSAL :

COMMENTS :
 EXPANSION PROBLEMS :
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENT, POLICIES :
 ALLOCATION :

EXISTING WATER SYSTEMS

SYSTEM NAME : POCOMOKE RIVER STATE FOREST AND PARK
 AREA SERVED : SHAD LANDING
 OWNED BY : STATE OF MARYLAND, DEPARTMENT OF NATURAL
 RESOURCES
 OPERATED BY :

POPULATION SERVED	:	1990	2000	2010
UNSERVED	:	15	30	30
GPCD (EDU)	:			

CAPACITY (MGD)	:			
DEMAND	:	0.015		
PLANNED	:	0.03	0.03	0.03

PRODUCTION WELL(S) :
 WELL NUMBER : 100
 AQUIFER : MANOKIN
 LOCATION : N155.122 E1,249,081
 DEPTH (FEET) : 342
 DIAMETER (") : 8
 MAX YIELD (GPM) : 234
 PUMPING CAP (GPM) : 200
 WATER QUALITY : GOOD; INCREASING CHLORIDES

TREATMENT PLANT(S) :
 TYPE :
 LOCATION :
 RATED CAPACITY :
 AVG PRODUCTION :
 MAX PEAK FLOW :
 STORAGE CAPACITY :
 SLUDGE DISPOSAL :

COMMENTS :
 EXPANSION PROBLEMS :
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENT, POLICIES :
 ALLOCATION :

EXISTING WATER SYSTEMS

SYSTEM NAME	:	POCOMOKE RIVER STATE FOREST AND PARK		
AREA SERVED	:	MILBURN LANDING		
OWNED BY	:	STATE OF MARYLAND, DEPARTMENT OF NATURAL RESOURCES		
OPERATED BY	:			
POPULATION SERVED	:	1990	2000	2010
UNSERVED	:			
GPCD (EDU)	:			
CAPACITY (MGD)	:			
DEMAND	:	0.0025	0.0035	0.004
PLANNED	:	0.096	0.096	0.096
PRODUCTION WELL(S)	:			
WELL NUMBER	:	98	99	
AQUIFER	:	MANOKIN	MANOKIN	
LOCATION	:	113,485/1,231,373	110,000/1,323,448	
DEPTH (FEET)	:	306	345	
DIAMETER (")	:	6	6	
MAX YIELD (GPM)	:	56		
PUMPING CAP (GPM)	:	40		
WATER QUALITY	:	GOOD; INCREASING CHLORIDES		
TREATMENT PLANT(S)	:			
TYPE	:			
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME	:	ASSATEAGUE ISLAND NATIONAL SEASHORE		
AREA SERVED	:			
OWNED BY	:	NATIONAL PARK SERVICE (8/90)		
OPERATED BY	:			
POPULATION SERVED	:	1990	2000	2010
UNSERVED	:			
GPCD (EDU)	:			
CAPACITY (MGD)	:			
DEMAND	:			
PLANNED	:			
PRODUCTION WELL(S)	:			
WELL NUMBER	:	83 (W053G003, W053G103, W053G203) (90/08/19)		
AQUIFER	:	MANOKIN		
LOCATION	:	156,336/1,330,264; 142/1330; 085/1255		
DEPTH (FEET)	:	300		
DIAMETER (")	:	6		
MAX YIELD (GPM)	:	100		
PUMPING CAP (GPM)	:	40		
WATER QUALITY	:			
TREATMENT PLANT(S)	:			
TYPE	:			
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:	0.005		
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME	:	DAYS INN		
AREA SERVED	:			
OWNED BY	:	NORTHGATE ASSOCIATES LIMITED (87/06/19)		
OPERATED BY	:			
POPULATION SERVED	:	1990	2000	2010
UNSERVED	:			
GPCD (EDU)	:			
CAPACITY (MGD)	:			
DEMAND	:			
PLANNED	:			
PRODUCTION WELL(S)	:			
WELL NUMBER	:	126 (W066G009)		
AQUIFER	:	POCOMOKE		
LOCATION	:	82,960/1,219,000		
DEPTH (FEET)	:	150'		
DIAMETER (")	:	4		
MAX YIELD (GPM)	:	50		
PUMPING CAP (GPM)	:	50		
WATER QUALITY	:	IRON - 7.5 PPM		
TREATMENT PLANT(S)	:			
TYPE	:			
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME	:	RED CARPET INN		
AREA SERVED	:			
OWNED BY	:			
OPERATED BY	:			
POPULATION SERVED	:	1990	2000	2010
UNSERVED	:			
GPCD (EDU)	:			
CAPACITY (MGD)	:			
DEMAND	:			
PLANNED	:			
PRODUCTION WELL(S)	:			
WELL NUMBER	:	120		
AQUIFER	:	MANOKIN		
LOCATION	:	75,000/1,220,000		
DEPTH (FEET)	:	238		
DIAMETER (")	:	4		
MAX YIELD (GPM)	:	40		
PUMPING CAP (GPM)	:	40		
WATER QUALITY	:			
TREATMENT PLANT(S)	:			
TYPE	:			
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME	:	FRANCIS SCOTT KEY MOTEL		
AREA SERVED	:			
OWNED BY	:	BAKER PROPERTIES AND WILLIAM (4/86)		
OPERATED BY	:			
POPULATION SERVED	:	1990	2000	2010
UNSERVED	:	176	176	176
GPCD (EDU)	:	280	280	280
CAPACITY (MGD) DEMAND	:	.049	.049	.049
PLANNED	:			
PRODUCTION WELL(S)	:			
WELL NUMBER	:	35 (W053G001)		
AQUIFER	:	OCEAN CITY	PLEISTOCENE	
LOCATION	:	187,500/1,343,000	3 STAND-BY WELLS	
DEPTH (FEET)	:	265'	100'	
DIAMETER (")	:	4"	(2) 4" WELLS; (1) 2" WELL	
MAX YIELD (GPM)	:	60		
PUMPING CAP (GPM)	:	40		
WATER QUALITY	:	GOOD	IRONY	
TREATMENT PLANT(S)	:			
TYPE	:			
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME : BALI HI RECREATIONAL VEHICLE PARK
 AREA SERVED :
 OWNED BY : BALI HI RECREATIONAL VEHICLE PARK, INC. (8/87)
 OPERATED BY :

POPULATION	:	1990	2000	2010
SERVED	:	178	178	178
UNSERVED	:	0	0	0
GPCD (EDU)	:	140	140	140

CAPACITY (MGD)	:			
DEMAND	:	0.025	0.025	0.025
PLANNED	:	0.025	0.025	0.025

PRODUCTION WELL(S) :
 WELL NUMBER : 4 (W077G016) 87/08/19
 AQUIFER : QUATERNARY
 LOCATION : N217 E1338
 DEPTH (FEET) : 2 WELLS AT 65'; 1 WELL AT 43"
 DIAMETER (") : ALL - 2"
 MAX YIELD (GPM) :
 PUMPING CAP (GPM) :
 WATER QUALITY :

TREATMENT PLANT(S) :
 TYPE :
 LOCATION :
 RATED CAPACITY :
 AVG PRODUCTION :
 MAX PEAK FLOW :
 STORAGE CAPACITY :
 SLUDGE DISPOSAL :

COMMENTS :
 EXPANSION PROBLEMS :
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENT, POLICIES :
 ALLOCATION :

EXISTING WATER SYSTEMS

SYSTEM NAME	:	SHOWELL ELEMENTARY SCHOOL		
AREA SERVED	:			
OWNED BY	:	WORCESTER COUNTY BOARD OF EDUCATION		
OPERATED BY	:			
POPULATION	:	1990	2000	2010
SERVED	:			
UNSERVED	:			
GPCD (EDU)	:			
CAPACITY (MGD)	:			
DEMAND	:			
PLANNED	:			
PRODUCTION WELL(S)	:			
WELL NUMBER	:	15 (W075G008)		
AQUIFER	:	QUATERNARY		
LOCATION	:	208,000/1,318,395		
DEPTH (FEET)	:	110		
DIAMETER (")	:	4		
MAX YIELD (GPM)	:			
PUMPING CAP (GPM)	:	50		
WATER QUALITY	:	NITRATES INCREASING		
TREATMENT PLANT(S)	:			
TYPE	:			
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:	0.004		
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME : OCEAN CITY ELEMENTARY SCHOOL
 AREA SERVED :
 OWNED BY : WORCESTER COUNTY BOARD OF EDUCATION
 OPERATED BY :

POPULATION : 1990 2000 2010
 SERVED :
 UNSERVED :
 GPCD (EDU) :

CAPACITY (MGD) :
 DEMAND :
 PLANNED :

PRODUCTION WELL(S) :
 WELL NUMBER : 33 (W065G003)
 AQUIFER : PLEISTOCENE
 LOCATION : 192,850/1,332,270
 DEPTH (FEET) : 128
 DIAMETER (") : 4
 MAX YIELD (GPM) : 150
 PUMPING CAP (GPM) : 60
 WATER QUALITY :

TREATMENT PLANT(S) :
 TYPE :
 LOCATION :
 RATED CAPACITY :
 AVG PRODUCTION :
 MAX PEAK FLOW :
 STORAGE CAPACITY :
 SLUDGE DISPOSAL :

COMMENTS :
 EXPANSION PROBLEMS :
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENT, POLICIES :
 ALLOCATION :

EXISTING WATER SYSTEMS

SYSTEM NAME : STEPHEN DECATUR HIGH SCHOOL
AREA SERVED :
OWNED BY : WORCESTER COUNTY BOARD OF EDUCATION
OPERATED BY :

POPULATION : 1990 2000 2010
SERVED :
UNSERVED :
GPCD (EDU) :

CAPACITY (MGD) :
DEMAND :
PLANNED :

PRODUCTION WELL(S) :
WELL NUMBER : 24 (W075G005)
AQUIFER : PLEISTOCENE
LOCATION : 190,158/1,318,870
DEPTH (FEET) : 109
DIAMETER (") : 6
MAX YIELD (GPM) : 140
PUMPING CAP (GPM) :
WATER QUALITY : NITRATES - 5.0 PPM

TREATMENT PLANT(S) :
TYPE :
LOCATION :
RATED CAPACITY :
AVG PRODUCTION :
MAX PEAK FLOW :
STORAGE CAPACITY :
SLUDGE DISPOSAL :

COMMENTS :
EXPANSION PROBLEMS :
PROBLEMS :
PLANNED IMPROVEMENTS :
AGREEMENT, POLICIES :
ALLOCATION :

EXISTING WATER SYSTEMS

SYSTEM NAME : MARLIN PARK PLAZA
 AREA SERVED :
 OWNED BY : WEST OCEAN CITY ENTERPRISES, INC.
 OPERATED BY : WILLIAM KILROY

POPULATION	:	1990	2000	2010
SERVED	:	14	14	14
UNSERVED	:	0		
GPCD (EDU)	:	280	280	280

CAPACITY (MGD)	:			
DEMAND	:	.0039	.0039	.0039
PLANNED	:			

PRODUCTION WELL(S) :
 WELL NUMBER : 151 (W088G011)
 AQUIFER : PLEISTOCENE
 LOCATION : 191/G1342
 DEPTH (FEET) : 95'
 DIAMETER (") : 2"
 MAX YIELD (GPM) :
 PUMPING CAP (GPM) :
 WATER QUALITY :

TREATMENT PLANT(S) :
 TYPE :
 LOCATION :
 RATED CAPACITY :
 AVG PRODUCTION :
 MAX PEAK FLOW :
 STORAGE CAPACITY :
 SLUDGE DISPOSAL :

COMMENTS :
 EXPANSION PROBLEMS :
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENT, POLICIES :
 ALLOCATION : GAP PERMIT W088G011 (01) EXPIRATION DEC. 1, 1988

EXISTING WATER SYSTEMS

SYSTEM NAME	:	PINES PLAZA		
AREA SERVED	:			
OWNED BY	:	PINES PLAZA LIMITED PARTNERSHIP (9/85)		
OPERATED BY	:	KENNETH BENNER - #00068		
POPULATION SERVED	:	1990	2000	2010
UNSERVED	:			
GPCD (EDU)	:			
CAPACITY (MGD)	:			
DEMAND	:	0.011	0.011	0.011
PLANNED	:	0.011	0.011	0.011
PRODUCTION WELL(S)	:			
WELL NUMBER	:	139 (W085G018) 9/85	140	
AQUIFER	:	QUATERNARY	QUATERNARY	
LOCATION	:	204,000/1,325,000	204,000/1,325,000	
DEPTH (FEET)	:	64	63	
DIAMETER (")	:	4	4	
MAX YIELD (GPM)	:			
PUMPING CAP (GPM)	:	60	70	
WATER QUALITY	:	INCREASING NITRATES		
TREATMENT PLANT(S)	:			
TYPE	:			
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:	PERMIT EXPIRATION - SEPT. 1, 1997		

EXISTING WATER SYSTEMS

SYSTEM NAME	:	WHITE MARLIN MALL		
AREA SERVED	:	WHITE MARLIN MALL, ROUTE 50		
OWNED BY	:	WHITE MARLIN MALL LIMITED (7/86)		
OPERATED BY	:			
POPULATION	:	1990	2000	2010
SERVED	:	224	224	224
UNSERVED	:	0		
GPCD (EDU)	:	280	280	280
CAPACITY (MGD)	:			
DEMAND	:	0.02		
PLANNED	:	0.1		
PRODUCTION WELL(S)	:			
WELL NUMBER	:	155 (W085G020)		
AQUIFER	:	POCOMOKE		
LOCATION	:	190,000/1,342,000		
DEPTH (FEET)	:	170'		
DIAMETER (")	:	6"		
MAX YIELD (GPM)	:			
PUMPING CAP (GPM)	:			
WATER QUALITY	:	HIGH IRON		
TREATMENT PLANT(S)	:			
TYPE	:	ION EXCHANGE		
LOCATION	:			
RATED CAPACITY	:	0.1		
AVG PRODUCTION	:	0.02		
MAX PEAK FLOW	:			
STORAGE CAPACITY	:	0.65		
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME	:	MARKET PLACE COMMERCIAL CENTER		
AREA SERVED	:	MARKET PLACE SHOPPING CENTER		
OWNED BY	:			
OPERATED BY	:			
POPULATION	:	1990	2000	2010
SERVED	:	45	45	45
UNSERVED	:			
GPCD (EDU)	:	280	280	280
CAPACITY (MGD)	:			
DEMAND	:	0.126	0.126	0.126
PLANNED	:			
PRODUCTION WELL(S)	:			
WELL NUMBER	:	1		
AQUIFER	:	OCEAN CITY		
LOCATION	:			
DEPTH (FEET)	:			
DIAMETER (")	:			
MAX YIELD (GPM)	:	50		
PUMPING CAP (GPM)	:			
WATER QUALITY	:			
TREATMENT PLANT(S)	:			
TYPE	:			
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:	60,000 GALLON LOW LEVEL STORAGE TANK		
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME : WEST OCEAN CITY FISHING CENTER
 AREA SERVED :
 OWNED BY : RAY NICHOLS
 OPERATED BY :

POPULATION : 1990 2000 2010
 SERVED :
 UNSERVED :
 GPCD (EDU) :

CAPACITY (MGD) :
 DEMAND :
 PLANNED :

PRODUCTION WELL(S) :
 WELL NUMBER : 156 (W091G021) 01
 AQUIFER : OCEAN CITY
 LOCATION : 185,000/1,343,000
 DEPTH (FEET) : 265'
 DIAMETER (") : 4"
 MAX YIELD (GPM) :
 PUMPING CAP (GPM) :
 WATER QUALITY :

TREATMENT PLANT(S) :
 TYPE :
 LOCATION :
 RATED CAPACITY :
 AVG PRODUCTION :
 MAX PEAK FLOW :
 STORAGE CAPACITY :
 SLUDGE DISPOSAL :

COMMENTS :
 EXPANSION PROBLEMS :
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENT, POLICIES :
 ALLOCATION :

EXISTING WATER SYSTEMS

SYSTEM NAME : WORCESTER COUNTY SENIOR CITIZENS ACTIVITY CENTER
 AREA SERVED :
 OWNED BY :
 OPERATED BY :

POPULATION : 1990 2000 2010
 SERVED :
 UNSERVED :
 GPCD (EDU) :

CAPACITY (MGD) :
 DEMAND :
 PLANNED :

PRODUCTION WELL(S) :
 WELL NUMBER : 34
 AQUIFER : PLEISTOCENE
 LOCATION : 189,346/1,332,270
 DEPTH (FEET) : 90
 DIAMETER (") : 6
 MAX YIELD (GPM) : 150
 PUMPING CAP (GPM) : 100
 WATER QUALITY :

TREATMENT PLANT(S) :
 TYPE :
 LOCATION :
 RATED CAPACITY :
 AVG PRODUCTION :
 MAX PEAK FLOW :
 STORAGE CAPACITY :
 SLUDGE DISPOSAL :

COMMENTS :
 EXPANSION PROBLEMS :
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENT, POLICIES :
 ALLOCATION :

EXISTING WATER SYSTEMS

SYSTEM NAME	:	OCEAN CITY GOLF & YACHT CLUB		
AREA SERVED	:			
OWNED BY	:	OCEAN CITY GOLF & YACHT CLUB, INC.		
OPERATED BY	:	OCEAN CITY GOLF & YACHT CLUB (7/87)		
POPULATION	:	1990	2000	2010
SERVED	:			
UNSERVED	:			
GPCD (EDU)	:			
CAPACITY (MGD)	:			
DEMAND	:	0.01	0.01	0.01
PLANNED	:	0.01	0.01	0.01
PRODUCTION WELL(S)	:	WELL 1	WELL 2	WELL 3
WELL NUMBER	:	85 (W058G005)	85	
AQUIFER	:	POCOMOKE-IRRIG.	POCOMOKE-IRRIG.	QUATERNARY
LOCATION	:	159,019/1,322,745	155,227/1,323,907	156,1,322
DEPTH (FEET)	:	144	147	98
DIAMETER (")	:	10	6	2
MAX YIELD (GPM)	:	43	70	
PRODUCTION WELL(S)	:	WELL 4	WELL 5	WELL 6
WELL NUMBER	:			
AQUIFER	:	QUATERNARY	QUATERNARY	QUATERNARY
LOCATION	:	156/1,322	156/1,322	156/1,322
DEPTH (FEET)	:	98	79	30
DIAMETER (")	:	2	4	
MAX YIELD (GPM)	:			
PUMPING CAPACITY	:			
WATER QUALITY	:			
TREATMENT PLANT(S)	:			
TYPE	:			
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:	REPLACE 2 SHALLOW WELLS SERVING CLUBHOUSE WITH 270' WELL		
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME : WORCESTER COUNTY VOCATIONAL CENTER
 AREA SERVED :
 OWNED BY : WORCESTER COUNTY BOARD OF EDUCATION
 OPERATED BY :

POPULATION : 1990 2000 2010
 SERVED :
 UNSERVED :
 GPCD (EDU) :

CAPACITY (MGD) :
 DEMAND :
 PLANNED :

PRODUCTION WELL(S) :
 WELL NUMBER : W086G015
 AQUIFER : POCOMOKE
 LOCATION :
 DEPTH (FEET) : 164
 DIAMETER (") : 6
 MAX YIELD (GPM) :
 PUMPING CAP (GPM) :
 WATER QUALITY :

TREATMENT PLANT(S) :
 TYPE :
 LOCATION :
 RATED CAPACITY :
 AVG PRODUCTION :
 MAX PEAK FLOW :
 STORAGE CAPACITY :
 SLUDGE DISPOSAL :

COMMENTS :
 EXPANSION PROBLEMS :
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENT, POLICIES :
 ALLOCATION : 5000 GPD

EXISTING WATER SYSTEMS

SYSTEM NAME	:	BEACH CLUB GOLF COURSE		
AREA SERVED	:			
OWNED BY	:	DEER PARK ENTERPRISES, INC.		
OPERATED BY	:			
POPULATION SERVED	:	1990	2000	2010
UNSERVED	:			
GPCD (EDU)	:			
CAPACITY (MGD) DEMAND	:	.005	.005	.005
PLANNED	:			
PRODUCTION WELL(S)	:	CLUBHOUSE	MAINTENANCE	IRRIGATION
WELL NUMBER	:	W090G005		W090G01D
AQUIFER	:	QUATERNARY	QUATERNARY	QUATERNARY
LOCATION	:	197,000/1,309,000		
DEPTH (FEET)	:	140	80	105
DIAMETER (")	:	4	4	4
MAX YIELD (GPM)	:			
PUMPING CAP (GPM)	:			
WATER QUALITY	:			
TREATMENT PLANT(S)	:			
TYPE	:			
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:	ADDITIONAL 18 HOLE GOLF COURSE		
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME : COWGER'S TRAILER PARK
 AREA SERVED :
 OWNED BY : JAMES W. COWGER
 OPERATED BY :

POPULATION	:	1990	2000	2010
SERVED	:	26	26	26
UNSERVED	:			
GPCD (EDU)	:	300	300	300

CAPACITY (MGD)	:			
DEMAND	:	.0078	.0078	.0078
PLANNED	:			

PRODUCTION WELL(S) :
 WELL NUMBER : W066G016
 AQUIFER : POCOMOKE POCOMOKE
 LOCATION : 097,000/1,227,000
 DEPTH (FEET) : 130 105
 DIAMETER (") : 2 2
 MAX YIELD (GPM) :
 PUMPING CAP (GPM) :
 WATER QUALITY : GOOD - IRON .50

TREATMENT PLANT(S) : #0216
 TYPE :
 LOCATION :
 RATED CAPACITY :
 AVG PRODUCTION :
 MAX PEAK FLOW :
 STORAGE CAPACITY :
 SLUDGE DISPOSAL :

COMMENTS :
 EXPANSION PROBLEMS :
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENT, POLICIES :
 ALLOCATION :

EXISTING WATER SYSTEMS

SYSTEM NAME	:	FOUR SEASONS MOBILE HOME PARK		
AREA SERVED	:			
OWNED BY	:	BRUCE CLARK		
OPERATED BY	:			
POPULATION	:	1990	2000	2010
SERVED	:	27	27	27
UNSERVED	:			
GPCD (EDU)	:	300	300	300
CAPACITY (MGD)	:			
DEMAND	:	.0081	.0081	.0081
PLANNED	:			
PRODUCTION WELL(S)	:			
WELL NUMBER	:	W077G033		
AQUIFER	:	MANOKIN		
LOCATION	:	188,000/1,333,000		
DEPTH (FEET)	:	258		
DIAMETER (")	:	4		
MAX YIELD (GPM)	:			
PUMPING CAP (GPM)	:			
WATER QUALITY	:	IRON 2.00 PPM		
TREATMENT PLANT(S)	:	#0210		
TYPE	:			
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

EXISTING WATER SYSTEMS

SYSTEM NAME	:	TOM ALL APARTMENTS		
AREA SERVED	:	RONALD THOMAS		
OWNED BY	:			
OPERATED BY	:			
POPULATION SERVED	:	1990	2000	2010
UNSERVED	:			
GPCD (EDU)	:			
CAPACITY (MGD)	:			
DEMAND	:			
PLANNED	:			
PRODUCTION WELL(S)	:			
WELL NUMBER	:	W078G006		
AQUIFER	:	QUATERNARY		
LOCATION	:			
DEPTH (FEET)	:	107		
DIAMETER (")	:	4		
MAX YIELD (GPM)	:			
PUMPING CAP (GPM)	:			
WATER QUALITY	:			
TREATMENT PLANT(S)	:	#0217		
TYPE	:			
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:	3,200 GPD		

EXISTING WATER SYSTEMS

SYSTEM NAME	:	SHOWELL FARMS, INC.		
AREA SERVED	:	EMPLOYEE HOUSING #1 AND #2		
OWNED BY	:	SHOWELL FARMS, INC.		
OPERATED BY	:	VINCENT LYNCH		
POPULATION SERVED	:	1990	2000	2010
	:	36	36	36
UNSERVED GPCD (EDU)	:			
	:	140	140	140
CAPACITY (MGD) DEMAND PLANNED	:			
	:	.0054	.0054	.0054
PRODUCTION WELL(S)	:			
WELL NUMBER	:	W071G001		
AQUIFER	:	QUATERNARY	QUATERNARY	
LOCATION	:			
DEPTH (FEET)	:	65	132	
DIAMETER (")	:	4	4	
MAX YIELD (GPM)	:			
PUMPING CAP (GPM)	:			
WATER QUALITY	:			
TREATMENT PLANT(S)	:	#0222 AND #0223		
TYPE	:			
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:	15,000 GPD		

EXISTING WATER SYSTEMS

SYSTEM NAME	:	WEST OCEAN CITY APARTMENTS		
AREA SERVED	:			
OWNED BY	:	VERNON MCCABE		
OPERATED BY	:			
POPULATION	:	1990	2000	2010
SERVED	:	16	16	16
UNSERVED	:			
GPCD (EDU)	:	280	280	280
CAPACITY (MGD)	:			
DEMAND	:	.0044	.0044	.0044
PLANNED	:			
PRODUCTION WELL(S)	:			
WELL NUMBER	:	W088G027		
AQUIFER	:	POCOMOKE		
LOCATION	:	188,000/1,339,000		
DEPTH (FEET)	:	170		
DIAMETER (")	:	4		
MAX YIELD (GPM)	:			
PUMPING CAP (GPM)	:			
WATER QUALITY	:	HIGH IRON		
TREATMENT PLANT(S)	:	#0023		
TYPE	:	IRON EXCHANGE		
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:	3,400 GPD		

EXISTING WATER SYSTEMS

SYSTEM NAME : WEST OCEAN CITY BUSINESS CENTER
 AREA SERVED :
 OWNED BY : WEST OCEAN CITY BUSINESS CENTER CONDOMINIUM ASSOCIATION
 OPERATED BY : WEST OCEAN CITY BUSINESS CENTER CONDOMINIUM ASSOCIATION

POPULATION SERVED	:	1992	2000	2010
UNSERVED	:	7	7	7
GPCD (EDU)	:	0	0	0
	:	280	280	280

CAPACITY (MGD) DEMAND PLANNED	:	.0019	.0019	.0019
-------------------------------	---	-------	-------	-------

PRODUCTION WELL(S)	:		
WELL NUMBER	:	W088266	W088265
AQUIFER	:	QUATERNARY	QUATERNARY
LOCATION	:	185,000/1,342,000	185,000/1,342,000
DEPTH (FEET)	:	95	95
DIAMETER (")	:	2	2
MAX YIELD (GPM)	:		
PUMPING CAP (GPM)	:	50	50
WATER QUALITY	:		

TREATMENT PLANT(S) :
 TYPE :
 LOCATION :
 RATED CAPACITY :
 AVG PRODUCTION :
 MAX PEAK FLOW :
 STORAGE CAPACITY :
 SLUDGE DISPOSAL :

COMMENTS :
 EXPANSION PROBLEMS :
 PROBLEMS :
 PLANNED IMPROVEMENTS :
 AGREEMENT, POLICIES :
 ALLOCATION : LIMITED SHARED FACILITY

EXISTING WATER SYSTEMS

SYSTEM NAME	:	BERLIN SHOPPING CENTER		
AREA SERVED	:			
OWNED BY	:	LOUIE J. AND BEATRICE M. PAGLIERANI		
OPERATED BY	:			
POPULATION SERVED	:	1990	2000	2010
UNSERVED	:			
GPCD (EDU)	:			
CAPACITY (MGD) DEMAND	:	.004	.004	.004
PLANNED	:			
PRODUCTION WELL(S)	:	#1	#2	
WELL NUMBER	:	W062G005		
AQUIFER	:	QUATERNARY	QUATERNARY	
LOCATION	:	189,000/1,315,000		
DEPTH (FEET)	:	80	78	
DIAMETER (")	:	4	4	
MAX YIELD (GPM)	:			
PUMPING CAP (GPM)	:			
WATER QUALITY	:			
TREATMENT PLANT(S)	:			
TYPE	:			
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:	5,000 GPD		

EXISTING WATER SYSTEMS

SYSTEM NAME	:	AMES PLAZA		
AREA SERVED	:			
OWNED BY	:	BURDMAN BROTHERS COMPANY		
OPERATED BY	:			
POPULATION SERVED	:	1990	2000	2010
UNSERVED	:			
GPCD (EDU)	:			
CAPACITY (MGD)	:			
DEMAND	:			
PLANNED	:			
PRODUCTION WELL(S)	:			
WELL NUMBER	:	W073GAP006		
AQUIFER	:	MANOKIN		
LOCATION	:	189,000/1,316,000		
DEPTH (FEET)	:	275		
DIAMETER (")	:	4		
MAX YIELD (GPM)	:			
PUMPING CAP (GPM)	:			
WATER QUALITY	:			
TREATMENT PLANT(S)	:			
TYPE	:			
LOCATION	:			
RATED CAPACITY	:			
AVG PRODUCTION	:			
MAX PEAK FLOW	:			
STORAGE CAPACITY	:			
SLUDGE DISPOSAL	:			
COMMENTS	:			
EXPANSION PROBLEMS	:			
PROBLEMS	:			
PLANNED IMPROVEMENTS	:			
AGREEMENT, POLICIES	:			
ALLOCATION	:			

PLANNED WATER SYSTEMS.

SYSTEM NAME : THE LANDINGS (PINE POINT)
PRIORITY CATEGORY : PLANNED, W-1
AREA SERVED : THE LANDING SUBDIVISION
POPULATION SERVED : 400 EDU @ 300/EDU, .082 MGD 1995
CONSTRUCTED BY: :
OWNED BY : ASSATEAGUE LANDING ASSOCIATES
OPERATED BY :

PLANNED DISTR. SYSTEM :

SYSTEM DESCRIPTION :

WELL LOCATION : 175,000/1,335,000

WELL DEPTH/AQUIFER : PLEISTOCENE/135'

TREATMENT FACILITIES : PH, CHLOR., .082 MGD PROPOSED

STORAGE FACILITIES : .010/.020 MG HPT

DISTRIBUTION SYSTEM: :

ESTIMATED COST AND
SOURCE OF FUNDING :

COST :

ESTIMATED
CONSTRUCTION TIME :

BEGIN :

COMPLETE :

COMMENTS :

AGREEMENT, POLICIES :

ALLOCATION :

PLANNED WATER SYSTEMS

SYSTEM NAME : RIDDLE FARM
PRIORITY CATEGORY :
AREA SERVED : COMMUNITY AND IRRIGATION
POPULATION SERVED : 209 EDU @ 275/EDU, PLANNED 650 EDU
CONSTRUCTED BY: : DEVELOPER
OWNED BY : WORCESTER COUNTY COMMISSIONERS
OPERATED BY : WORCESTER COUNTY DEPARTMENT OF WATER AND
WASTEWATER SERVICES

PLANNED DISTR. SYSTEM :
SYSTEM DESCRIPTION :
WELL LOCATION : 192,000/1,331,000 (W088G029)
WELL DEPTH/AQUIFER : POCOMOKE/250'
TREATMENT FACILITIES : .240 MGD WTP
STORAGE FACILITIES : .100 MG ABOVE GROUND
DISTRIBUTION SYSTEM: :
ESTIMATED COST AND SOURCE OF FUNDING :
COST :
ESTIMATED CONSTRUCTION TIME :
BEGIN :
COMPLETE :
COMMENTS :
AGREEMENT, POLICIES :
ALLOCATION : PERMIT WAS ISSUED 4/90

SYSTEM NAME : Lighthouse Sound
PRIORITY CATEGORY : W-1
AREA TO BE SERVED : Lighthouse Sound
POPULATION SERVED: .0587 mgd (81 EDU-indiv. wells)
1998 2000 2010
CONSTRUCTED BY : *OEL No. 37 P.F. and Individual Lots
OWNED BY : *OEL No. 37 P.F. and Individual Lots
OPERATED BY : *OEL No. 37 P.F. and Individual Lots
PLANNED DISTR. SYSTEM : N.A. N.A.
SYSTEM DESCRIPTION: Individual Lots + golf course/clubhouse and maintenance
WELL LOCATION (N/E) : Individual Lots + golf course/clubhouse/maintenance/
waste treatment
WELL DEPTH/AQUIFER : Manokin (450')
TREATMENT FACILITIES : Iron Removal
STORAGE FACILITIES : As required (fire protection)
DISTRIBUTION SYSTEM : N.A.
ESTIMATED COST AND
SOURCE OF FUNDING:
COST :
FUNDING :
ESTIMATED
CONSTRUCTION TIMES:
BEGIN : 1998
COMPLETE : 2000 golf course
COMMENTS:
AGREEMENTS. POLICIES :
ALLOCATION :

*Operating Engineers Local No. 37 Pension Fund (OEL No. 37 P.F.) or Assigns

PLANNED WATER SYSTEMS

SYSTEM NAME : RIVER RUN
PRIORITY CATEGORY : UNDER CONSTRUCTION
AREA SERVED : RIVER RUN COMMUNITY
POPULATION SERVED : 408 EDU @ 250/EDU
CONSTRUCTED BY: : DEVELOPER
OWNED BY : WORCESTER COUNTY COMMISSIONERS
OPERATED BY : WORCESTER COUNTY DEPARTMENT OF WATER AND
WASTEWATER SERVICES

PLANNED DISTR. SYSTEM :

SYSTEM DESCRIPTION :

WELL LOCATION : OCEAN PINES SERVICE AREA, 4 WELLS IN OPSA
211,000/1,322,000 (3 WELLS)
WELL DEPTH/AQUIFER : 100' TO 110'/PLEISTOCENE

TREATMENT FACILITIES : PH ADJUSTMENT AND DISINFECTION AT EACH WELL SITE

STORAGE FACILITIES : 1.0 MGD IN OPSA

DISTRIBUTION SYSTEM: :

ESTIMATED COST AND SOURCE OF FUNDING :

COST :

ESTIMATED CONSTRUCTION TIME :

BEGIN :

COMPLETE :

COMMENTS :

AGREEMENT, POLICIES : PURCHASE OF WATER FROM OCEAN PINES WATER SYSTEM
TO SERVE 408 EDU'S OF RIVER RUN

ALLOCATION :

PLANNED WATER SYSTEMS

SYSTEM NAME : HOMEPORT
PRIORITY CATEGORY : W-1
AREA SERVED : HOMEPORT PLANNED UNIT DEVELOPMENT
POPULATION SERVED :
CONSTRUCTED BY :
OWNED BY : WORCESTER COUNTY COMMISSIONERS (DISTRIBUTION SYSTEM)
OPERATED BY : WORCESTER COUNTY DEPARTMENT OF WATER AND
WASTEWATER SERVICES (DISTRIBUTION SYSTEM)

PLANNED DISTR. SYSTEM :
SYSTEM DESCRIPTION :
WELL LOCATION : MYSTIC HARBOUR SERVICE AREA
WELL DEPTH/AQUIFER :
TREATMENT FACILITIES : MYSTIC HARBOUR SERVICE AREA
STORAGE FACILITIES : MYSTIC HARBOUR SERVICE AREA
DISTRIBUTION SYSTEM: :
ESTIMATED COST AND SOURCE OF FUNDING :
COST :
ESTIMATED CONSTRUCTION TIME :
BEGIN :
COMPLETE :
COMMENTS :
AGREEMENT, POLICIES : HOMEPORT SERVICE AREA, WHICH INCLUDES THE SEAPOINTE
SUBDIVISION, IS TO BE PROVIDED WITH WATER FROM THE MYSTIC
HARBOUR SERVICE AREA BY TERMS OF A CONTRACT
AGREEMENT.
ALLOCATION :

PLANNED WATER SYSTEMS

SYSTEM NAME : SEAPOINTE/MARSH HARBOR
PRIORITY CATEGORY : W-1
AREA SERVED : SEPOINTE SUBDIVISION/MARSH HARBOR
POPULATION SERVED : 8 SINGLE-FAMILY LOTS, 36 MULTI-FAMILY UNITS AND AMENITIES - 18,200 GPD

CONSTRUCTED BY: : WORCESTER COUNTY COMMISSIONERS (DISTRIBUTION SYSTEM)
OWNED BY : WORCESTER COUNTY DEPARTMENT OF WATER AND WASTEWATER SERVICES (DISTRIBUTION SYSTEM)
OPERATED BY :

PLANNED DISTR. SYSTEM : 8" TRANSMISSION MAIN FROM CAPTAIN'S POINT P.U.D. WITH 6" WATER MAINS AND FIRE HYDRANTS ON-SITE

SYSTEM DESCRIPTION :

WELL LOCATION : MYSTIC HARBOUR SERVICE AREA
WELL DEPTH/AQUIFER :

TREATMENT FACILITIES : MYSTIC HARBOUR SERVICE AREA
STORAGE FACILITIES : MYSTIC HARBOUR SERVICE AREA
DISTRIBUTION SYSTEM: :

ESTIMATED COST AND SOURCE OF FUNDING :
COST :
ESTIMATED CONSTRUCTION TIME :
BEGIN :
COMPLETE :
COMMENTS :

AGREEMENT, POLICIES : IS PART OF CAPTAIN'S POINT SERVICE AREA AND IS TO BE PROVIDED WITH WATER SERVICE FROM THE MYSTIC HARBOUR SERVICE AREA BY TERMS OF A CONTRACT AGREEMENT

ALLOCATION :

PLANNED WATER SYSTEMS

SYSTEM NAME : MARINER'S COUNTRY DOWN
PRIORITY CATEGORY : W-1
AREA SERVED : MARINER'S COUNTRY DOWN, TAX MAP 26, PARCELS 323, 324
AND 375
POPULATION SERVED : 1992 2000 2010
(EDU) : 36 36 36
CONSTRUCTED BY: :
OWNED BY : A. REGGIE MARINER
OPERATED BY :
PLANNED DISTR. SYSTEM :
SYSTEM DESCRIPTION :
WELL LOCATION :
WELL DEPTH/AQUIFER :
TREATMENT FACILITIES :
STORAGE FACILITIES :
DISTRIBUTION SYSTEM: :
ESTIMATED COST AND
SOURCE OF FUNDING :
COST :
ESTIMATED
CONSTRUCTION TIME :
BEGIN : JUNE, 1996
COMPLETE :
COMMENTS :
AGREEMENT, POLICIES :
ALLOCATION :

PLANNED WATER SYSTEMS

SYSTEM NAME : TOWN OF SNOW HILL
PRIORITY CATEGORY : W-2
AREA SERVED : EAST MARKET STREET

POPULATION SERVED : 1992 2000 2010
(EDU) : N/A 30 EDU 30
EDU

CONSTRUCTED BY: : NOT YET KNOWN

OWNED BY : TOWN OF SNOW HILL

OPERATED BY : TOWN OF SNOW HILL (RICHARD RAU)

PLANNED DISTR. SYSTEM : EXTENSION OF 6" WATER MAIN IN MARKET STREET FROM
EVERGREEN TERRACE TO MD ROUTE 113

SYSTEM DESCRIPTION :

WELL LOCATION : N/A

WELL DEPTH/AQUIFER : N/A

TREATMENT FACILITIES : N/A

STORAGE FACILITIES : N/A

DISTRIBUTION SYSTEM: : 6" MAIN

ESTIMATED COST AND SOURCE OF FUNDING : NOT YET KNOWN

COST :

ESTIMATED CONSTRUCTION TIME :

BEGIN : 1999

COMPLETE : 2000

COMMENTS :

AGREEMENT, POLICIES :

ALLOCATION :

SYSTEM NAME

Sandpoint Village
WI

PRIORITY CATEGORY :

AREA TO BE SERVED :

development

POPULATION SERVED:

1992

1998
2000

2010

CONSTRUCTED BY :

owner

OWNED BY :

owner

OPERATED BY :

county

PLANNED DISTR. SYSTEM :

4" pvc

SYSTEM DESCRIPTION:

WELL LOCATION (N/E) :

N 188400
E 1340,700

WELL DEPTH/AQUIFER :

260' manokta

TREATMENT FACILITIES :

chlorination
softners

STORAGE FACILITIES :

12,500 gallon tank

DISTRIBUTION SYSTEM :

4" pvc

ESTIMATED COST AND
SOURCE OF FUNDING:

COST :

\$60,000

FUNDING :

owner

ESTIMATED
CONSTRUCTION TIMES:

BEGIN :

1998

COMPLETE :

1998

COMMENTS:

AGREEMENTS, POLICIES :

ALLOCATION :

coordinates

TABLES

WATER SYSTEMS

TABLE 3-1
WATER SUPPLY DEMANDS AND PLANNED CAPACITY FOR EXISTING AND PLANNED PUBLIC AND PRIVATE
COMMUNITY AND MULTI-USE WATER SYSTEMS

FIG No.	WATER SERVICE AREA COMMUNITY SYSTEMS	PRESENT-1992					
		POPULATION			GPCD (GALS)	CAPACITY (mgd)	
		TOTAL	SERVED	UNSERVED		DEMAND	PLANNED
3-1	Mill Pond	26 EDU	26 EDU	0	300/EDU	0.0078	0.0078
3-2	Lighthouse Sound	0	0	0	250/EDU	0	0.102
3-5	River Run (Served by Mystic Harbor)	0	0	0	300/EDU	0	0.102
3-5	St. Martin by the Bay	65	17	0	300/EDU	0.005	0.020
3-6	Ocean Pines	4,500 EDU	4,500 EDU	0	250/EDU	0.5	2.0
3-7	Town of Berlin	2,656	2,656	0	218	0.57	0.89
3-7	Briddelittown	48 EDU	48 EDU	0	300/EDU	0.014	0.03
3-8	Lake Haven Trailer Park	125 EDU	125 EDU	0	300/EDU	0.038	0.038
3-9	Riddle Farm	675 EDU	0	675	275/EDU	0	0.24
3-10	Oyster Harbor	242	242	0	250/EDU	0.06	0.061
3-10	Villa Nova Condominiums	36 EDU	36 EDU	0	250/EDU	0.009	0.009
3-10	Sea Gull Trailer Court	45 EDU	45 EDU	0	300/EDU	0.0135	0.0135
3-10	South Point Village	14 EDU	14 EDU	0	300/EDU	0.009	0.01
3-11	Ocean City	224,410	224,410	0	58	13.0	18.1
3-13	Edgewater Acres/Nantucket Point	36 EDU	36 EDU	0	300/EDU	0.02	0.02
3-14	Mystic Harbor	201	201	58	250	0.05	0.2
3-16	Assateague Point	201 EDU	201 EDU	0	110/EDU	0.022	0.064
3-16	The Landing			0	300/EDU	0	0.082
3-18	Newark	250	250	0	44	0.011	0.015
3-22	Snow Hill	2,200	2,200	0	205	0.450	1.87

TABLE 3-1
WATER SUPPLY DEMANDS AND PLANNED CAPACITY FOR EXISTING AND PLANNED PUBLIC AND PRIVATE
COMMUNITY AND MULTI-USE WATER SYSTEMS

FIG No.	WATER SERVICE AREA MULTI-USE SYSTEMS	PRESENT-1992					
		POPULATION			GPCD (GALS)	CAPACITY (mgd)	
		TOTAL	SERVED	UNSERVED		DEMAND	PLANNED
3-1	Riverview MHP	66 EDU	66 EDU	0	300/EDU	0.0198	0.0198
3-2	Bali HI RV Park	178 EDU	178 EDU	0	140/EDU	0.025	0.025
3-5	Pine Shores Golf Course			0		0.0075	0.0075
3-5	Pines Plaza			0		0.011	0.011
3-7	Bay Club Golf Course			0		0.005	0.005
3-7	Beach Club Golf Course			0		0.005	0.005
3-7	Sunset Lake MHP	34 EDU	34 EDU	0	300/EDU	0.0102	0.0102
3-8	Delmarva Downs			0		0.010	0.010
3-10	Delmarva Trailer Park	50		0	250/EDU	0.001	
3-10	Greenridge T.P.	60 EDU	60 EDU	0	300/EDU	0.018	0.018
3-10	Marlin Park Plaza	14 EDU	14 EDU	0	1,000/EDU	0.014	0.014
3-10	Shantytown			0			
3-10	White Marlin Mall	48 EDU		0		0.02	0.100
3-10	W.O.C. Fishing Center			0			
3-16	Frontier Town	584 Camps	584 Camp	0	90/Site	0.053	0.053
3-17	Castaways T.P.	42 EDU	42 EDU	0	300/EDU	0.013	0.013
3-17	Eagles Landing G.C.			0		0.005	0.005
3-17	Eagles Nest T.P.			0	250 Trailer		
	(70 Trailers, 267 Campsites)	337 EDU	337 EDU	0	140/Site	0.058	0.058
3-19	O.C. Golf & Yacht Club			0		0.010	0.010
3-21	Assateague Island S.P.			0	30	0.45	1.0
3-24	Milburn Landing S.P.			0	30	0.0025	0.096

TABLE 3-2
PROJECTED WATER SUPPLY DEMANDS AND PLANNED CAPACITIES FOR COMMUNITY
AND MULTI-USE WATER SYSTEMS

FIG No.	WATER SERVICE AREA MULTI-USE	GPCD gals EDU (*)	1995				2000				2010			
			POPULATION EDU (*)		CAPACITY (MGD)		POPULATION EDU (*)		CAPACITY (MGD)		POPULATION EDU (*)		CAPACITY (MGD)	
			TOTAL	UNSERVED	DEMAND	PLANNED	TOTAL	UNSERVED	DEMAND	PLANNED	TOTAL	UNSERVED	DEMAND	PLANNED
3-1	Riverview MHP	300/*	66*	0	0.0198	0.0198	66*	0	0.0198	0.0198	66*	0	0.0198	0.0198
3-2	Bali Hi RV Park	140/*	178*	0	0.025	0.025	178*	0	0.025	0.025	178*	0	0.025	0.025
3-5	Pines Plaza			0	0.011	0.011		0	0.011	0.011		0	0.011	0.011
3-5	Pines Shores Golf Course			0	0.0075	0.0075		0	0.0075	0.0075		0	0.0075	0.0075
3-7	Bay Club Golf Course			0	0.005	0.005		0	0.005	0.005		0	0.005	0.005
3-7	Beach Club Golf Course			0	0.005	0.005		0	0.005	0.005		0	0.005	0.005
3-7	Sunset Lakes MHP	300/*	34*	0	0.0102	0.0102	34*	0	0.0102	0.0102	34*	0	0.0102	0.0102
3-8	Delmarva Downs			0	0.01	0.01		0	0.01	0.01		0	0.01	0.01
3-10	Greenridge Trailer Park	300/*	60*	0	0.018	0.018	60*	0	0.018	0.018	60*	0	0.018	0.018
3-10	Delmarva Trailer Park	250/*	50*	0	0.013	0.013	50*	0	0.013	0.013	50*	0	0.013	0.013
3-10	Marlin Park Plaza	1000/*	14*	0	0.014	0.014	14*	0	0.014	0.014	14*	0	0.014	0.014
3-10	Shantytown			0	0	0		0	0	0		0	0	0
3-10	White Marlin Mall			0	0.02	0		0	0.02	0		0	0.02	0
3-10	W.O.C. Fishing Center			0	0	0		0	0	0		0	0	0
3-16	Frontier Town	90/site	584 sites	0	0.053	0.053	584 sites	0	0.053	0.053	584 sites	0	0.053	0.053
3-17	Castaways Trailer Park	300/*	42*	0	0.013	0.013	42*	0	0.013	0.013	42*	0	0.013	0.013
3-17	Eagles Landing G.C.			0	0.005	0.005		0	0.005	0.005		0	0.005	0.005
3-17	Eagles Nest Trailer Park (70 Trailers, 267 Camps)	250/140	337*	0	0.058	0.058	337*	0	0.058	0.058	337*	0	0.058	0.058
3-19	O.C. Golf & Yacht Club			0	0.010	0.010		0	0.010	0.010		0	0.010	0.010

TABLE 3-3
 INVENTORY OF EXISTING PUBLIC AND / OR PRIVATE COMMUNITY
 AND OTHER MULTI-USE WATER SUPPLY SYSTEMS

FIG No.	OWNER Multi-Use	WELL No.	AQUIFER	COORDINATE LOCATION	DEPTH (Feet)	DIAMETER (Inches)	MAX. SAFE YIELD (gpm)	PUMPING CAP. (gpm)	WATER QUALITY
3-16	Frontier Town	65	Pleistocene	N 172,000 E 1,333,000	94	2			
		66		N 172,587	94	4			
		67		N 1,331,637	50	2		N/A	Abandoned
		68			50	2		N/A	Abandoned
3-16	Frontier Town	69	Pleistocene	N 172,587	115	4			
		70		N 171,--3	45				
		71		E 1,333,432	110	4	60		
		72			115	4	60		
3-17	Eagle's Nest By The Bay	77	Manokin		300	4			
		78		N 176,230					
		79		E 1,339,821					
		80							
3-17	Eagles Landing G.C.	157	Ocean City	N 177,000	280	4			
		158	Pleistocene	E 1,337,000	95	6			

TABLE 3-3
 INVENTORY OF EXISTING PUBLIC AND / OR PRIVATE COMMUNITY
 AND OTHER MULTI-USE WATER SUPPLY SYSTEMS

FIG No.	OWNER Multi-Use	WELL No.	AQUIFER	COORDINATE LOCATION	DEPTH (Feet)	DIAMETER (Inches)	MAX. SAFE YIELD (gpm)	PUMPING CAP. (gpm)	WATER QUALITY
3-17	Eagles Nest Trailer Park	73	Manokin		300	4	20		
		74	Manokin	N 176,864 E 1,339,504	300	4			
3-18	Mason Canning	82	Pocomoke	N 157,500 E 1,290,420	210	8			
3-19	Assateague Island National Seashore	83	Manokin	N 156,336 E 1,330,264	300	6	100	40	
3-19	Ocean City Golf and Yacht Club	84	Pocomoke-Irrigation	N 156,019 E 1,322,745	144	10	43		
3-19	Ocean City Golf and Yacht Club	85	Quaternary	N 155,227 E 1,323,907	101	2	70		
3-21	Assateague Island State Park	86	Manokin	N 151,109 E 1,334,593	302	8	120	200	
		87		N 150,475 E 1,333,854	316	8		200	
		88		N 148,342 E 1,332,270	313	8		200	
		89		N 146,705 E 1,332,270	322	8	378	200	
3-21	Assateague Island National Seashore	90		N 141,425 E 1,330,792	500	6			
3-22	Holly Farms Poultry	94	Manokin		318	4	30		
		95		N 133,179 E 1,258,420	352	6	200		

TABLE 3-3
 INVENTORY OF EXISTING PUBLIC AND / OR PRIVATE COMMUNITY
 AND OTHER MULTI-USE WATER SUPPLY SYSTEMS

FIG No.	OWNER Community	WELL No.	AQUIFER	COORDINATE LOCATION	DEPTH (Feet)	DIAMETER (Inches)	MAX. SAFE YIELD (gpm)	PUMPING CAP. (gpm)	WATER QUALITY
3-1	Hill Pond	1		N 230,000 E 1,312,000					
3-5	River Run/OPSA	2	Pleistocene	N 211,000 E 1,322,000	110	6			
		49		N 211,000 E 1,322,000					
		50		N 211,000 E 1,322,000					
3-5	St. Martins Bay by the Bay	63	Pocomoke	N 213,000 E 1,325,000	158	6			High Iron
3-6	Ocean Pines	16	Pleistocene	N 206,000 E 1,324,5000	110			500	
		17		N 207,700 E 1,324,224	117	20	500	500	
		18		N 208,000 E 1,321,7000	105				
		19		N 209,300 E 1,324,224	105	20	500	500	
	Lake Well		Pleistocene		91	4		60	
	Golf Course #1		Pleistocene		110	8		503	
	Golf Course #2		Pleistocene		110	8		503	
3-7	Town of Berlin	20	Pleistocene	N 185,280 E 1,311,320	122	18	1500	1100	Irony
3-7		21		N 184,700 E 1,312,375	115	12	600	500	
3-7		22		N 186,180 E 1,310,635	134	10	344	240	
3-7		23		N 180,803 E 1,315,227	83	5	60	N/A	Abandoned
3-7	Briddelltown	25	Pleistocene	N 187,000 E 1,316,000	117	6			
3-8	Lake Haven Trailer Park	26	Manokin	N 193,379	260	4	20	12	

TABLE 3-3
 INVENTORY OF EXISTING PUBLIC AND / OR PRIVATE COMMUNITY
 AND OTHER MULTI-USE WATER SUPPLY SYSTEMS

FIG No.	OWNER Community	WELL No.	AQUIFER	COORDINATE LOCATION	DEPTH (Feet)	DIAMETER (Inches)	MAX. SAFE YIELD (gpm)	PUMPING CAP. (gpm)	WATER QUALITY
3-8	Lake Haven Trailer Park	27	Manokin	E 1,322,640	260	4	20	12	
3-10	Oyster Harbor	64	Manokin	N 193,000 E 1,341,000	362	8	143		High Iron
3-10	Villa Nova Condo.	106	Quaternary System	N 187,000 E 1,342,000	85	4	2		
3-10	Sea Gull Trailer Court	32	Pleistocene	N 189,240 E 1,431,637	100	2	20		
3-10	South Point Village	107	Pocomoke	N 188,000 E 1,340,000	140	4	70		
3-10	Sunset Village	112	Ocean City	N 185,000 E 1,340,000	301	6			
3-11	Ocean City	38	Ocean City	N 185,700	280	16	580	550	Good aft. treatment
		39	Ocean City	E 1,348,080	290	16	495	550	
		40	Manokin		450	16	605	550	
3-11	Ocean City	41	Ocean City	N 185,700 E 1,348,080	300	16	500	500	Good
3-11	Ocean City	42	Ocean City	N 191,700	284	16	600	550	
		43	Ocean City	E 1,350,420	295	16	600	550	
		44	Ocean City		298	16	550	450	
3-11	Ocean City	45	Manokin	N 191,700 E 1,350,420	420	16	600	600	Good
3-11	Ocean City	New Well, 33rd St.	Ocean City		300	16			
3-12	Ocean City	51	Ocean City	N 200,370	308	16	830	600	

TABLE 3-3
 INVENTORY OF EXISTING PUBLIC AND / OR PRIVATE COMMUNITY
 AND OTHER MULTI-USE WATER SUPPLY SYSTEMS

FIG No.	OWNER Multi-Use	WELL No.	AQUIFER	COORDINATE LOCATION	DEPTH (Feet)	DIAMETER (Inches)	MAX. SAFE YIELD (gpm)	PUMPING CAP. (gpm)	WATER QUALITY
3-1	Showell Farms, Inc.	118							
	Employee Housing	119	Quaternary 2 Wells	N 221,000 E 1,309,000	65 132	4 4			
	Chicken Hatchery	122		N 230,000 E 1,318,000					
	Feed & Grain Mill	134	Pocomoke	N 220,000 E 1,309,000					
	Primary Breeder Hatchery	135	Quaternary	N 222,000	127 123	4" 4"			
	Chicken Houses	136	Quaternary	E 1,308,000	95 93	4 4			
3-1	Riverview MHP	3	Manokin	N 220,792	295	4	40	30	
3-2	Bali HI RV Park	4	Pleistocene 3 Wells	N 220,000 E 1,335,000	65	2			
3-4	Showell Poultry	5	Pleistocene	N 210,264	110	6			
		6		E 1,311,531	103	6	40		
		7			103	8	113		
		8			112	6			
		9			104	8			
		10			103	8			

TABLE 3-3
INVENTORY OF EXISTING PUBLIC AND / OR PRIVATE COMMUNITY
AND OTHER MULTI-USE WATER SUPPLY SYSTEMS

FIG No.	OWNER Multi-Use	WELL No.	AQUIFER	COORDINATE LOCATION	DEPTH (Feet)	DIAMETER (Inches)	MAX. SAFE YIELD (gpm)	PUMPING CAP. (gpm)	WATER QUALITY
		11			93	8			
3-4	Perdue Hatchery	12	Pocomoke	N 213,432	128	4	25		
		13	Pleistocene	E 1,311,742					
		14	Pleistocene						
3-5	McDonald's/589	138	Pocomoke	N 203,000 E 1,326,000	190	4			
3-5	Pines Park Plaza	139	Quaternary	N 204,000	64	4		60	
3-5	Pines Park Plaza	140	Quaternary	E 1,325,000	63	4		70	
3-5	Pine Shores Golf Course	141	Quaternary	N 209,000 E 1,321,000	115	4		50	
		142	Quaternary	N 205,000 E 1,320,000	97	4		80	
3-5	Showell Elm. School	15	Quaternary	N 208,000 E 1,318,395	110	4		50	
3-7	Bay Club Golf Course	143	Quaternary	N 185,000 E 1,301,000	70	8			
3-7		144	Quaternary	N 186,000 E 1,301,000	110	4			
3-7	Beach Club Golf Course	145	Quaternary	N 191,000 E 1,310,000	140	4			
3-7	Chesapeake Foods	129	Pleistocene		105	8	180		
		130			161	8	1000		

TABLE 3-3
 INVENTORY OF EXISTING PUBLIC AND / OR PRIVATE COMMUNITY
 AND OTHER MULTI-USE WATER SUPPLY SYSTEMS

FIG No.	OWNER Multi-Use	WELL No.	AQUIFER	COORDINATE LOCATION	DEPTH (Feet)	DIAMETER (Inches)	MAX. SAFE YIELD (gpm)	PUMPING CAP. (gpm)	WATER QUALITY
		131		N 187,709 E 1,311,003	106	8	100		
		132			127	10	58		
		133			128	10	112		
3-7	Davis Ice & Coal	126	Pleistocene	N 184,380	110	6			
		127		E 1,309,260	108	6	60		
3-7	Daves Ice & Coal	128			122	6	110		
3-7	Stephen Decatur High School	24	Pleistocene	N 190,158 E 1,318,870	109	6	140		
3-7	Sunset Lakes MHP	146	Manokin	N 175,000 E 1,316,000	270	4		40	High Iron
3-7	Delmarva Downs	28	Pleistocene	N 193,538	100	4		70	
		29		E 1,326,758	97	4	200	50	
		30			96	4	65	50	
3-8	McDonalds/Rt. 50	31	Pleistocene	N 196,000 E 1,315,000	94	4	40	25	
3-10	Delmarva Trailer Park	147	Quaternary System	N 185,000	63	2		40	Unk.
		148		E 1,342,000	112	4		30	Unk.
3-10	Fishermans Marina	36	Pleistocene	N 186,000	100	12	15	15	

TABLE 3-3
INVENTORY OF EXISTING PUBLIC AND / OR PRIVATE COMMUNITY
AND OTHER MULTI-USE WATER SUPPLY SYSTEMS

FIG No.	OWNER Multi-Use	WELL No.	AQUIFER	COORDINATE LOCATION	DEPTH (Feet)	DIAMETER (Inches)	MAX. SAFE YIELD (gpm)	PUMPING CAP. (gpm)	WATER QUALITY
3-10	Fishermans Marina	37		E 1, 345,000	100	2	15	15	
3-10	Food Lion	149		N 189,000 E 1,341,000	260	6			
3-10	Francis Scot Key Motel	35	Ocean City	N 187,500 E 1,344,00	265	4	60	40	Good
3-10	Greenridge Trailer Park	150	Quaternary	N 188,000 E 1,338,000	80	4		50	Unk.
3-10	Marlin Park Plaza	151	Pleistocene	N 191,000 E 1,342,000	95	2			
3-10	Sunset Business Park	152	Pleistocene 2 Wells	N 175,000 E 1,318,000	100	2			
3-10	Ocean City Elm. School	33	Pleistocene	N 192,850 E 1,332,270	128	4	150	60	
3-10	Shantytown	153	Pleistocene	N 187,000	93	4			
		154	Pleistocene	E 1,346,000	?	6			
3-10	White Marlin Mall	155	Pocomoke	N 190,000 E 1,342,000	170	6			
3-10	Worc. Co. Senior citizen Act. Center	34	Pleistocene	N 189,346 E 1,332,270	90	6	150	100	
3-10	W.O.C. Fishing Center	156	Ocean City	N 185,000 E 1,343,000	265	4			
3-11	Ocean City Ice Co.	46	Manokin		285	6		144	
		47	Pocomoke	N 180,600 E 1,348,025	189	10	175	61	
		48	Pleistocene		80	3	75	20	

**TABLE 3-1
WATER SUPPLY DEMANDS AND PLANNED CAPACITY FOR EXISTING AND PLANNED PUBLIC AND PRIVATE
COMMUNITY AND MULTI-USE WATER SYSTEMS**

FIG No.	WATER SERVICE AREA COMMUNITY SYSTEMS	PRESENT-1992					
		POPULATION			GPCD (GALS)	CAPACITY (mgd)	
		TOTAL	SERVED	UNSERVED		DEMAND	PLANNED
3-1	Mill Pond	26 EDU	26 EDU	0	300/EDU	0.0078	0.0078
3-2	Lighthouse Sound	0	0	0	250/EDU	0	0.102
3-5	River Run (Served by Mystic Harbor)	0	0	0	300/EDU	0	0.102
3-5	St. Martin by the Bay	65	17	0	300/EDU	0.005	0.020
3-6	Ocean Pines	4,500 EDU	4,500 EDU	0	250/EDU	0.5	2.0
3-7	Town of Berlin	2,656	2,656	0	218	0.57	0.89
3-7	Bridgeltown	48 EDU	48 EDU	0	300/EDU	0.014	0.03
3-8	Lake Haven Trailer Park	125 EDU	125 EDU	0	300/EDU	0.038	0.038
3-9	Riddle Farm	0	0	0	300/EDU	0	0.20
3-10	Oyster Harbor	242	242	0	250/EDU	0.06	0.061
3-10	Villa Nova Condominiums	36 EDU	36 EDU	0	250/EDU	0.009	0.009
3-10	Sea Gull Trailer Court	45 EDU	45 EDU	0	300/EDU	0.0135	0.0135
3-10	South Point Village	14 EDU	14 EDU	0	300/EDU	0.009	0.01
3-11	Ocean City	224,410	224,410	0	58	13.0	18.1
3-13	Edgewater Acres/Nantucket Point	36 EDU	36 EDU	0	300/EDU	0.02	0.02
3-14	Mystic Harbor	201	201	58	250	0.05	0.2
3-16	Assateague Point	201 EDU	201 EDU	0	110/EDU	0.022	0.064
3-16	The Landing			0	300/EDU	0	0.082
3-18	Newark	250	250	0	44	0.011	0.015
3-22	Snow Hill	2,200	2,200	0	205	0.450	1.87

TABLE 3-2
 PROJECTED WATER SUPPLY DEMANDS AND PLANNED CAPACITIES FOR COMMUNITY
 AND MULTI-USE WATER SYSTEMS

FIG No.	WATER SERVICE AREA COMMUNITY	GPCD gals EDU (*)	1995				2000				2010			
			POPULATION EDU (*)		CAPACITY (MGD)		POPULATION EDU (*)		CAPACITY (MGD)		POPULATION EDU (*)		CAPACITY (MGD)	
			TOTAL	UNSERVED	DEMAND	PLANNED	TOTAL	UNSERVED	DEMAND	PLANNED	TOTAL	UNSERVED	DEMAND	PLANNED
3-1	Mill Pond	300/*	26*	0	0.0078	0.0078	26/*	0	0.0078	0.0078	26*	0	0.0078	0.0078
3-2	Lighthouse Sound	250/*	50*	0	0.0125	0.102	100/*	0	0.025	0.102	204*	0	0.051	0.102
3-5	River Run	250/*	50*	0	0.0125	0.102	100/*	0	0.025	0.102	408*	0	0.061	0.102
3-5	St. Martin By the Bay	300/*	40*	0	0.012	0.020	52/*	0	0.016	0.020	65*	0	0.02	0.020
3-6	Ocean Pines	250/*	6,000	0	1.50	2.50	7,500	0	1.875	2.50	9,000	0	2.250	2.50
3-7	Town of Berlin	218	3060	0	0.66	0.89	3500	0	0.76	0.89	5100	0	1.11	0.89
3-7	Briddelltown	300/*	48*	0	0.014	0.03	48/*	0	0.014	0.03	48*	0	0.014	0.03
3-8	Lake Haven Trailer Park	300/*	125*	0	0.038	0.038	125/*	0	0.038	0.038	125*	0	0.038	0.038
3-9	Riddle Farm	300/*	30*	0	0.009	0.200	65/*	0	0.020	0.200	100*	0	0.030	0.200
3-10	Oyster Harbor	250/*	242*	0	0.060	0.061	242/*	0	0.060	0.061	242*	0	0.060	0.061
3-10	Villa Nova Condo.	250/*	36*	0	0.009	0.009	36/*	0	0.009	0.009	36*	0	0.009	0.009
3-10	Sea Gull Trailer Court	300/*	45*	0	0.0135	0.0135	45/*	0	0.0135	0.0135	45*	0	0.0135	0.0135
3-10	South Point Village	300/*	36*	0	0.01	0.01	36/*	0	0.01	0.01	36*	0	0.01	0.01
3-10	Sunset Village	250/*	14*	0	0.0035	0.02	72/*	0	0.022	0.025	84*	0	0.025	0.025
3-11	Ocean City	161	240,000	0	14.0	18.0	261,120	0	15.1	18.0	295,510	0	17.1	18.1
3-13	Edgewater Acres/Nantucket Point	300/*	61*	0	0.018	0.050	200/*	0	0.060	0.108	400*	0	0.120	0.120
3-14	Mystic Harbor	60	420	0	0.025	0.2	590	0	0.035	0.2	720	0	0.050	0.2
3-16	Assateague Point	110/*	201*	0	0.022	0.064	319*	0	0.035	0.064	522*	0	0.064	0.064
3-16	The Landing	300/*	40*	0	0.012	0.082	80*	0	0.024	0.082	121*	0	0.036	0.082

TABLE 3-3 INVENTORY OF EXISTING PUBLIC AND / OR PRIVATE COMMUNITY
AND OTHER MULTI-USE WATER SUPPLY SYSTEMS

FIG No.	OWNER Community	WELL No.	AQUIFER	COORDINATE LOCATION	DEPTH (Feet)	DIAMETER (Inches)	MAX. SAFE YIELD (gpm)	PUMPING CAP. (gpm)	WATER QUALITY
3-12	Ocean City	52	Ocean City	E 1,352,375	298	16	830	600	
3-12	Ocean City	53	Ocean City		294	10	600	750	
3-12	Ocean City	54	Ocean City	N 200,370	294	10	525	750	
		55	Ocean City	E 1,352,375	318	10	750	750	
		56	Ocean City		325	10	600	750	
3-13	Edgewater Acres	113	Manokin	N 230,000 E 1,353,000	360	6			High Iron
3-13	Ocean City	57	Manokin	N 227,550	450	12	1320	1400	
		58	Manokin	E 1,356,760	450	12	1400	NONE	Good
		59	Manokin		403	12	1400	1400	Good
3-13	Ocean City	60	Manokin	N 220,000 E 1,350,000	403	12	1400	1400	Good
3-13	Ocean City		Manokin, 125th St.	N 225,000 E 1,356,000	402	8			
3-13	Ocean City		Manokin		400				
3-14	Mystic Harbor	61	Pleistocene	N 185,227 E 1,339,873	140	10	357	335	Good Aft. Treatment
		62		N 184,646 E 1,339,609	140	10	351	335	Good Aft. Treatment
3-16	Assateague Point	114	Ocean City	N 172,000	306	8	150		
		115		E 1,335,000			150		
3-18	Newark Service Area	81	Pocomoke	N 156,495 E 1,290,685	202	8	100	78	Good After Treatment

TABLE 3-4
INVENTORY OF EXISTING PUBLIC AND / OR PRIVATE COMMUNITY
AND OTHER MULTI-USE WATER TREATMENT FACILITIES

FIG. NO:	OWNER-OPERATING AGENCY COMMUNITY	PLANT COORDINATE LOCATION	TYPE OF TREATMENT	RATED PLANT CAPACITY (mgd)	AVERAGE PRODUCTION (mgd)	MAX. PEAK FLOW (mgd)	STORAGE CAPACITY (mg)	PLANNED EXPANSION AND DATE	METHOD OF SLUDGE DISPOSAL
3-1	Mill Pond	N 230.000 E 1.312.000							
3-5	River Run	N 211.000 E 1.322.000	At Ocean Pines		.102 Prop.				
3-6	Ocean Pines	At Wells	pH Adjustment Disinfection	2.0	.875		1.0	REVISED MASTER PLAN	
3-7	Town of Berlin	At Wells	Chlorinated	0.88	0.57	0.88	.317	.3 MGD Storage Tank by 1/94	N/A
3-7	Bridgettown	At Wells	Iron Rem.. pH Adj.. Chlorin.	0.30	.014	.016	(HPT) .001	None	Septic Field
3-10	Dyster Harbor	N 193.379 E 1.322.640			.072		.042		
3-10	South Point Village	N 188.000 E 1.340.000		.010	.001	.0017	0	Planned WTP after 14th unit	
3-10	Sunset Village	N 185.000 E 1.340.000		.020	.020	0	.015	None	
3-11	Ocean City (South)	N 227.550 E 1.356.550	Iron Removal Chlorination	3.0			.400		Sanitary Sewer
3-11	Ocean City (15th Street)	N 200.370 E 1.352.375	Iron Removal	3.0			.500		Sanitary Sewer
3-12	Ocean City (44th Street)	N 191.740 E 1.350.420	Iron Removal	4.0			.400		Sanitary Sewer
3-13	Edgewater Acres	N 230.000 E 1.316.000						Planned WTP exp. w/.040 St.	
3-13	Ocean City (Gorman Ave)	N 185.280 E 1.311.320	Clarification. Aer.. Iron Rem.	8.0			*4.0		Sanitary Sewer
3-14	Mystic Harbor	N 185.805 E 1.339.504	Chlor.. pH Adj. & Iron Remov.	0.35	.015	.025	.500	None	Public Sewer
3-16	Assateague Pointe	N 172.000 E 1.335.000			.064 Prop.		.005		

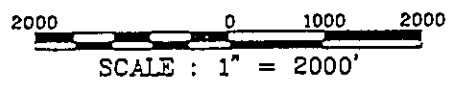
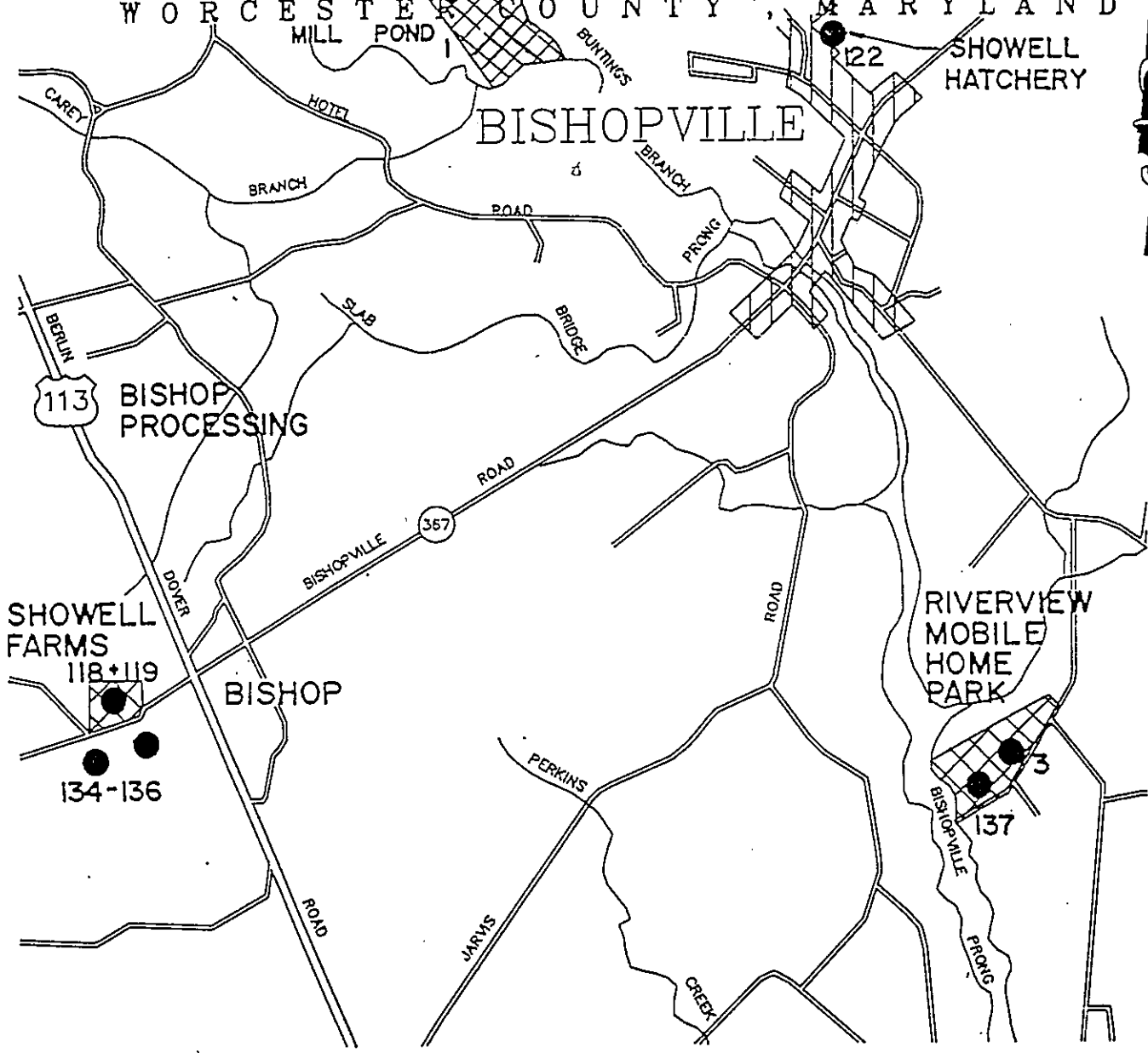
TABLE 3-6
IMMEDIATE 5 AND 10 YEAR PRIORITIES FOR WATER DEVELOPMENT

FIGURE NO:	WATER SERVICE AREA	DESCRIPTION	ESTIMATED COST			ASSIGNED COUNTY PRIORITY
			TOTAL	AVAILABLE FUNDING		
				FED. AND/OR STATE	LOCAL	
3-2	Lighthouse Sound	3 wells-Ocean City/Pocomoke 0.600 MGD		N/A	By Developer	W-2
3-5	River Run	3 wells - Manokin 0.123 MGD		N/A	By Developer	W-1
		2 Wells @ 110,000 G.A.P.		N/A	By Developer	
3-6	Ocean Pines	0.5 MGD Elev. Storage Tank		N/A	\$900,000	W-1
3-9	Riddle Farm	Well - Manokin 0.360 MGD		N/A		W-2
3-10	Oyster Harbor	1 Well - Manokin		N/A	By Developer	W-1
3-16	Assateague Pointe	2 Wells - Manokin 0.80 MGD		N/A	By Developer	W-1
3-16	The Landing	2 Wells - Pleistocene 0.100 MGD		N/A	By Developer	W-1
	Nantucket Point	1 Well @ 0.020 MGD		N/A	By Developer	W-1
	Berlin	See pages 3-				
	Ocean City	See pages 3-				



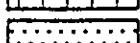
MAPS

WATER SERVICE AREAS

SUSSEX COUNTY, DELAWARE
 WORCESTER COUNTY, MARYLAND



CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS

LEGEND

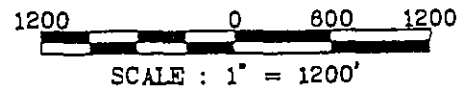
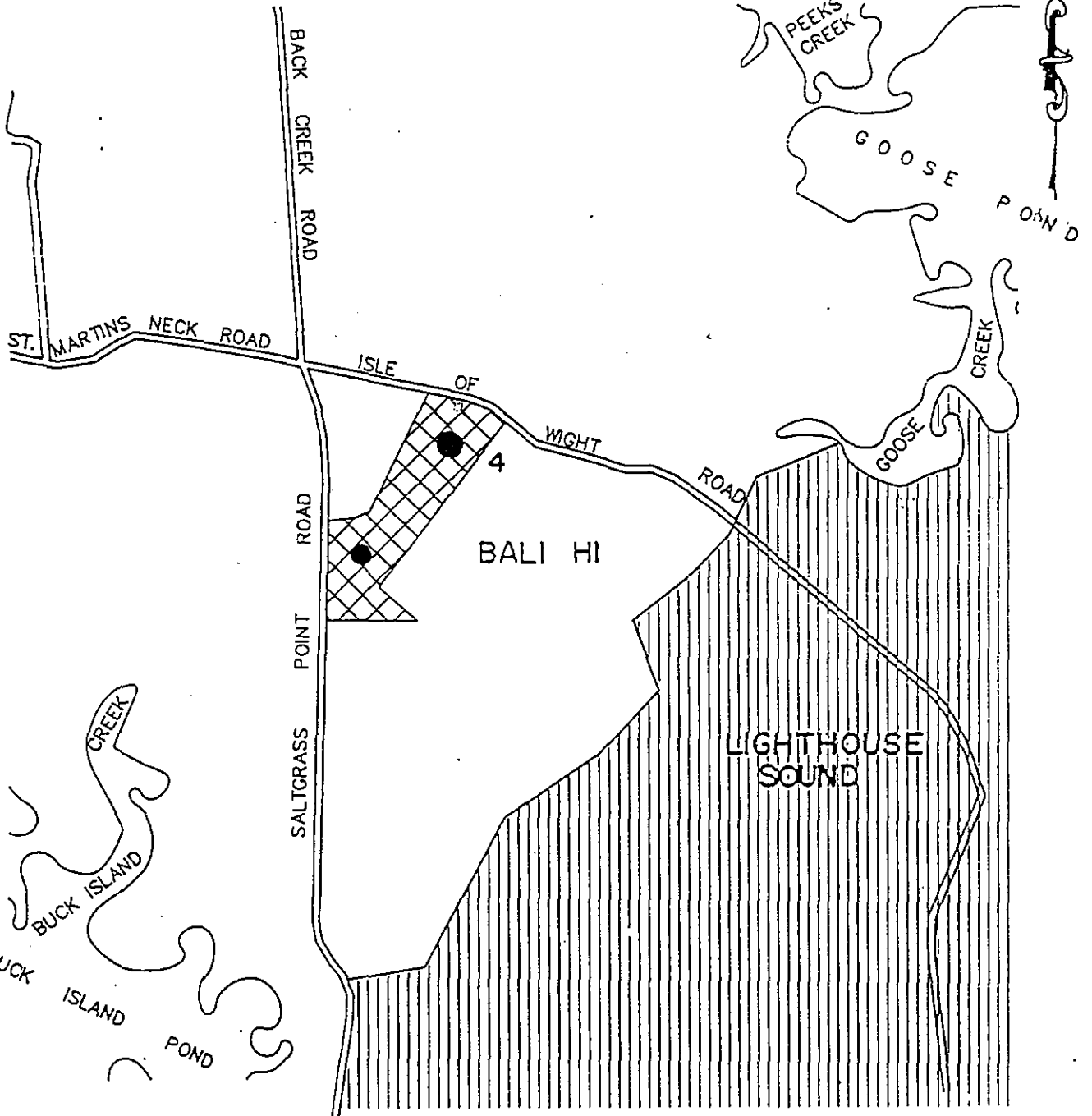
ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT	▲	△
WATER STORAGE TANK	◆	◊
WELL & PUMP	●	○
TRANSMISSION MAIN	---	---

BISHOPVILLE & ENVIRONS
 WATER SERVICE AREA




WORCESTER COUNTY
 COMPREHENSIVE WATER
 AND SEWERAGE PLAN

DATE : JUNE, 1990









FIGURE NO. : 3-1



CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS

LEGEND

ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT		
WATER STORAGE TANK		
WELL & PUMP		
TRANSMISSION MAIN		

SAINT MARTIN NECK & ENVIRONS
WATER SERVICE AREA

WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN


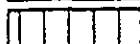
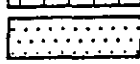


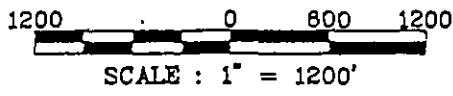
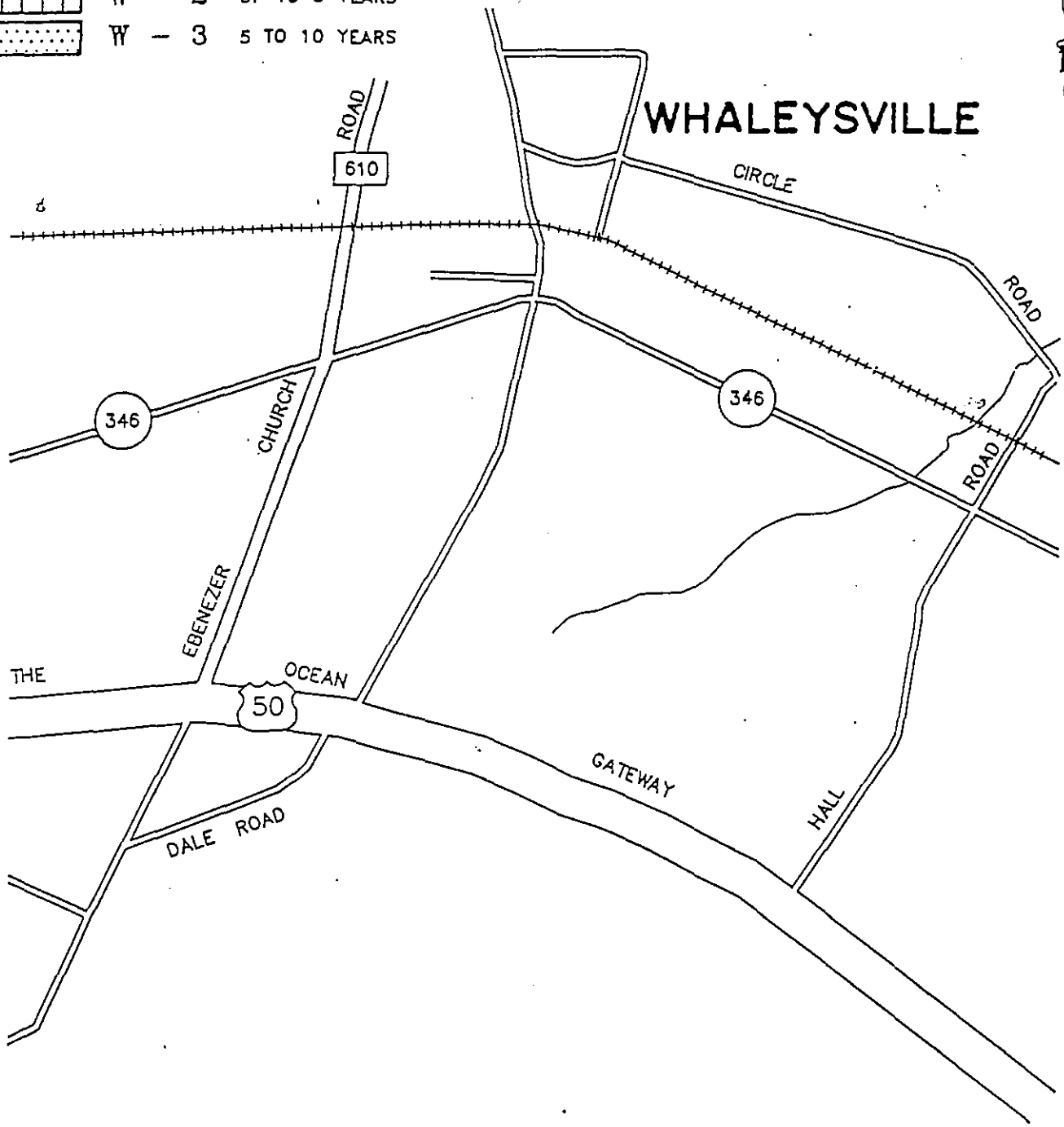
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PHONE (301) 228 - 7117

DATE : JUNE, 1990









FIGURE NO. : 3-2

CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS




LEGEND

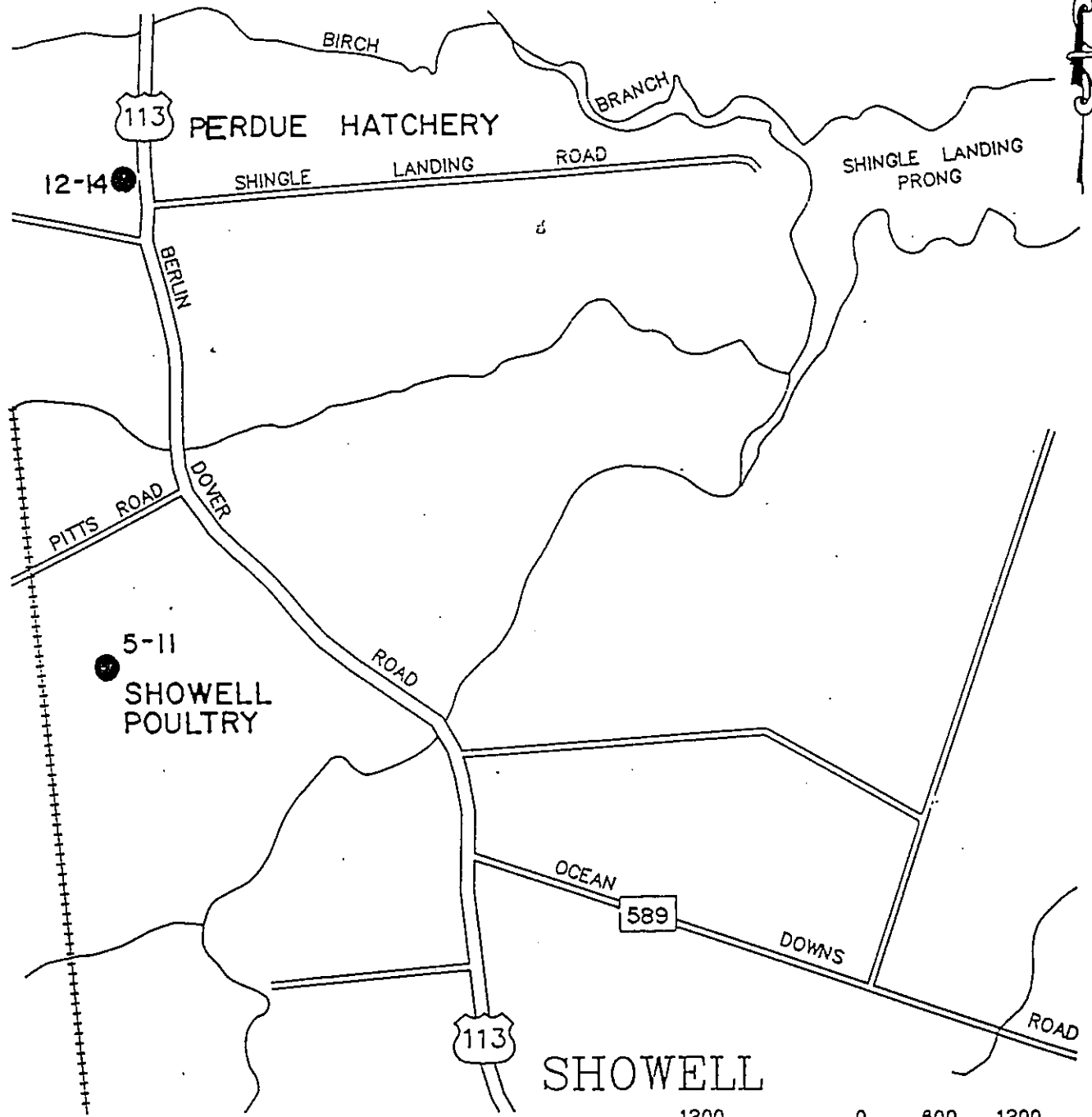
ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT		
WATER STORAGE TANK		
WELL & PUMP		
TRANSMISSION MAIN		

WHALEYSVILLE & ENVIRONS WATER SERVICE AREA

WORCESTER COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN

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DATE : JUNE, 1990 FIGURE NO. : 3-3



CATEGORIES

	W - 1	EXISTING & PLANNED SYSTEM
	W - 2	UP TO 5 YEARS
	W - 3	5 TO 10 YEARS

LEGEND

ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT		
WATER STORAGE TANK		
WELL & PUMP		
TRANSMISSION MAIN		

SHOWELL & ENVIRONS
WATER SERVICE AREA

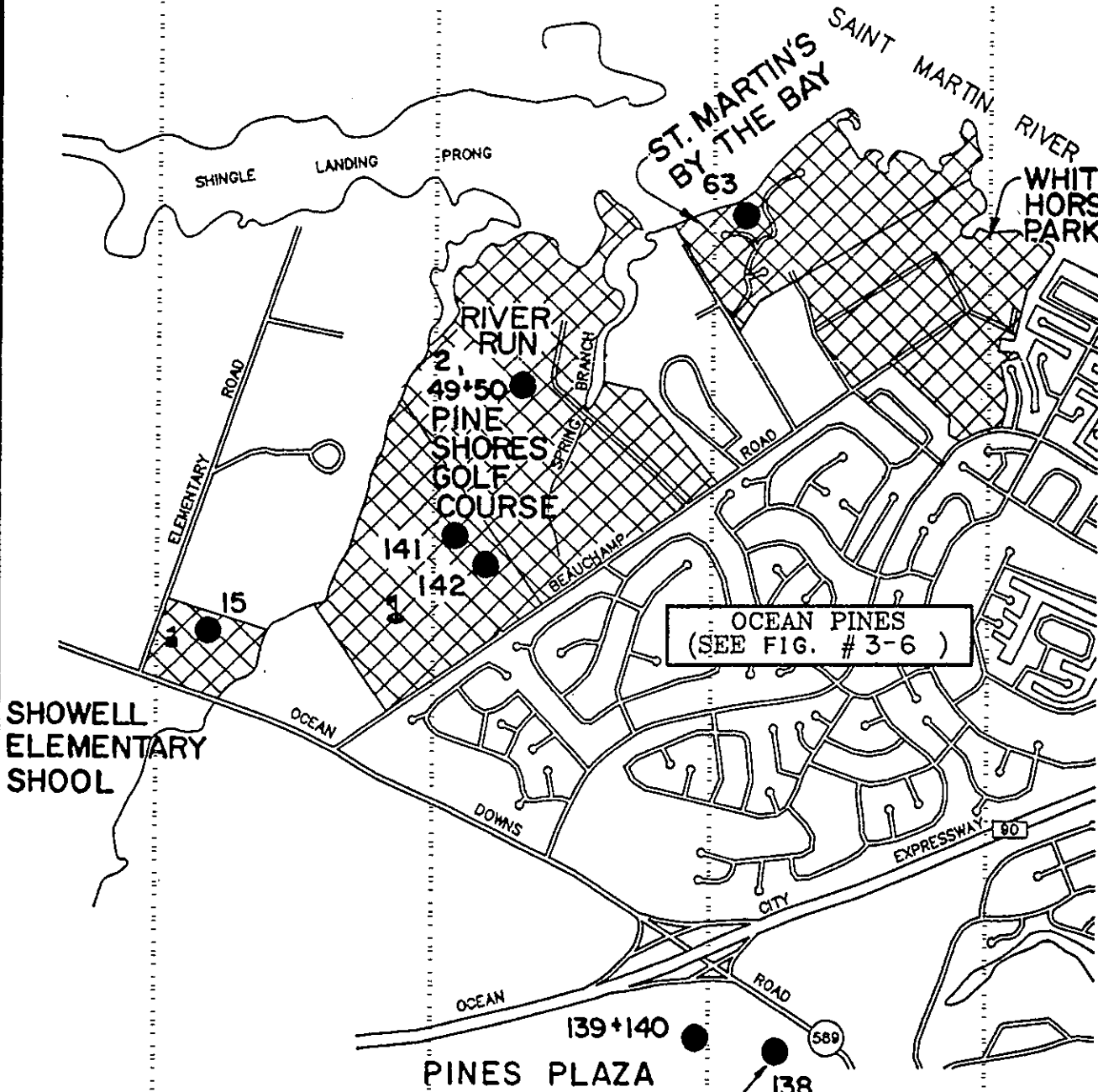
WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN





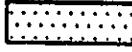
CONSULTING ENGINEERS AND SURVEYORS
Andrews, Miller & Assoc., Inc.
508 MARYLAND AVENUE • CAMBRIDGE, MARYLAND • 21613
PHONE (301) 228 - 7117

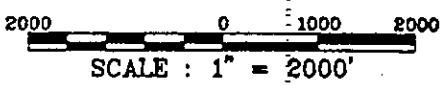
DATE : JUNE, 1990

FIGURE NO. : 3-4



CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS




LEGEND

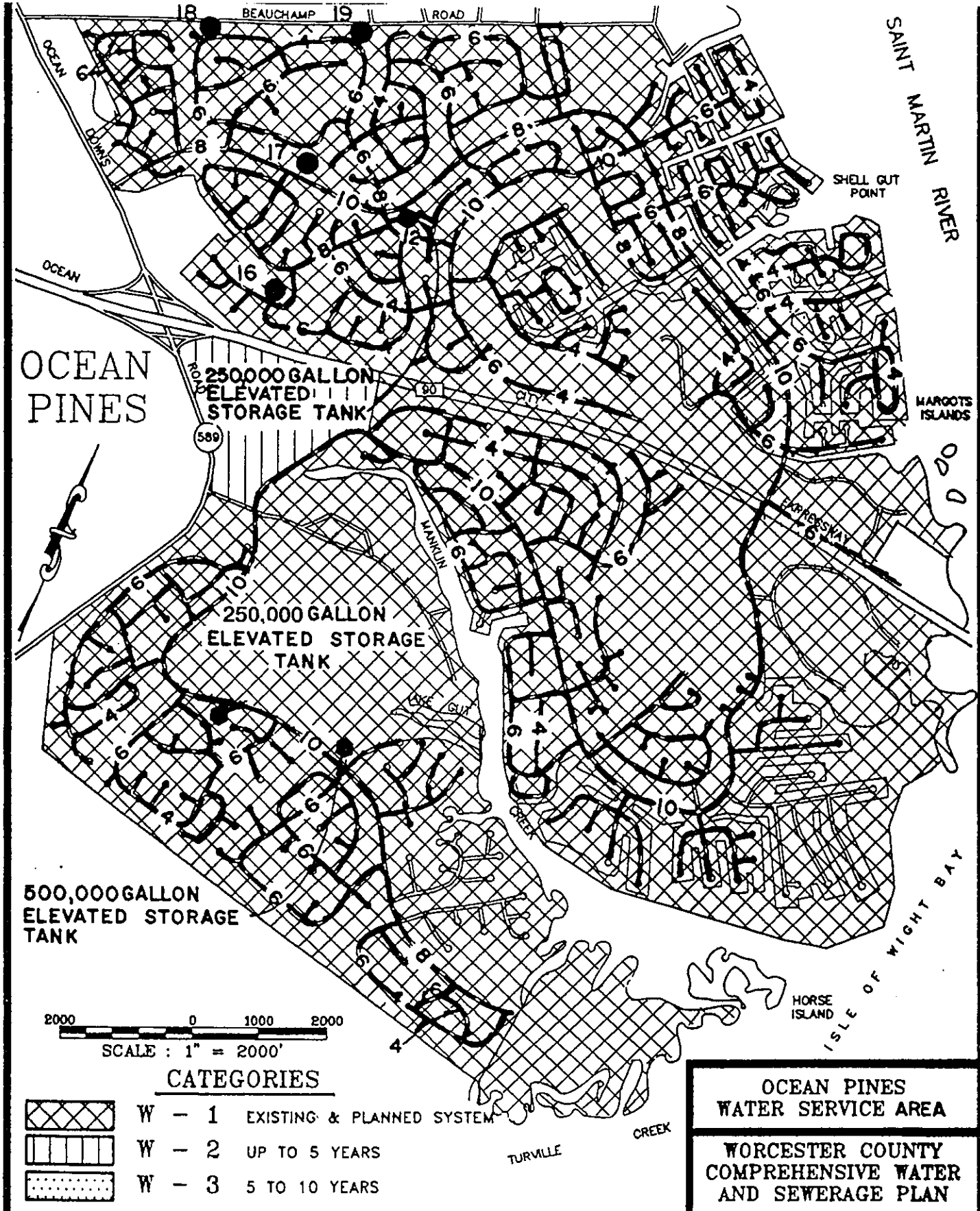
ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT	▲	△
WATER STORAGE TANK	●	○
WELL & PUMP	●	○
TRANSMISSION MAIN	---	---

BEAUCHAMP ROAD & ENVIRONS WATER SERVICE AREA

WORCESTER COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN

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DATE : JUNE, 1990 FIGURE NO. : 3 - 5



OCEAN PINES




250,000 GALLON ELEVATED STORAGE TANK

250,000 GALLON ELEVATED STORAGE TANK

500,000 GALLON ELEVATED STORAGE TANK

2000 0 1000 2000
SCALE : 1" = 2000'

CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS

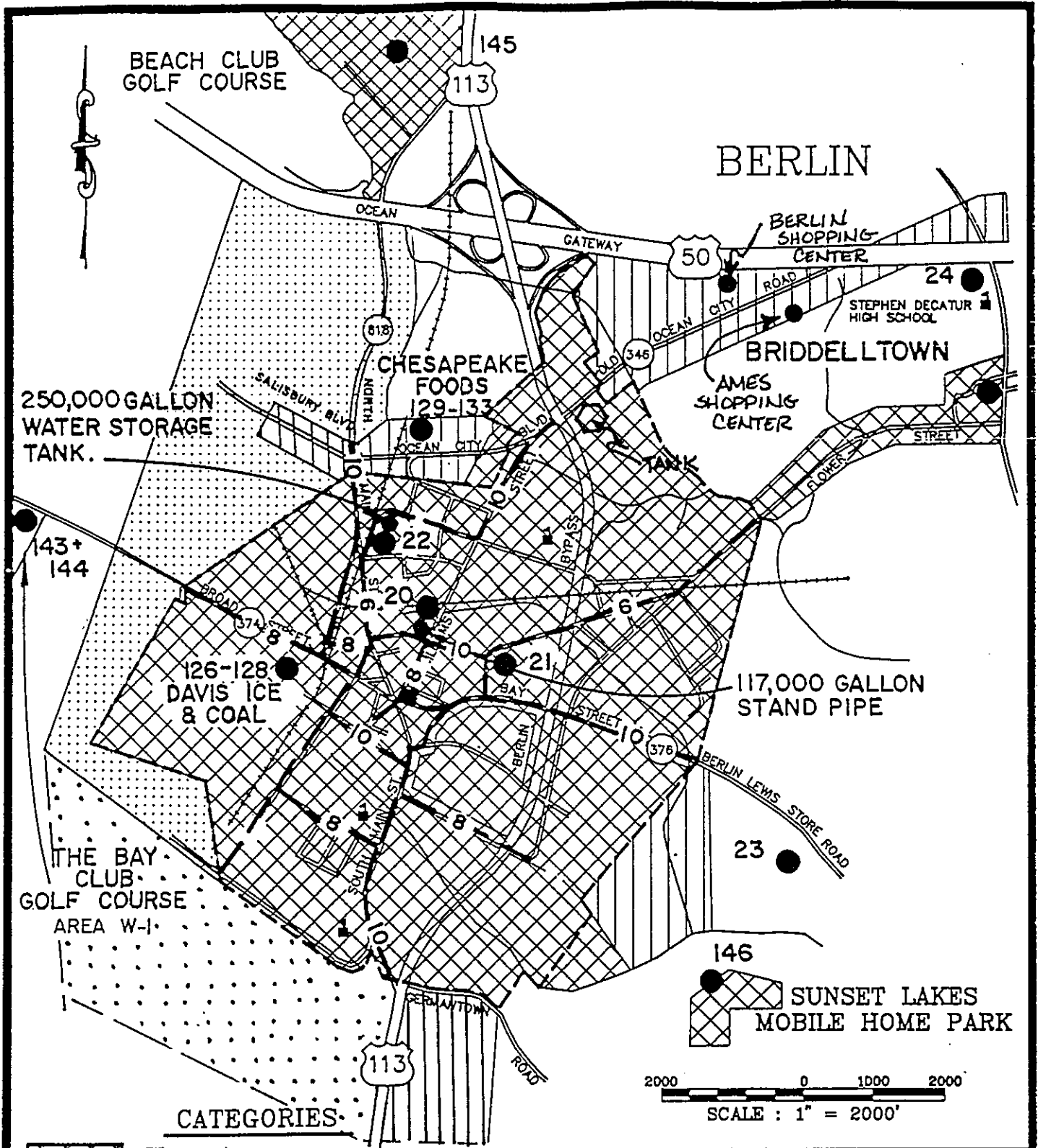
OCEAN PINES WATER SERVICE AREA
WORCESTER COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN

LEGEND



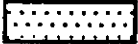
ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT	▲	△
WATER STORAGE TANK	◆	◇
WELL & PUMP	●	○
TRANSMISSION MAIN	---	---

WORCESTER COUNTY DEPARTMENT OF PLANNING, PERMITS AND INSPECTIONS
SNOW HILL, MARYLAND

DATE: MAY 1995 FIGURE NO. : 3-6



CATEGORIES


-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS

LEGEND

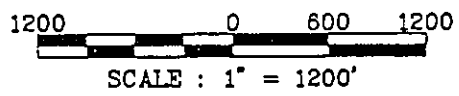
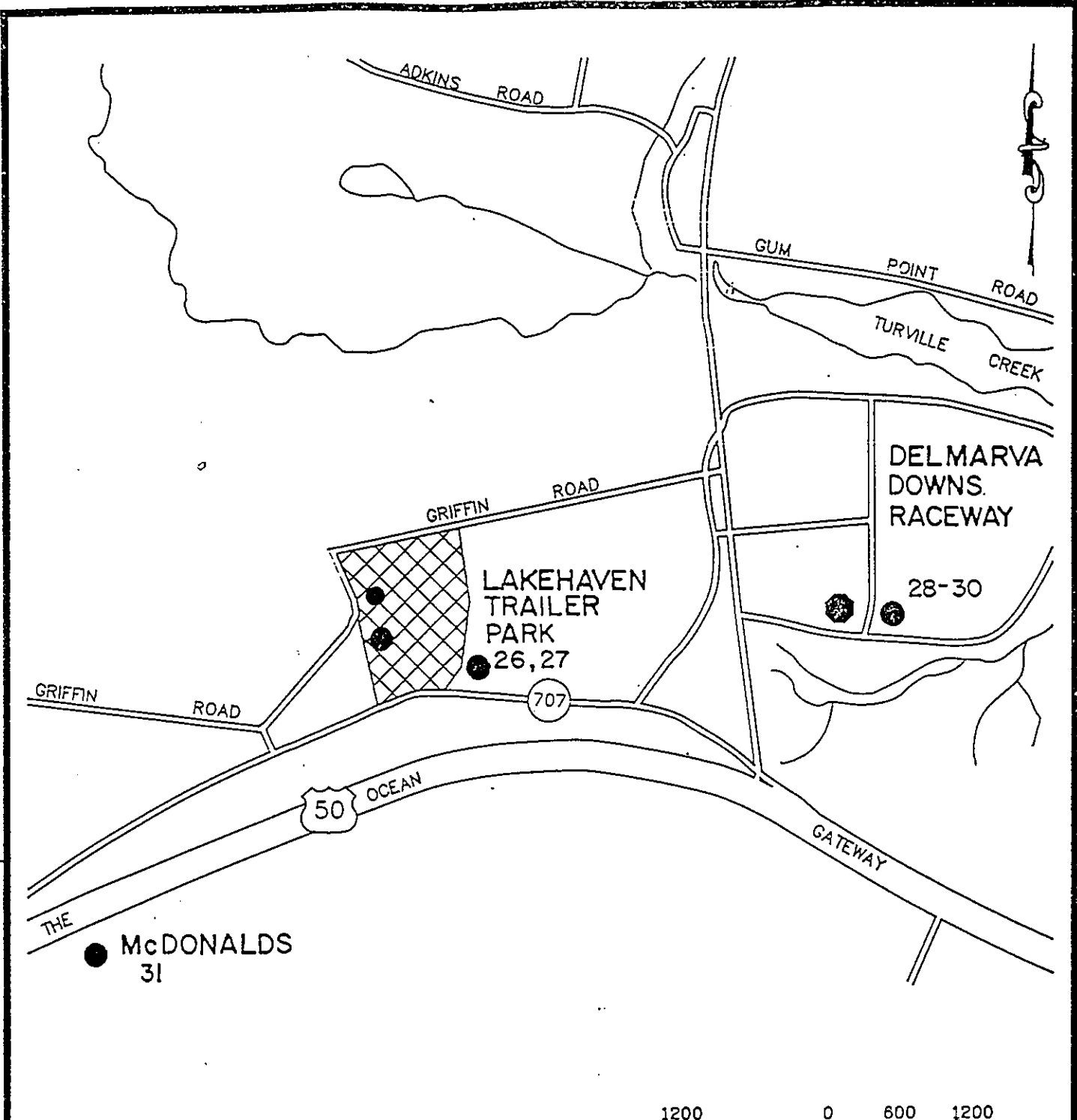
ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT	▲	△
WATER STORAGE TANK	●	○
WELL & PUMP	●	○
TRANSMISSION MAIN	— — — — —	— — — — —

**BERLIN & ENVIRONS
WATER SERVICE AREA**



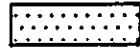
**WORCESTER COUNTY
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AND SEWERAGE PLAN**

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DATE : JUNE, 1990 FIGURE NO. : 3-7



CATEGORIES


-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS

LEGEND

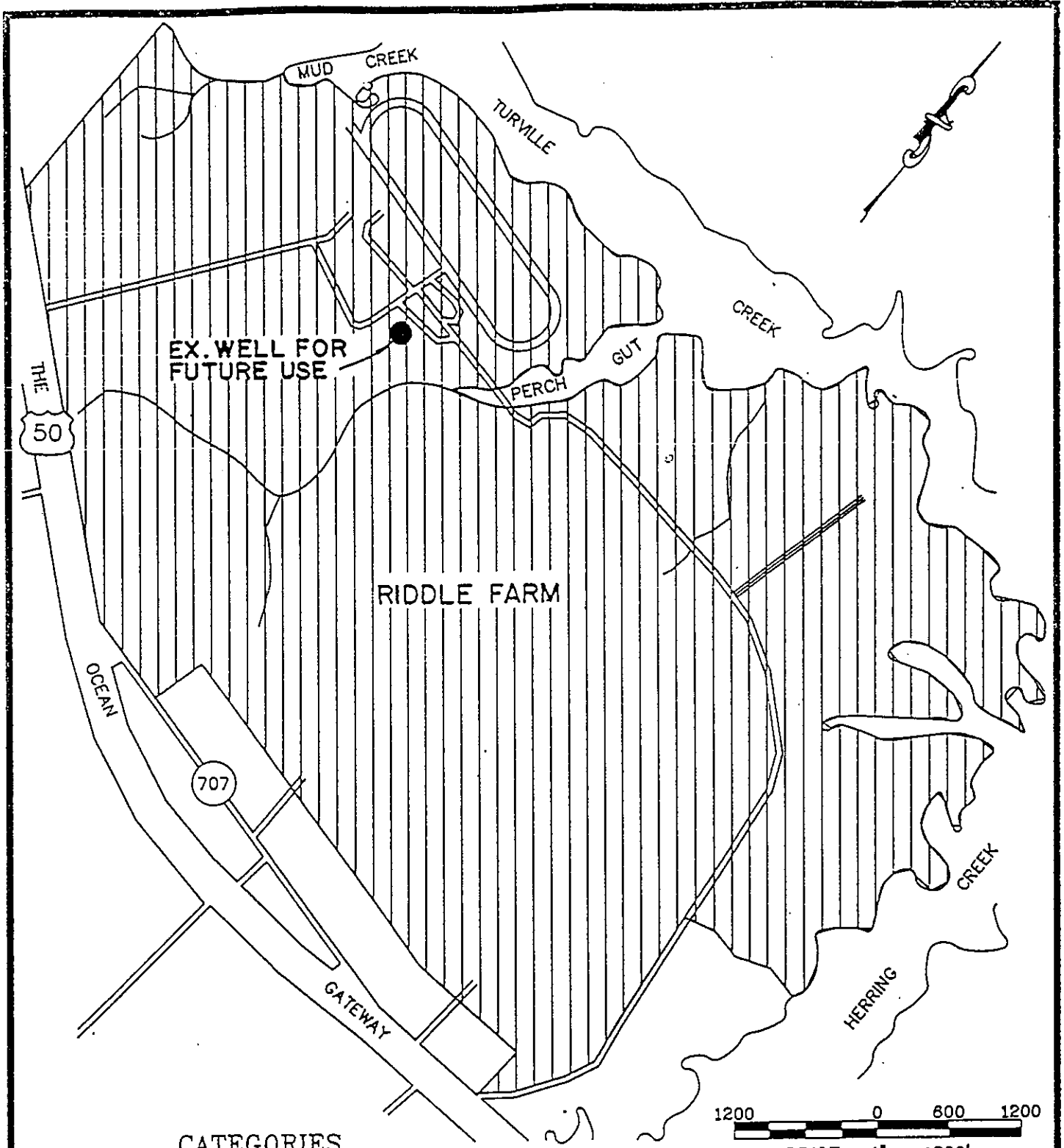
ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT	▲	△
WATER STORAGE TANK	●	○
WELL & PUMP	●	○
TRANSMISSION MAIN	---	---

**GRAY'S CORNER & ENVIRONS
WATER SERVICE AREA**



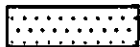
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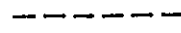
DATE : JUNE, 1990 | FIGURE NO. : 3-8



CATEGORIES


-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS

LEGEND

ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT		
WATER STORAGE TANK		
WELL & PUMP		
TRANSMISSION MAIN		

**RIDDLE FARM
WATER SERVICE AREA**

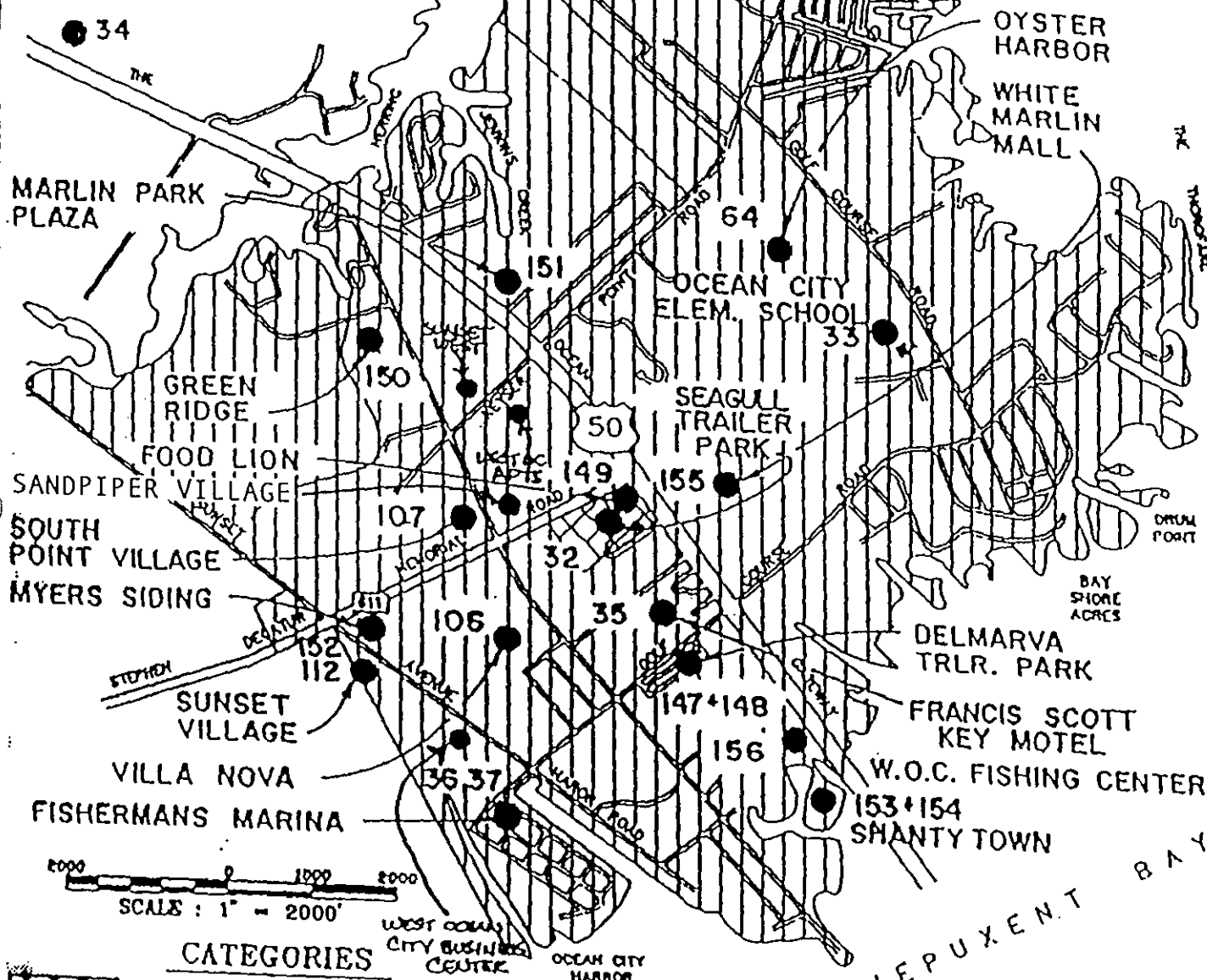
**WORCESTER COUNTY
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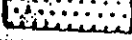
DATE : JUNE, 1990 FIGURE NO. : **3-9**

WEST OCEAN CITY









WORCESTER COUNTY SENIOR
CITIZENS ACTIVITY CENTER



CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS

LEGEND

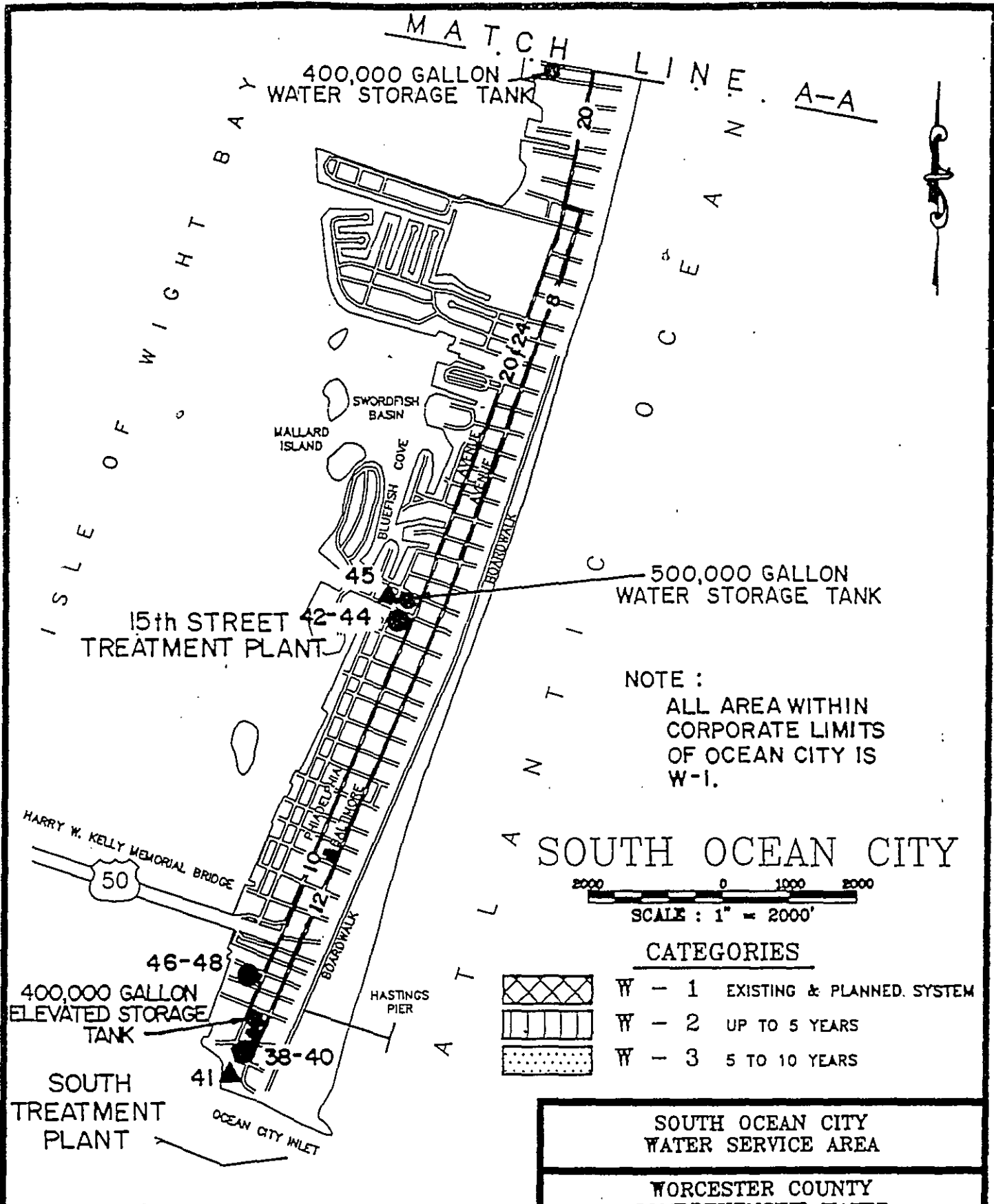
ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT		
WATER STORAGE TANK		
WELL & PUMP		
TRANSMISSION MAIN		

WEST OCEAN CITY & ENVIRONS
WATER SERVICE AREA

WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN

DATE: REVISIONS 1994




FIGURE NO. 5 10



NOTE:
ALL AREA WITHIN
CORPORATE LIMITS
OF OCEAN CITY IS
W-1.

2000 0 1000 2000
SCALE: 1" = 2000'


CATEGORIES

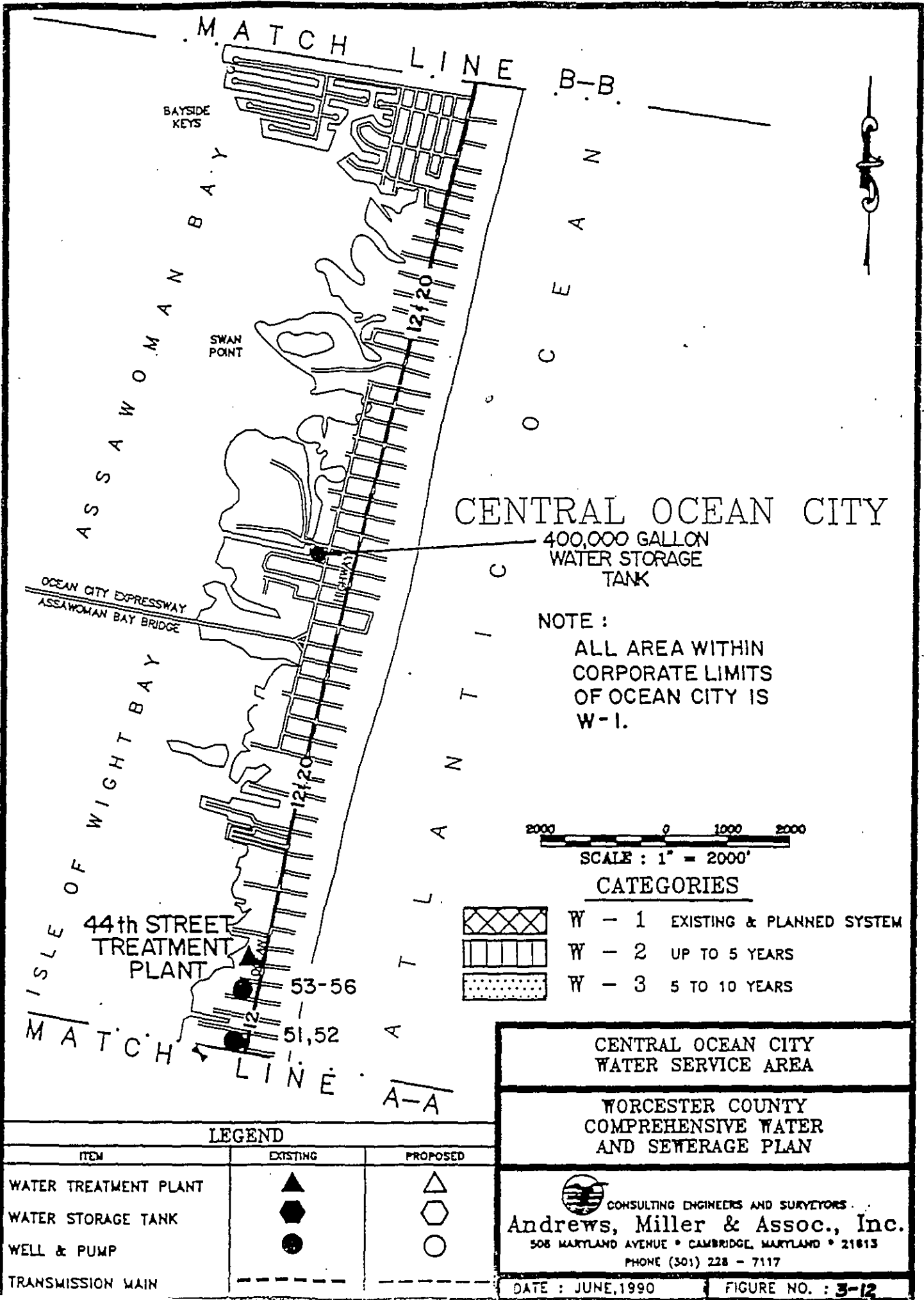
-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS

LEGEND		
ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT	▲	△
WATER STORAGE TANK	◆	◇
WELL & PUMP	●	○

**SOUTH OCEAN CITY
WATER SERVICE AREA**

**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**


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CENTRAL OCEAN CITY




400,000 GALLON
WATER STORAGE
TANK

NOTE :
ALL AREA WITHIN
CORPORATE LIMITS
OF OCEAN CITY IS
W-1.



SCALE : 1" = 2000'

CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS

LEGEND

ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT	▲	△
WATER STORAGE TANK	●	○
WELL & PUMP	●	○
TRANSMISSION MAIN	---	---

CENTRAL OCEAN CITY
WATER SERVICE AREA

WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN

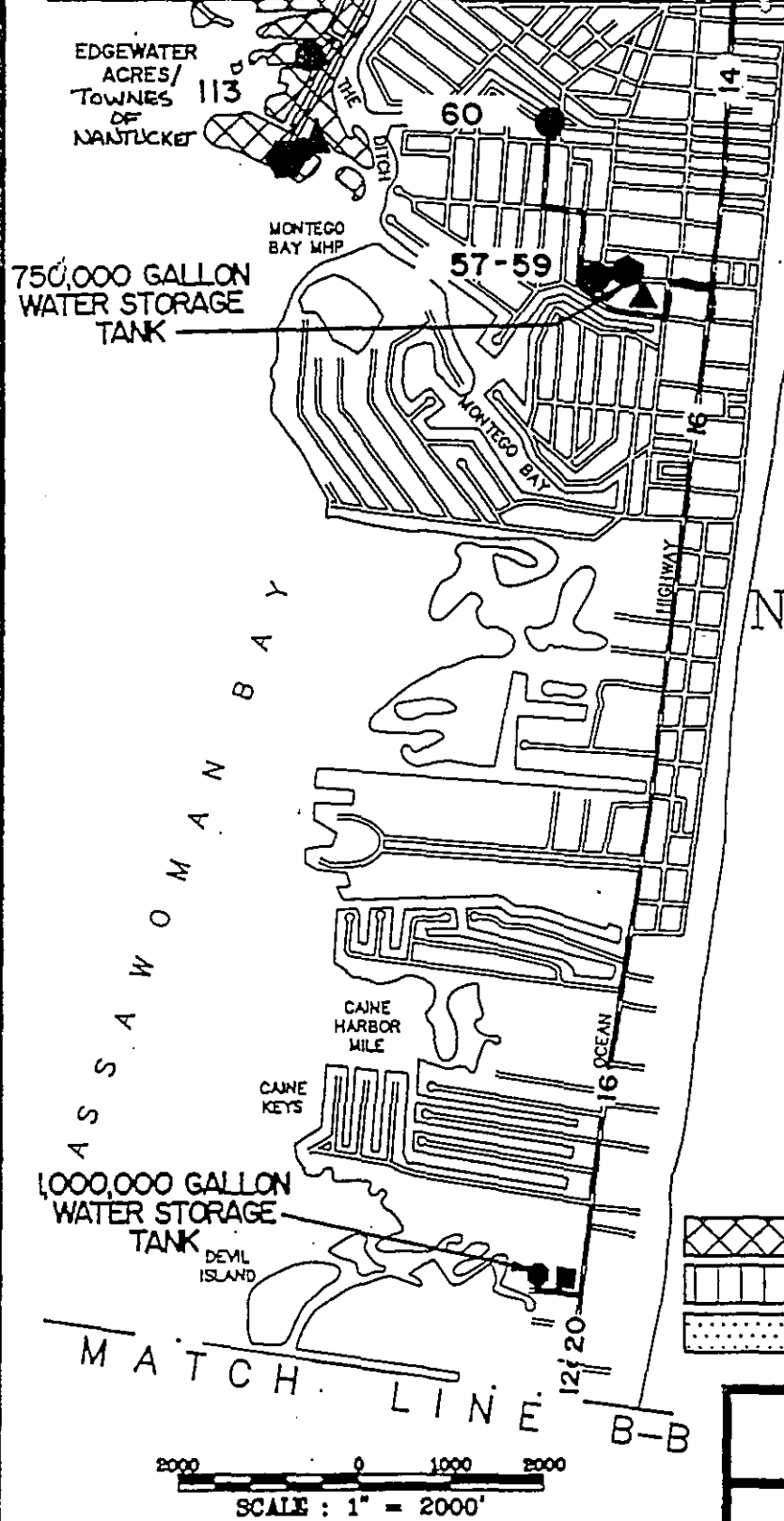


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DATE : JUNE, 1990

FIGURE NO. : 3-12

SUSSEX COUNTY, DELAWARE



GORMAN AVENUE TREATMENT PLANT




OCEAN

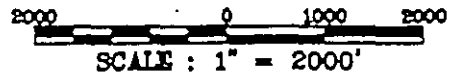
NORTH OCEAN CITY

ATLANTIC

NOTE : ALL AREA WITHIN CORPORATE LIMITS OF OCEAN CITY IS W-1.

CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS




LEGEND

ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT	▲	△
WATER STORAGE TANK	◆	◇
WELL & PUMP	●	○
TRANSMISSION MAIN	---	---




NORTH OCEAN CITY WATER SERVICE AREA

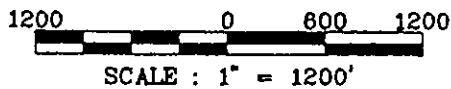
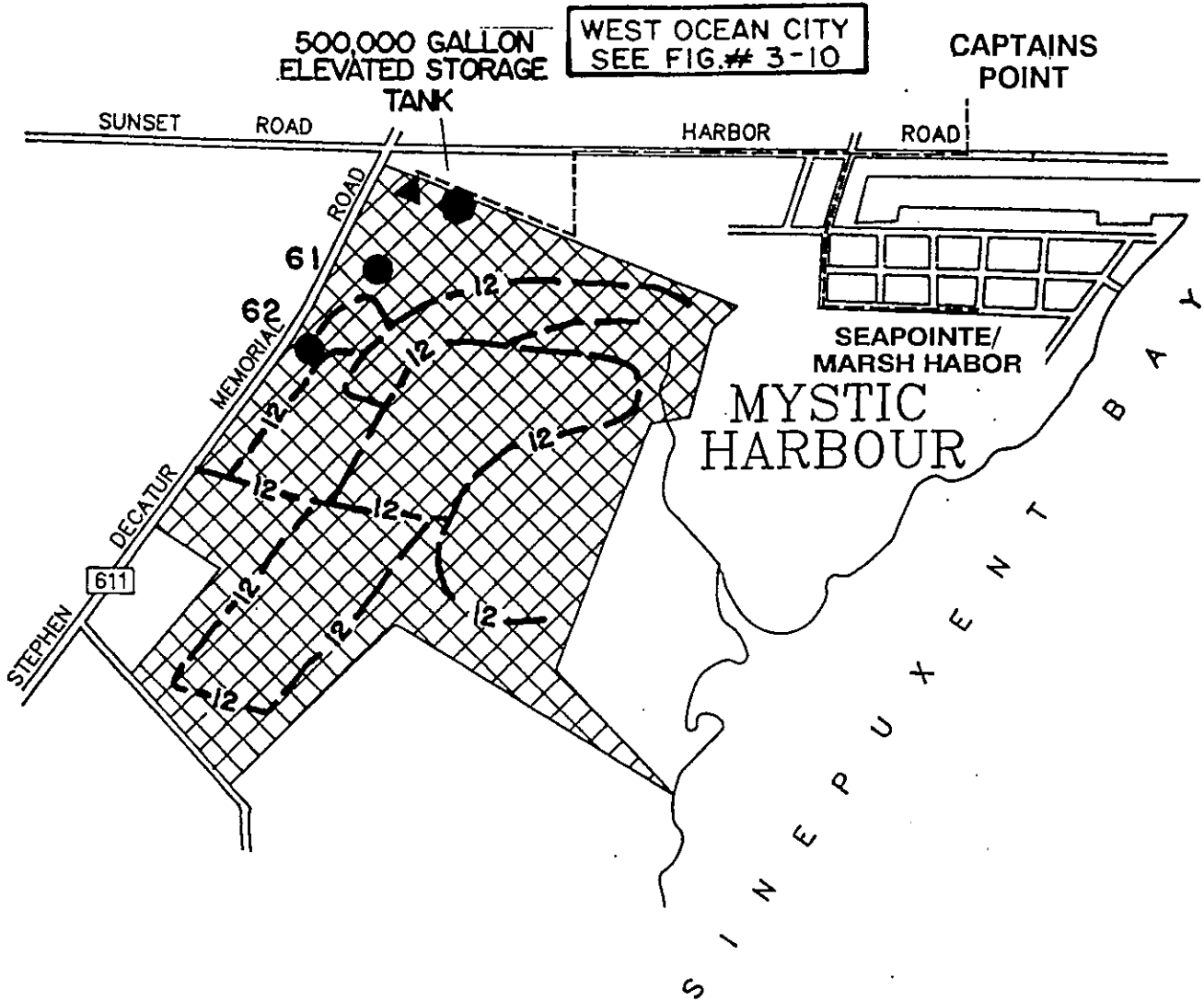
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DATE : JUNE, 1990 FIGURE NO. : 3-13

CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS



LEGEND

ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT		
WATER STORAGE TANK		
WELL & PUMP		
TRANSMISSION MAIN		

**MYSTIC HARBOUR
WATER SERVICE AREA**

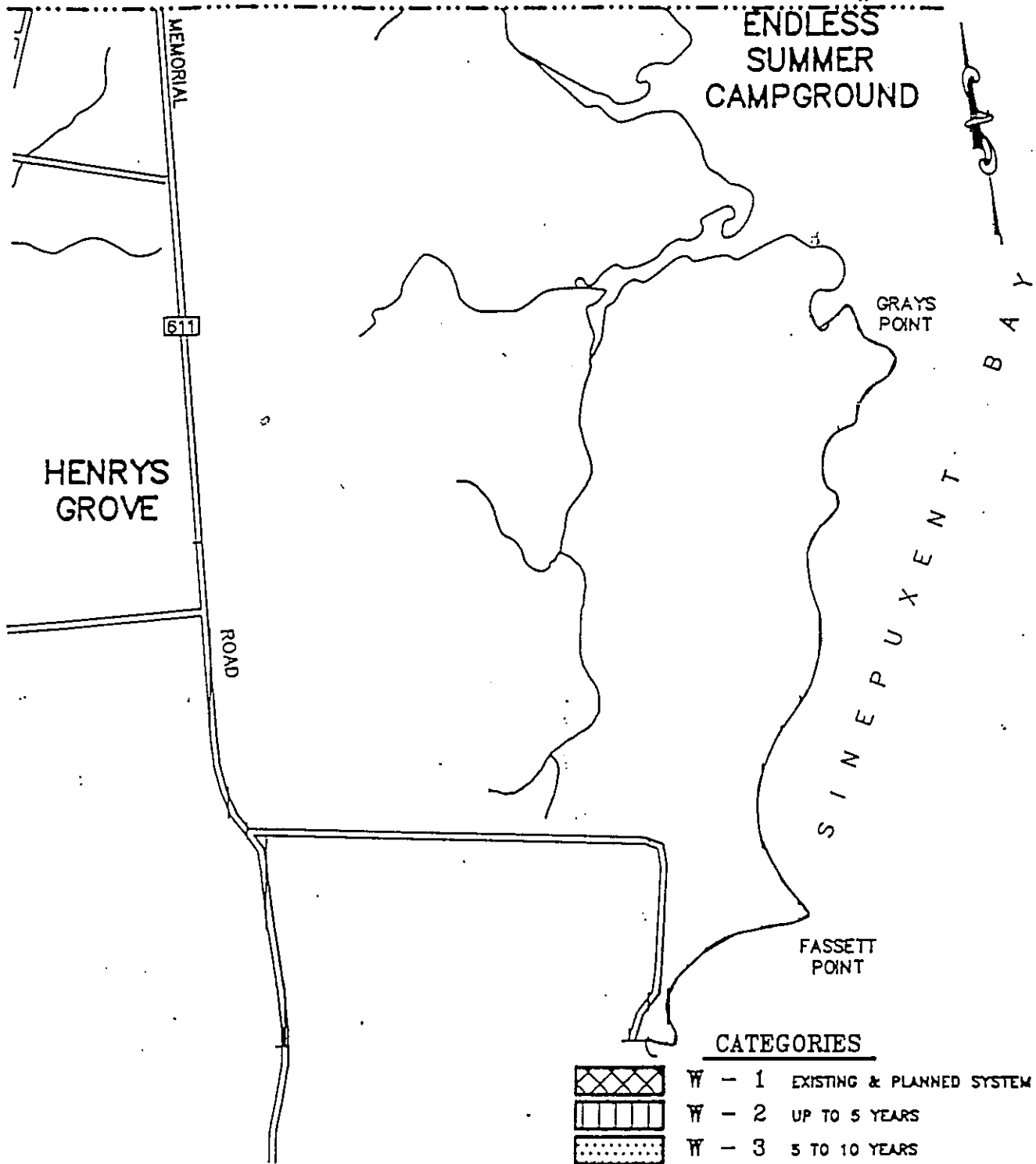
**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**

**WORCESTER COUNTY
DEPARTMENT OF PLANNING, PERMITS
AND INSPECTIONS
SNOW HILL, MARYLAND**




DATE: MAY, 1995

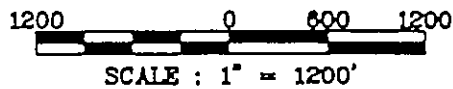
FIGURE NO. : 3-14

ENDLESS
SUMMER
CAMPGROUND



CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS



LEGEND

ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT	▲	△
WATER STORAGE TANK	◆	◈
WELL & PUMP	●	○
TRANSMISSION MAIN	—	—

UPPER SINEPUXENT NECK
WATER SERVICE AREA

WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN

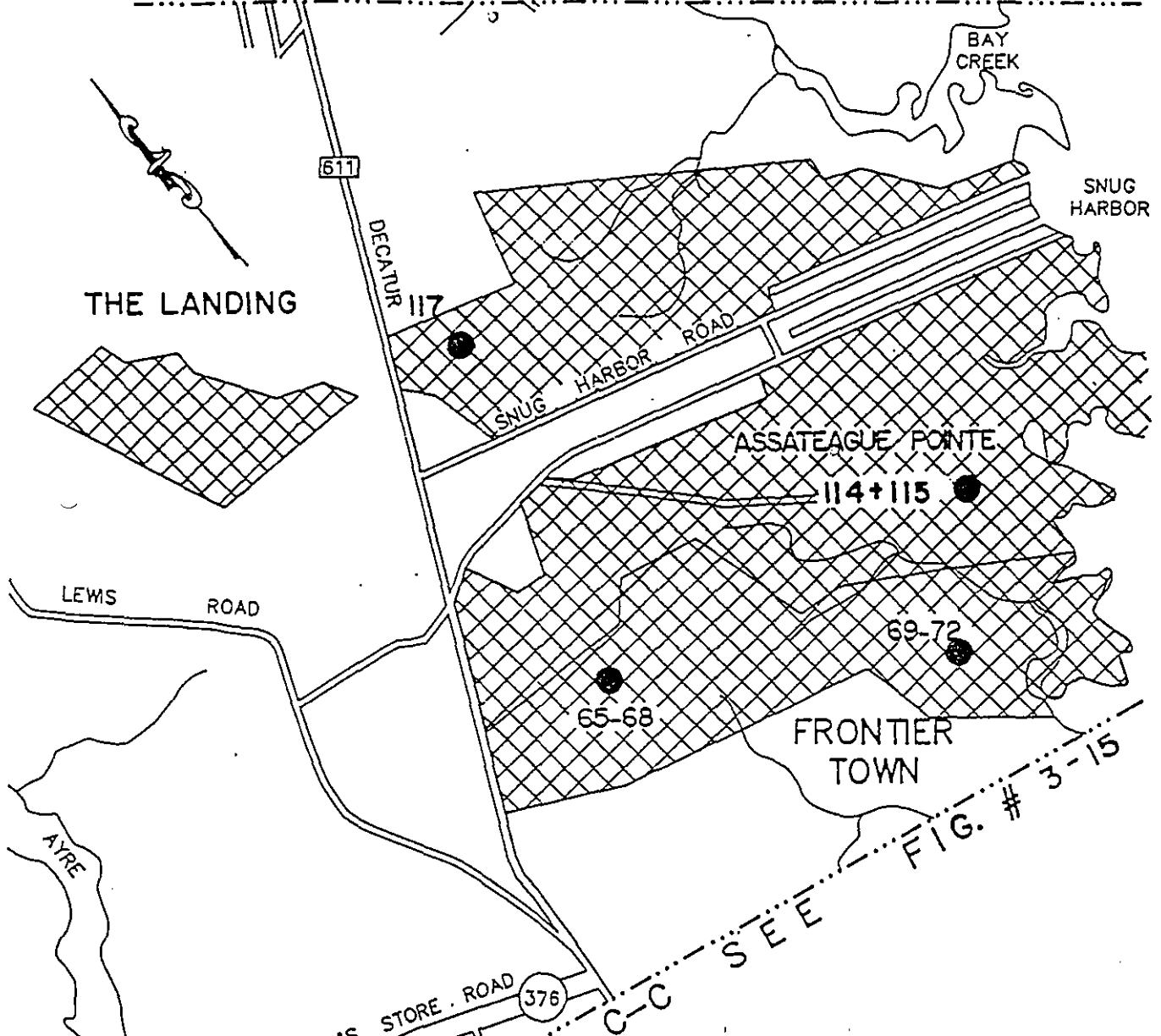


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DATE : JUNE, 1990

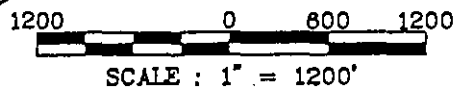
FIGURE NO. : 3-15

MATCH LINE D-D SEE FIG. #3-17



CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS




LEGEND

ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT	▲	△
WATER STORAGE TANK	●	○
WELL & PUMP	●	○
TRANSMISSION MAIN	—	—

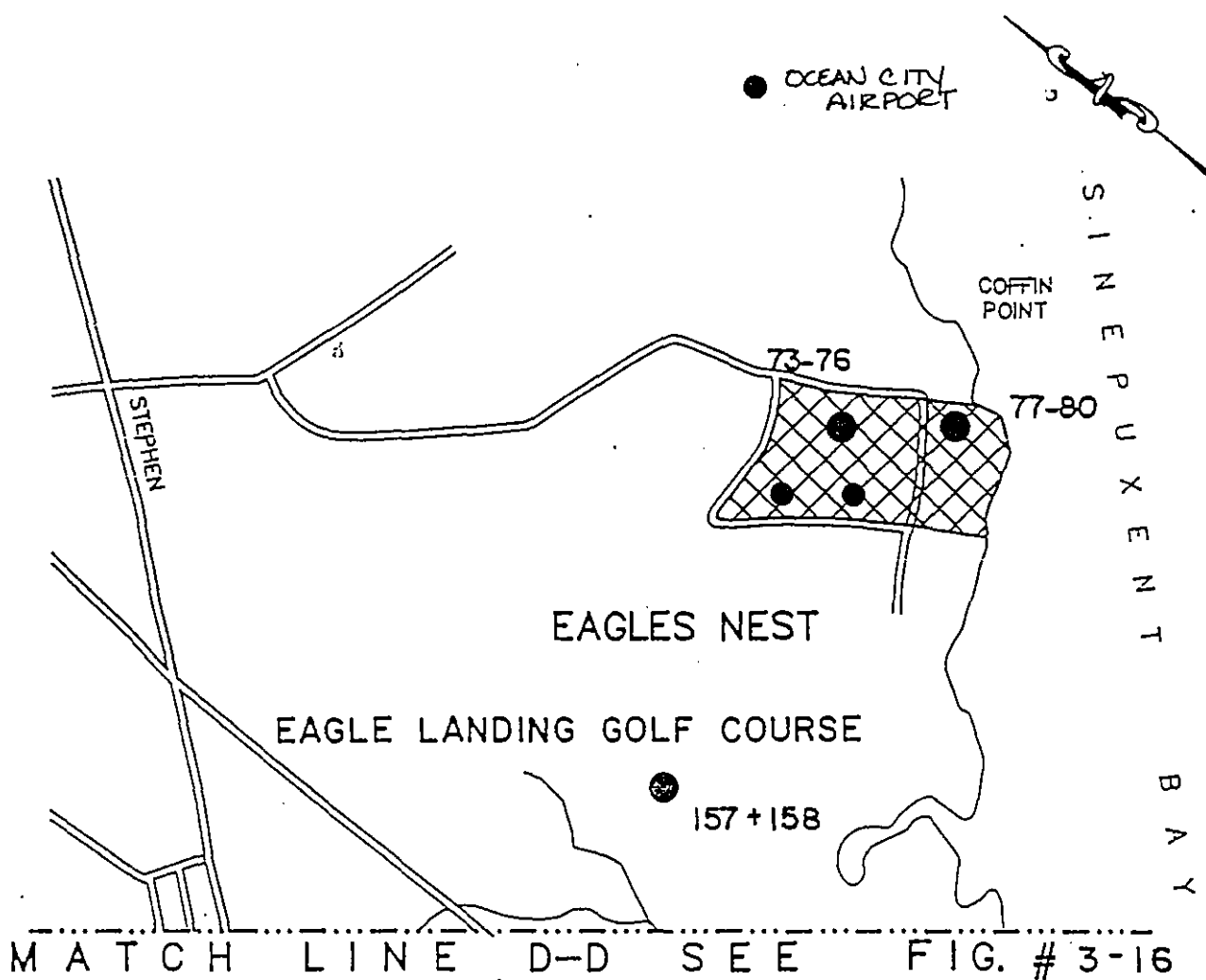
**UPPER SINEPUXENT NECK
WATER SERVICE AREA**

**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**


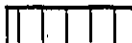
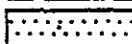
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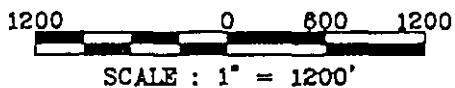
DATE : JUNE, 1990

FIGURE NO. : 3-16



CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS



LEGEND

ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT	▲	△
WATER STORAGE TANK	●	○
WELL & PUMP	●	○
TRANSMISSION MAIN	---	---

UPPER SINEPUXENT NECK
WATER SERVICE AREA

WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN



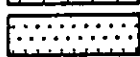


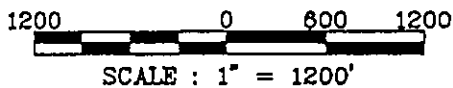
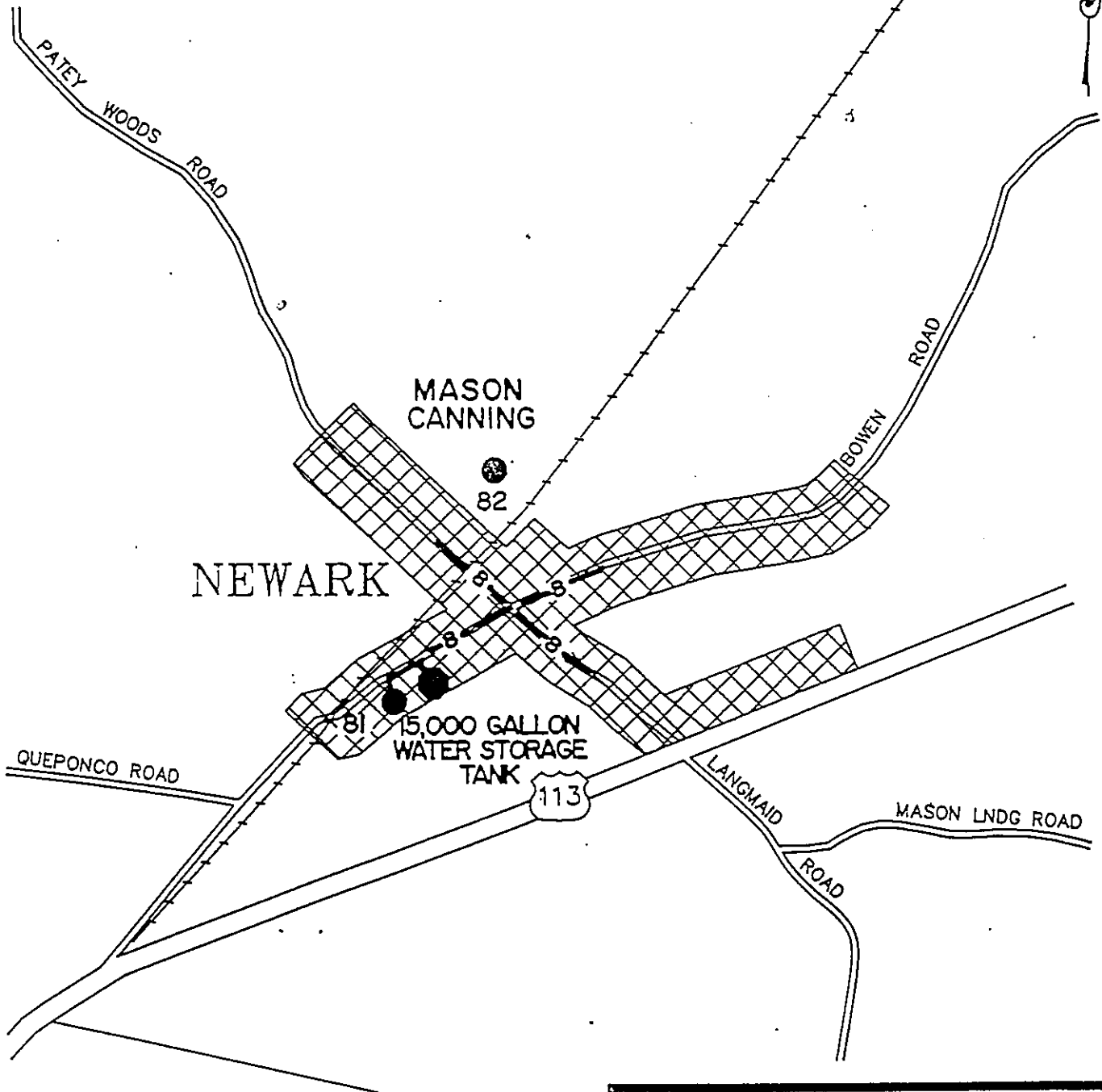
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DATE : JUNE, 1990









FIGURE NO. : 3-17

CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS




LEGEND

ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT		
WATER STORAGE TANK		
WELL & PUMP		
TRANSMISSION MAIN		

**NEWARK & ENVIRONS
WATER SERVICE AREA**

**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**

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DATE : JUNE, 1990 FIGURE NO. : **3-18**

ASSATEAGUE
ISLAND
STATE PARK
ADMINISTRATIVE
BUILDING

83

ASSATEAGUE
ISLAND NATIONAL
SEASHORE INFORMATION
CENTER

OCEAN CITY
GOLF & YACHT
CLUB

611

84

85

SALT
POINT

B
A
Y

ROAD

POINT

SOUTH

GREEN POINT
CREEK




RUM
POINT

GREEN
POINT

S
I
N
E
P
U
X
E
N
T

M A T C H L I N E E - E S E E F I G . # 3 - 2 0

CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS

1200 0 600 1200

SCALE : 1" = 1200'

LOWER SINEPUXENT NECK
WATER SERVICE AREA

WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN

LEGEND

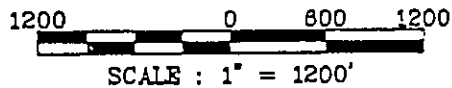
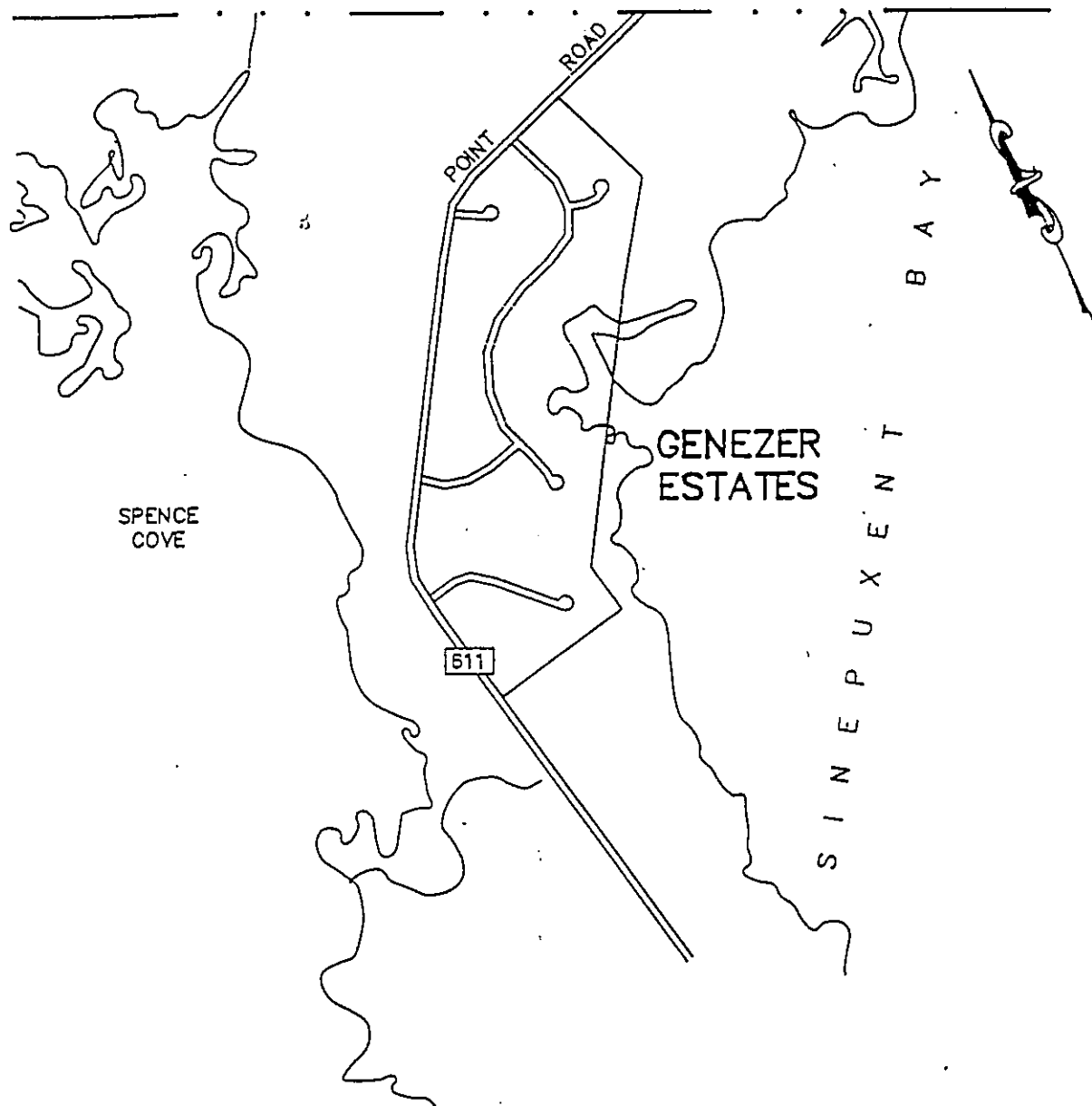
ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT	▲	△
WATER STORAGE TANK	◆	◊
WELL & PUMP	●	○
TRANSMISSION MAIN	---	---






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DATE : JUNE, 1990









FIGURE NO. : 3-19



CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS

LEGEND

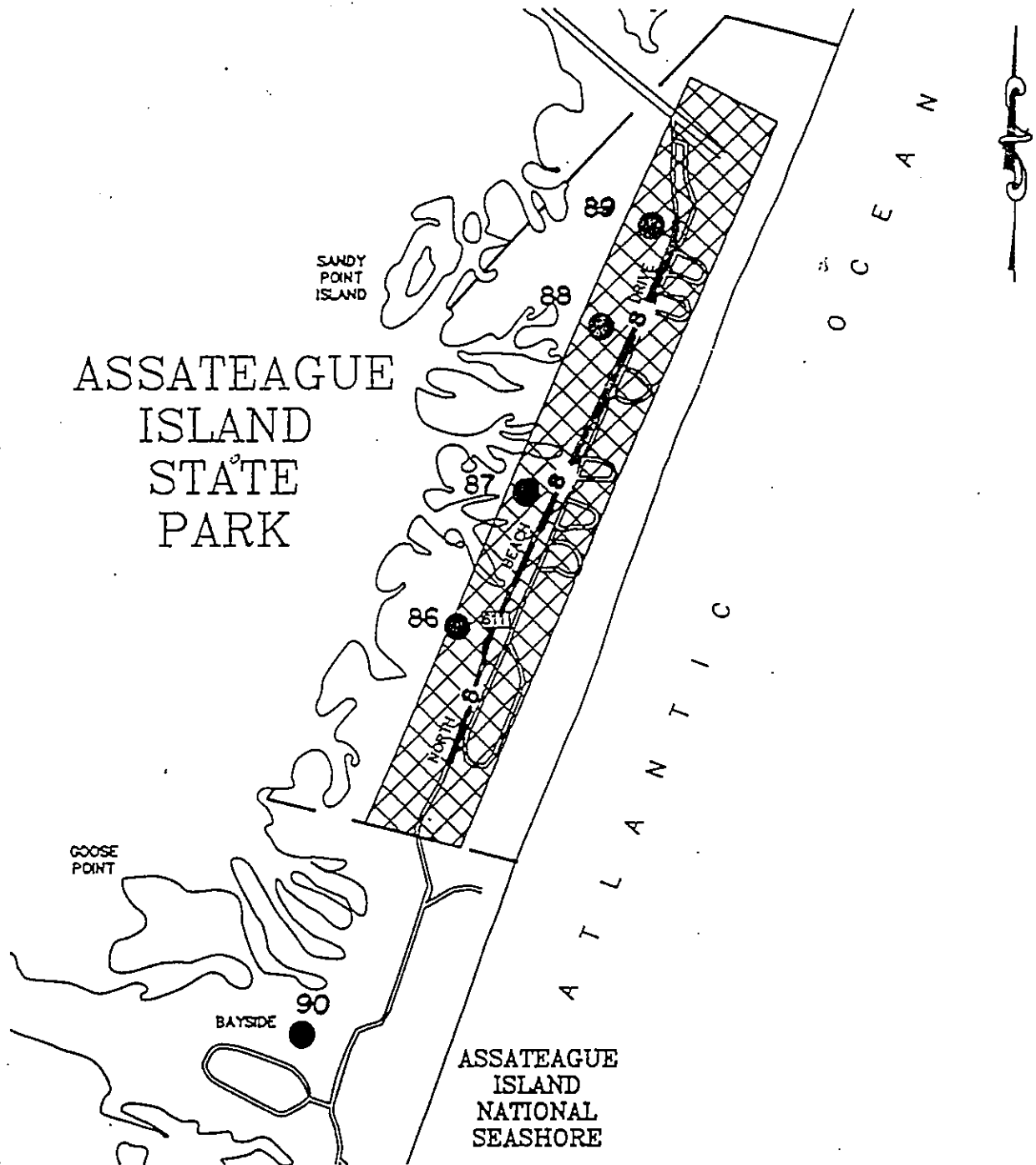
ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT		
WATER STORAGE TANK		
WELL & PUMP		
TRANSMISSION MAIN		

LOWER SINEPUXENT NECK
WATER SERVICE AREA

WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN






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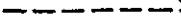


ASSATEAGUE ISLAND STATE PARK

CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS


LEGEND

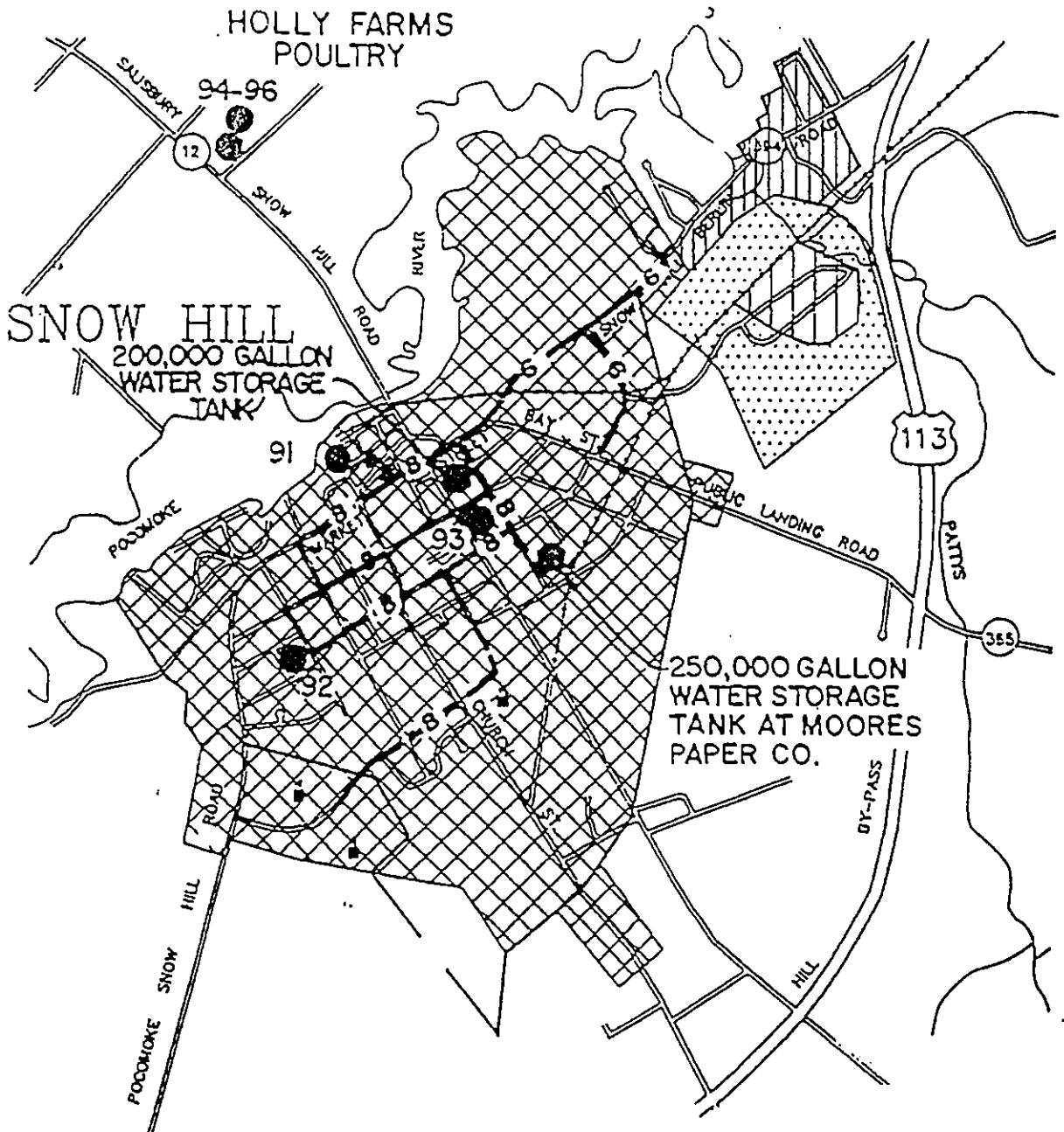
ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT		
WATER STORAGE TANK		
WELL & PUMP		
TRANSMISSION MAIN		

2000 0 1000 2000
SCALE : 1" = 2000'




ASSATEAGUE ISLAND
WATER SERVICE AREA

WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN

 CONSULTING ENGINEERS AND SURVEYORS
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PHONE (301) 228 - 7117



CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS

LEGEND

ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT	▲	△
WATER STORAGE TANK	●	○
WELL & PUMP	●	○
TRANSMISSION MAIN	---	---

2000 0 1000 2000

SCALE : 1" = 2000'



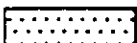
SNOW HILL & ENVIRONS WATER SERVICE AREA

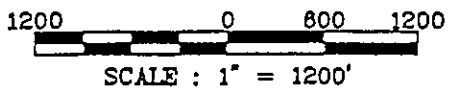
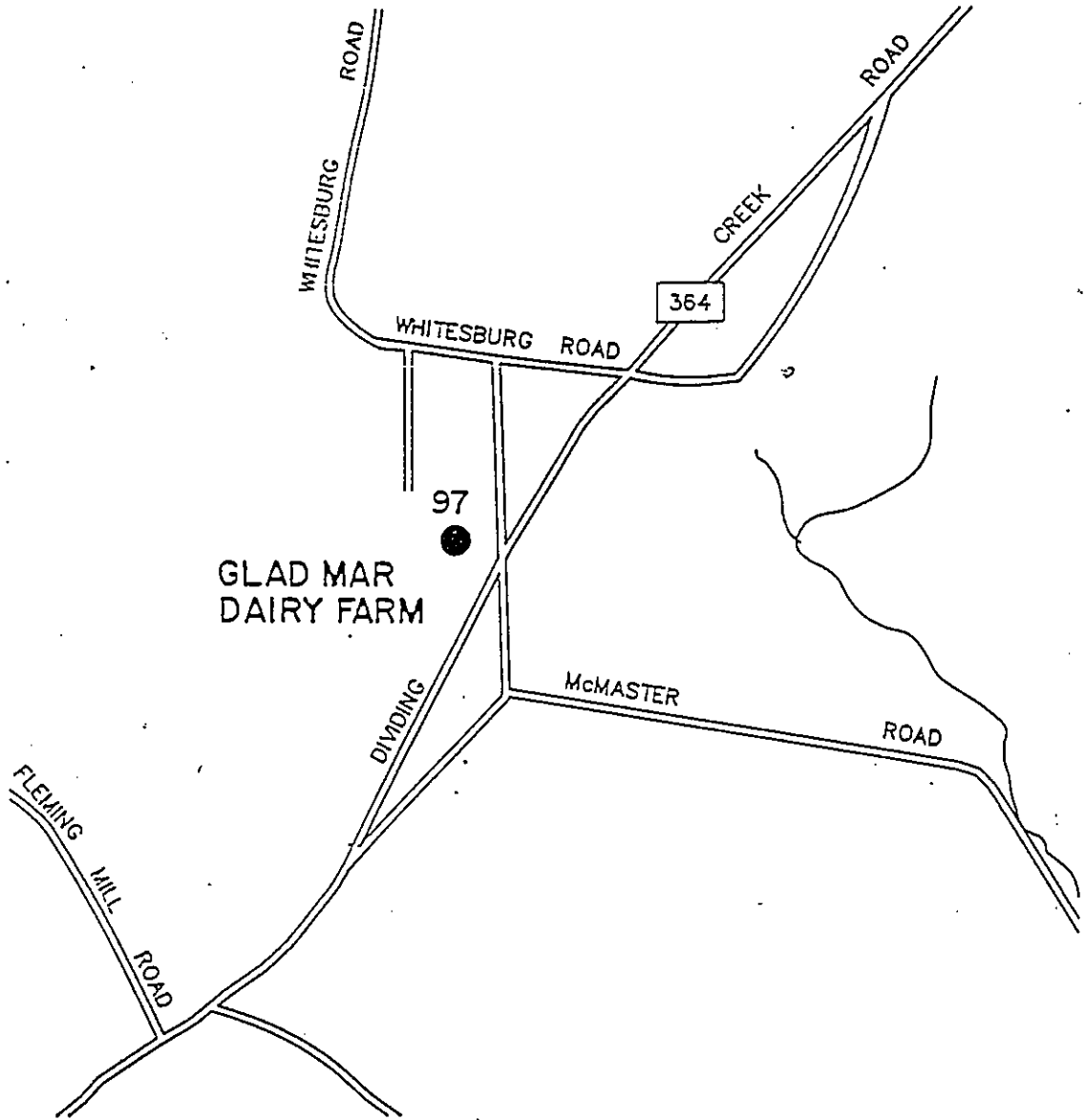
WORCESTER COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN

WORCESTER COUNTY
DEPARTMENT OF PLANNING, PERMITS
AND INSPECTIONS
SNOW HILL, MARYLAND

DATE: October 1995 FIGURE NO. 3-22








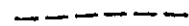
CATEGORIES


-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS



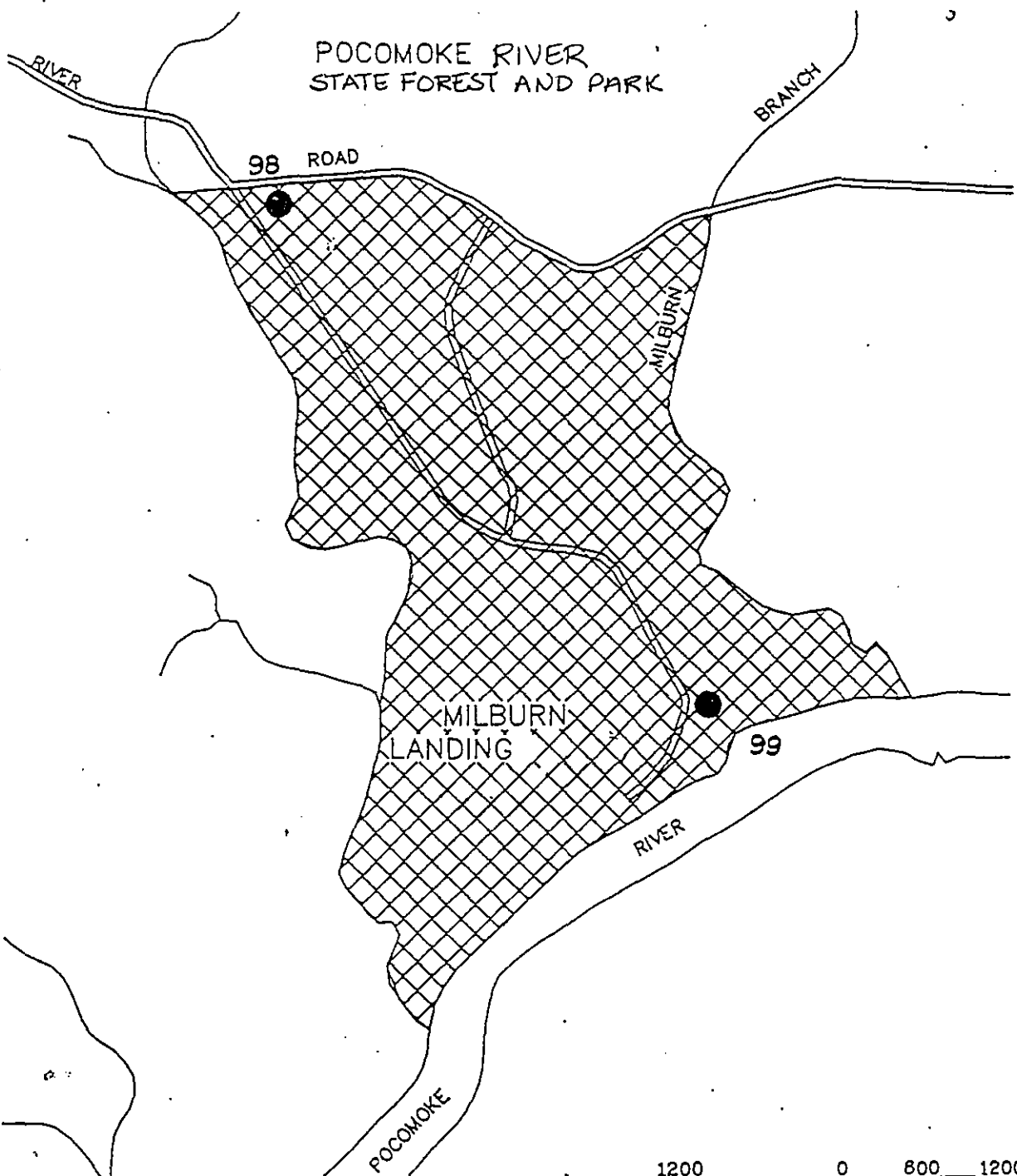
**DIVIDING CREEK & ENVIRONS
WATER SERVICE AREA**

**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**



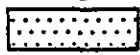
LEGEND		
ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT		
WATER STORAGE TANK		
WELL & PUMP		
TRANSMISSION MAIN		

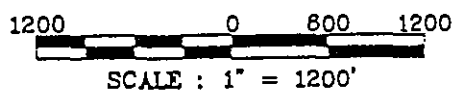
 CONSULTING ENGINEERS AND SURVEYORS
Andrews, Miller & Assoc., Inc.
 508 WATLAND AVENUE • CAMBRIDGE, MARYLAND • 21813
 PHONE (301) 228 - 7117

DATE : JUNE, 1980 | FIGURE NO. : 3-23








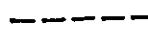


CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS




LEGEND

ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT		
WATER STORAGE TANK		
WELL & PUMP		
TRANSMISSION MAIN		

**MILBURN LANDING
WATER SERVICE AREA**

**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**

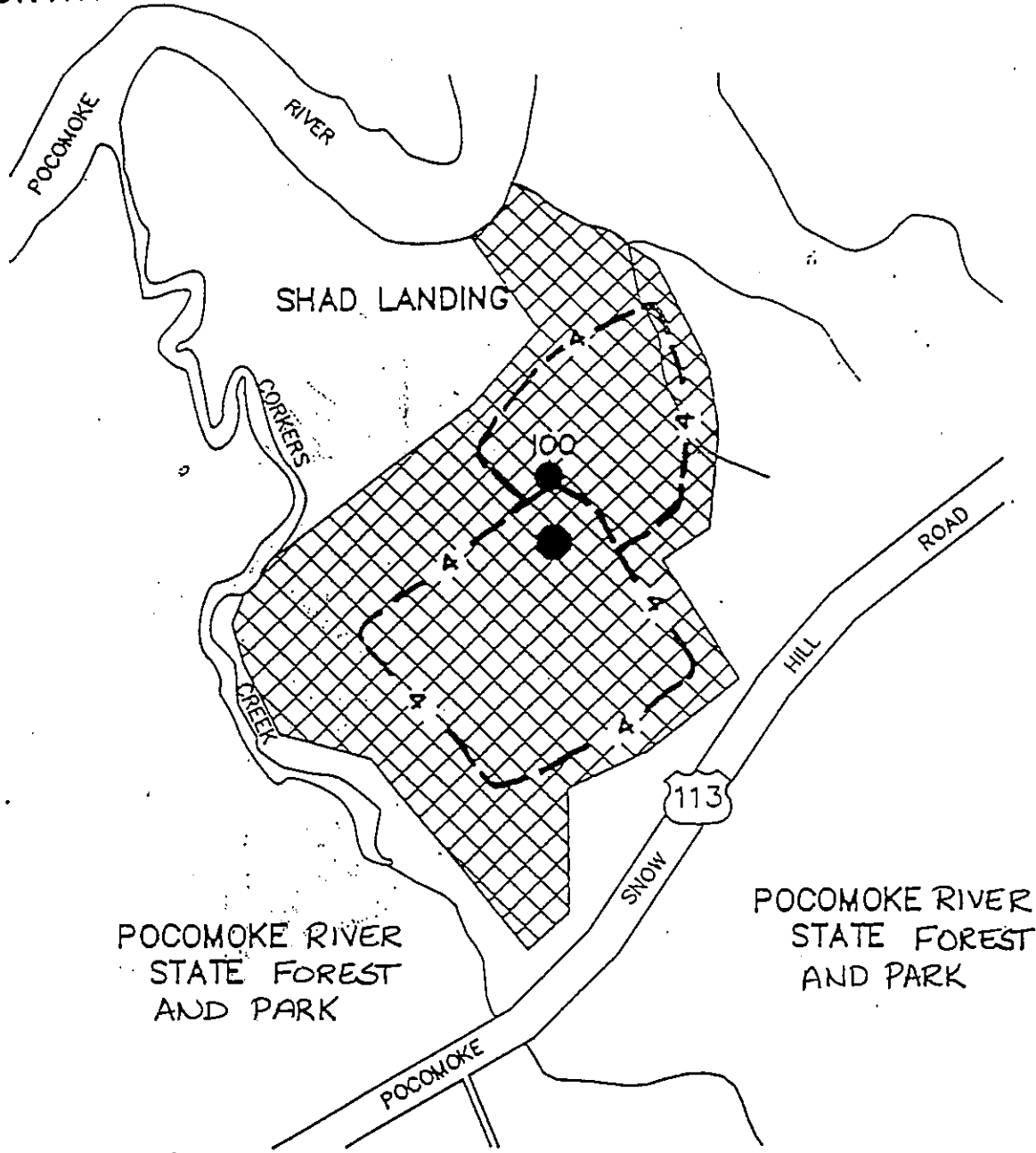


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DATE : JUNE, 1990 FIGURE NO. : 3-24

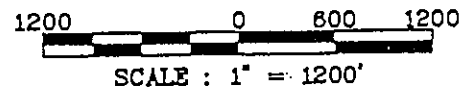
NASSAWANG
COUNTRY CLUB

159+160



CATEGORIES

	W - 1	EXISTING & PLANNED SYSTEM
	W - 2	UP TO 5 YEARS
	W - 3	5 TO 10 YEARS



LEGEND

ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT		
WATER STORAGE TANK		
WELL & PUMP		
TRANSMISSION MAIN		

SHAD LANDING
WATER SERVICE AREA




WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN

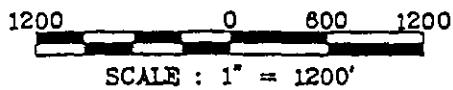
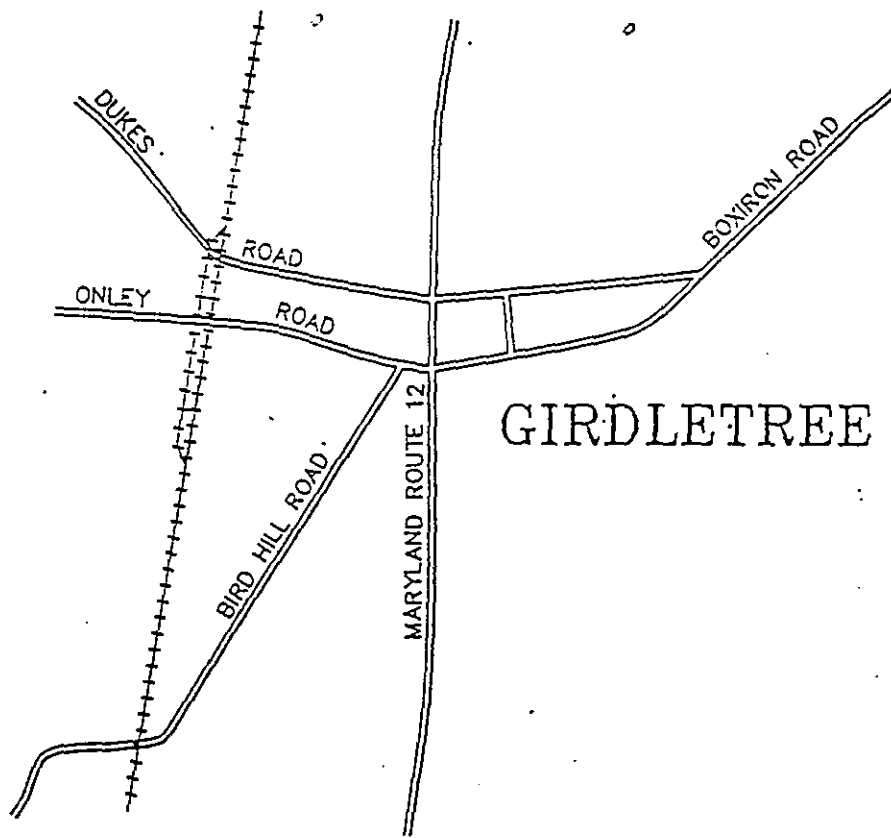
CONSULTING ENGINEERS AND SURVEYORS
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PHONE (301) 228 - 7117

DATE : JUNE, 1990







FIGURE NO. : **3-25**

CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS



LEGEND

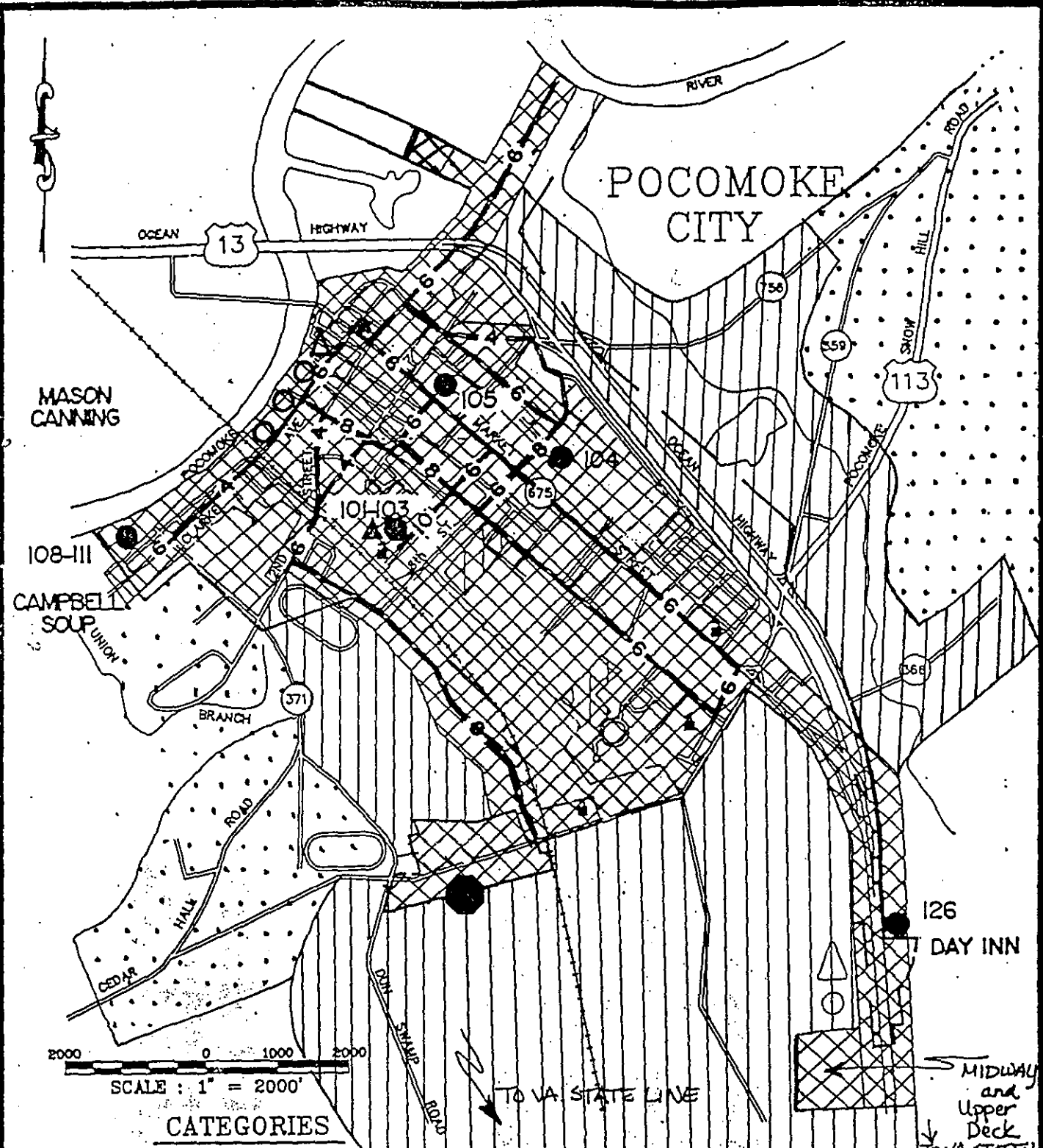
ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT		
WATER STORAGE TANK		
WELL & PUMP		

GIRDLETREE & ENVIRONS
WATER SERVICE AREA

WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN






CONSULTING ENGINEERS AND SURVEYORS
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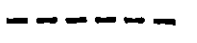
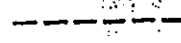


2000 0 1000 2000
 SCALE : 1" = 2000'

CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS

LEGEND

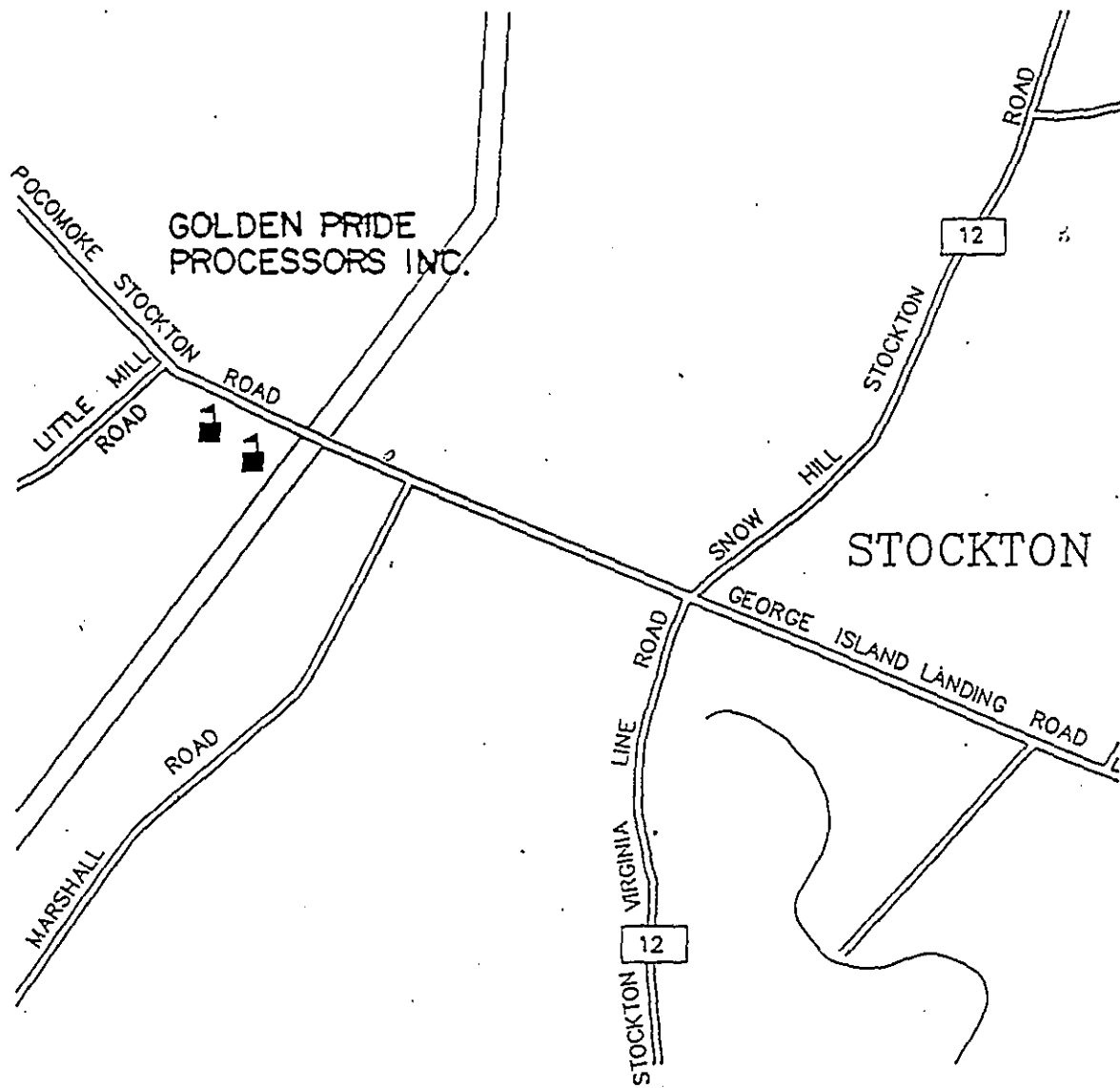
ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT		
WATER STORAGE TANK		
WELL & PUMP		
TRANSMISSION MAIN		

**POCOMOKE CITY & ENVIRONS
 WATER SERVICE AREA**




**WORCESTER COUNTY
 COMPREHENSIVE WATER
 AND SEWERAGE PLAN**

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DATE : JUNE, 1990 FIGURE NO. : 3-27



CATEGORIES


-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS

LEGEND

ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT	▲	△
WATER STORAGE TANK	◆	◈
WELL & PUMP	●	○
TRANSMISSION MAIN	---	---




**STOCKTON & ENVIRONS
WATER SERVICE AREA**

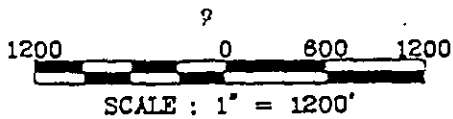
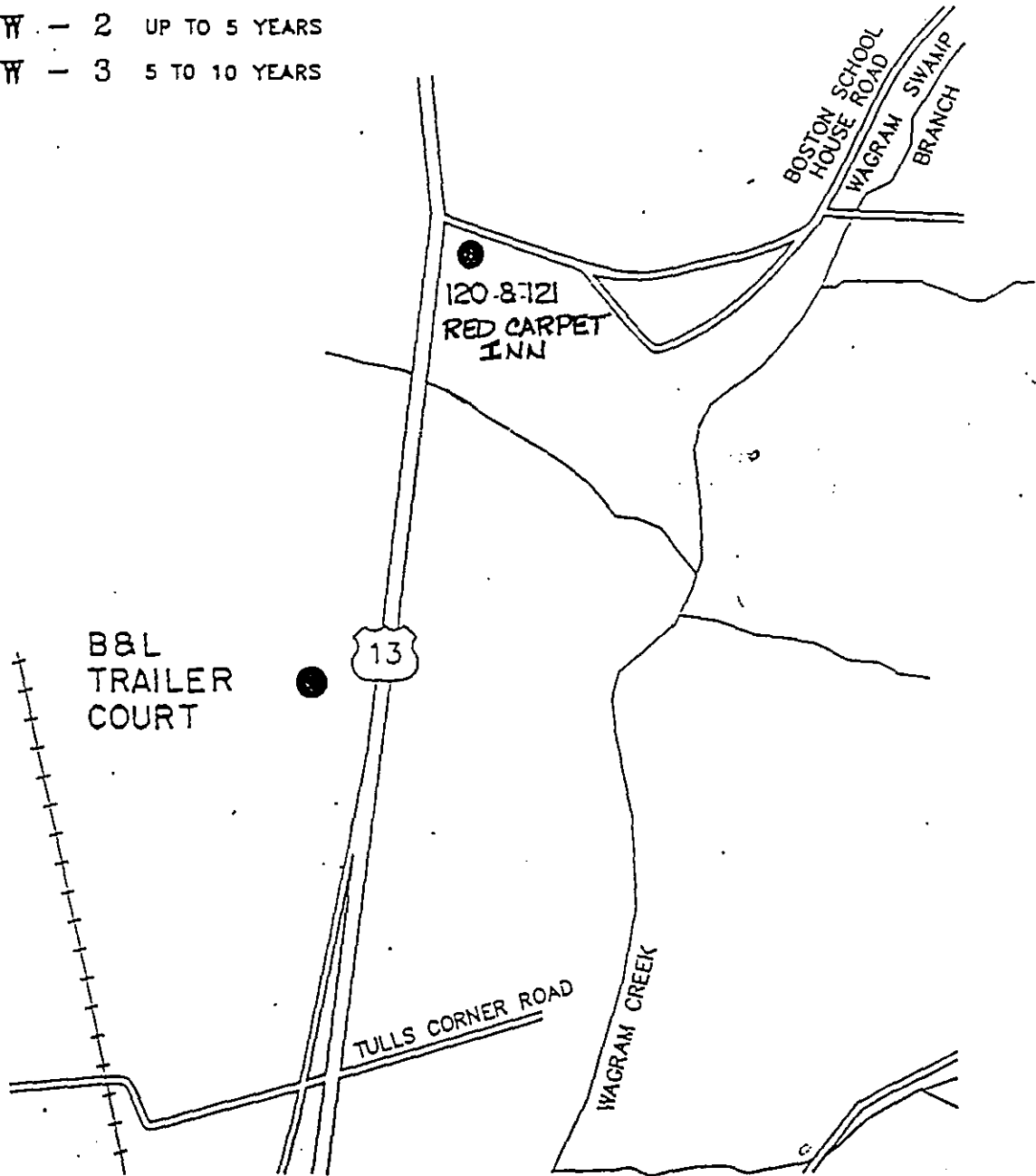
**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**

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DATE : JUNE, 1990 FIGURE NO. : 3-28

CATEGORIES









-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS



**WAGRAM CREEK & ENVIRONS
WATER SERVICE AREA**

**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**

LEGEND

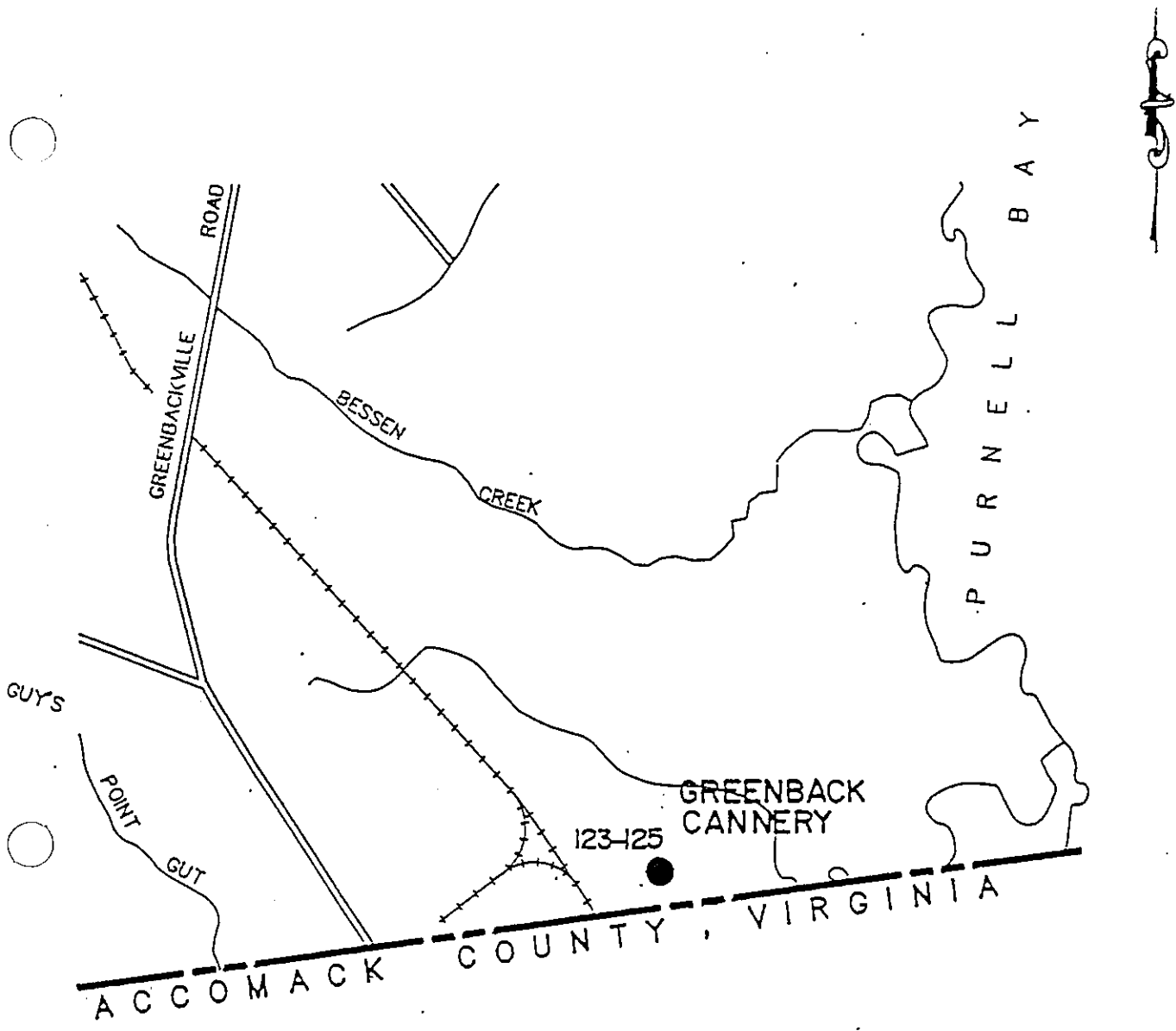
ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT		
WATER STORAGE TANK		
WELL & PUMP		
TRANSMISSION MAIN		





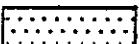
CONSULTING ENGINEERS AND SURVEYORS
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 PHONE (301) 228 - 7117

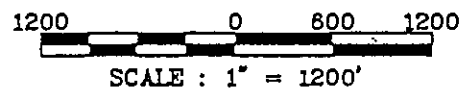
DATE : JUNE, 1990

FIGURE NO. : **3-29**











CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS




LEGEND

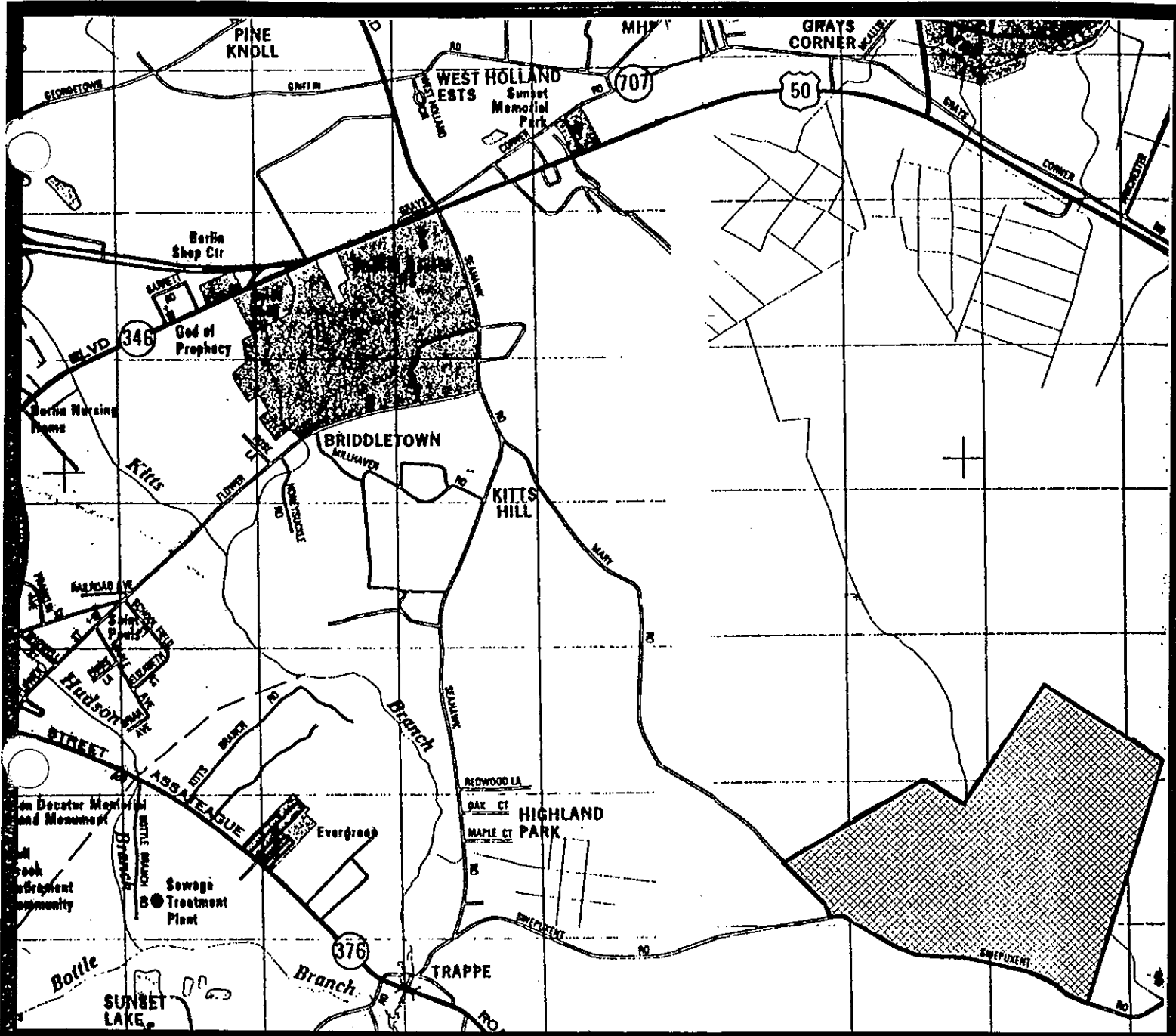
ITEM	EXISTING	PROPOSED
TREATMENT PLANT		
STORAGE TANK		
WELL & PUMP		
TRANSMISSION MAIN		

GREENBACKVILLE & ENVIRONS WATER SERVICE AREA

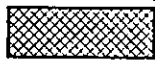


WORCESTER COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN

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 PHONE (301) 228 - 7117









DATE : JUNE, 1990 FIGURE NO. : **3-20**



CATEGORIES

-  W - 1 EXISTING & PLANNED SYSTEM
-  W - 2 UP TO 5 YEARS
-  W - 3 5 TO 10 YEARS

LEGEND

ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT		
WATER STORAGE TANK		
WELL & PUMP		
TRANSMISSION MAIN		

2000 0 1000 2000

SCALE : 1" = 2000'

MARINERS'S COUNTRY DOWN WATER SERVICE AREA

WORCESTER COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN

WORCESTER COUNTY
DEPARTMENT OF PLANNING, PERMITS
AND INSPECTIONS
SNOW HILL, MARYLAND

DATE: October 1995 FIGURE NO.3-31

CHAPTER IV

CHAPTER-IV

4.1 SEWAGE SYSTEM ALTERNATIVES

4.1.1 Collection

Wastewater collection differs from water distribution as the collection pipes generally do not flow under pressure; flow is almost always unsteady and non-uniform and considerable amounts of floating and suspended matter are transported. Because of these factors, most sewers are designed for open channel flow while partially or barely full. They are sized so that the velocity of flow will be sufficient to scour out any settled solids at least during peak flows. This may not always be possible during the beginning of the design period if the sewers are sized to handle flows projected far into the future.

Sanitary sewers are designed, whenever possible, to allow the sewage to flow by gravity to its ultimate destination. This is frequently not possible with the flat terrain in Worcester County and one or more pumping stations may be required to eliminate the need for excessively deep trenches which would be required for gravity sewers flowing long distances. Pumping stations may also serve isolated low areas that could not economically be served by a complete gravity system; however, in some instances sewage will be pumped directly to the treatment plant.

A gravity sewerage system consists of two main components: lateral sewers and interceptors. The primary function of lateral sewers is to collect flow directly from individual services, such as residences, commercial business, etc. These lines are usually located in or along the streets and are small in size (usually 8" diameter). Flow from lateral sewers will discharge into larger sewers known as interceptor sewers. These sewers can range in size from 10" diameter and up. An interceptor sewer will generally serve a large geographical area and can receive flow from sewage pumping stations and numerous lateral sewers.

In recent years, complete pressure sewer systems have been developed. Such systems require small grinder pumps serving one to several dwelling units. All sewage is pumped into the pressurized system, flowing through smaller pipes (1 1/4" diameter & up) than used for gravity sewers of the same capacity. These systems have advantages over conventional gravity systems in certain areas, since topography of the area served does not dictate the route that the sewer must follow. Sparsely settled areas may also advantageously use such systems.

Pressure sewer systems have also been developed for use with septic tanks. These Septic Tank Effluent Pressure (STEP) systems use small sump-type pumps serving one or several dwelling units to pump effluent from a conventional septic tank to a central treatment facility. In operation, a septic tank is utilized to settle and reduce sewerage solids. The liquid overflow from the tank flows by gravity to a sump pump where it is

pressurized and enters the pressure collection system. In such systems small pipes are used. Such pipes have advantages over conventional gravity sewers. Being under pressure, the system is also not subject to infiltration and inflow problems common to gravity sewers. Septic tanks in the system must be cleaned about every three years to prevent solids carry-over into the piping system. Such systems are particularly adaptable to solving sanitary problems in existing communities presently using individual septic tanks and tile fields for disposal.

Another development in collection methods is the vacuum system. In this method, sanitary wastes from several lines flow by gravity to a small holding tank. Special valves in the tanks allow sewage to enter the vacuum portion of the collection system. Reduced air pressure in the vacuum system pulls the sewage through the system. A negative air pressure is supplied by centrally located vacuum pumps. As with pressure systems, small pipes and freedom from topographical restraints can be advantageous when compared to conventional gravity systems. In a vacuum system, centralized pumps are utilized compared to the many small pumps required for pressure systems.

4.1.2 Treatment

Domestic sewage and many industrial wastes are usually treated by physical and biological processes which remove solids, some soluble and insoluble organic material, and to some extent, soluble inorganic compounds. While there are many variations of biological treatment, the overall process in a treatment plant can be broken down into five general categories: Primary Treatment; Secondary Treatment; Advanced Treatment (where required); Sludge Disposal; and Disinfection. This section briefly describes the various unit processes involved in each and the degree of treatment that can be generally expected.

A. Primary Treatment

The main purpose of primary treatment is to remove settleable and floatable material from the wastewater. The first step in primary treatment involves the removal of coarse solids and debris. This is usually accomplished by passing the influent sewage through bar racks or fine screens. Comminutors may also be used to grind up coarse solids without removing them from the flow.

The second step usually involves grit removal. This is accomplished by passing the sewage through a chamber which will provide velocities low enough to allow sand, gravel, cinders, and other heavy material to settle out but high enough to keep the lighter organic material in suspension. Grit removal is desirable in that it will reduce wear of mechanical equipment due to abrasion, reduce the formation of heavy deposits in pipe lines, channels, and process structures, and reduce the frequency of digester cleaning that may be required from excessive accumulations of grit. Grit removal facilities are seldom provided in package

type treatment plants. The final step in the primary treatment process is sedimentation. This is accomplished by passing the sewage through circular or rectangular tanks of sufficient size to provide a relatively quiescent state. By so doing, solids having a higher specific gravity than the liquid will settle while those having a lower specific gravity will rise. The objective of this treatment is to remove the readily settleable solids and floating material (grease and scum). Primary settling tanks are usually provided with skimming and scraping devices that remove accumulated scum and settled solids, respectively.

Primary treatment alone is not capable of treating sewage sufficiently to meet present effluent quality requirements. Efficiently designed primary systems should remove from 50 to 65 percent of the influent suspended solids and from 25 to 40 percent of the BOD 5. Where primary treatment alone is used, effluent from the sedimentation tanks is disinfected before being discharged.

A special form of primary treatment is used in many canneries and food processing plants in the County. This treatment consists of screening processed wastewaters prior to discharge. Current NPDES permits require process waters to pass through a Tyler designation 20 mesh screen before discharge to nearby streams. Grinding or similar treatment to reduce particle size is not permitted. Collected solids are disposed of in sanitary landfills or, in the case of several tomato processors, are processed for eventual feeding to livestock. Solid wastes from the processing of seafood can be landfilled or processed as poultry feed.

B. Secondary Treatment

Secondary treatment uses biological processes to convert the finely divided and dissolved organic matter that escapes primary treatment into settleable biological masses (solids) that can be removed in final sedimentation tanks. Primary treatment is most efficient in removing coarse solids, whereas secondary treatment is most efficient in removing organic substances that are soluble or very small in size.

The most frequently used biological processes are activated sludge, the trickling filter, and waste stabilization lagoons. The latter is the most common in the County. There are many modifications of these processes that can be used to meet specific treatment requirements. Essentially, all biological processes depend on micro-organisms which utilize the suspended and soluble organic matter in sewage for food. These organisms in turn grow and form floc particles which are removed by sedimentation.

1. Activated Sludge

In the activated sludge process, sewage is mixed with biologic organisms in a tank with oxygen (air) mechanically introduced to aerate the sewage. These organisms utilize both dissolved and colloidal organic matter in the sewage for food. As this material is utilized, the existing organisms grow and reproduce.

The generation of activated sludge or floc in sewage is a slow process and the amount so formed from any volume of sewage during its period of treatment is small and inadequate for the rapid and effective treatment of the sewage which requires large concentrations of activated sludge. Such concentration is built up by collecting the sludge produced from each volume of sewage treated and reusing it in the treatment of subsequent sewage flows. The sludge so re-used is known as returned sludge. This is a cumulative process so that eventually more sludge has been produced and is available for re-use than is needed. The surplus, or excess activated sludge, is then permanently removed from the treatment process and conditioned for ultimate disposal. Overall plant efficiency, as measured by the reduction of BOD 5 and suspended solids, of 80% to 95% can be expected.

The activated sludge must be kept in suspension during its period of contact with the sewage by some method of agitation. This is accomplished by the addition of air or in some cases pure oxygen. Turbulent flow by large mechanical mixers or blowing large quantities of air into the tank not only keeps the sewage and activated sludge in suspension, but more importantly supplies oxygen to the organisms. The oxygen supply, as for humans, is necessary for the organisms' survival and growth. The activated sludge process therefore consists of the following steps:

- a. Mixing the activated sludge with the sewage to be treated;
- b. Aeration and agitation of this mixed liquor for the required length of time;
- c. Separation of the activated sludge from the mixed liquor;
- d. Return of the proper amount of activated sludge for mixture with the sewage;
- e. Disposal of the excess activated sludge.

A modification of this process is extended aeration where raw sewage (after screening) is aerated. Average detention time is 24 hours.

2. Trickling Filters

Trickling filters differ from activated sludge in that the biological organisms are fixed to a filter medium in the form of a slime. This medium has traditionally consisted of stone or slag but more recently plastic and wood have been used. The treatment process consists of uniformly distributing wastewater over the filter media. A large portion of the wastewater passes rapidly through the filter, while the remainder passes slowly over the surface of the biological slime. As the sewage passes through the filter, air currents form which brings oxygen to the organisms. The biological slime will continue to grow on the filter media until it becomes so thick that oxygen cannot reach the innermost organisms. A portion of the slime will then "slough off" and pass through the filter. The treated sewage and solids then are collected in channels beneath the filter and are transported to a secondary clarifier where the solids are removed. Energy requirements for this method of treatment are minimal. Overall treatment efficiencies between 80 and 90 percent can be achieved with trickling filters. There are no trickling filter installations in the County.

A modern version of the trickling filter is the rotating biological contactor (RBC). In this process the "film" attaches to discs which are rotated into and out of the waste water. This allows the microorganisms in the "film" to have alternating periods of "food" presentation followed by aeration. Treatment efficiencies are similar to that of trickling filters, but several advantages exist for this technology including smaller space requirements. The Town of Snow Hill utilizes this technology.

3. Waste Stabilization Ponds

Stabilization ponds are simple earthwork structures which utilize aerobic and anaerobic bacteria to treat suspended and dissolved substances in raw sewage. The ponds are open to sun and air and contain algae which, through photosynthesis, use these resources to stabilize degradable substances. Needed oxygen to support bacterial growth is partially supplied by these algae masses in the pond.

Ponds are generally designed to provide retention periods of 60 days to allow natural stabilization to occur. Design depths of three to four feet are common with provision in this area of the county to increase depths

by a foot or two in the winter when bacterial activity is at a minimum and additional depth must be provided for sludge storage. Ponds are generally segmented into smaller units which can usually be operated in series or parallel.

Series operation and oversizing is desirable to reduce algae escape into available receiving waters. Three or four cell ponds minimize algae outflow and provide additional treatment. This simple, effective treatment method is land intensive and land costs for treatment works are normally borne by the operating agency. However, maintenance and operation costs and energy use are usually much less than with the other types of secondary treatment.

The treatment capacity of stabilization ponds can be increased by aerating the ponds using mechanical aerators or compressed air. The extent of aeration will determine allowable loadings which could approach that permitted for extended aeration or activated sludge treatment.

4. Secondary Clarification

As previously mentioned, treated sewage and biological solids are separated by means of sedimentation in a secondary settling tank. These tanks are similar in design to primary settling tanks except that skimming devices are seldom used. In many secondary treatment plants, the overall plant efficiency is determined to a large extent by the efficiency of the secondary clarifier. This is due to the fact that biological solids also exert a BOD. Therefore, poor solids removal results in both high effluent suspended solids and BOD concentrations.

C. Advanced Treatment

With the passage of the Water Pollution Control Act Amendments of 1972 and 1977, both State and Federal Agencies have imposed stringent effluent quality requirements for most existing treatment plants. In many cases these requirements cannot be met by secondary treatment alone and advanced waste treatment is necessary. Such treatment generally falls into two main categories: increased BOD and suspended solids removal, and nutrient removal. As previously mentioned, the effluent BOD is dependent to a large extent upon the effluent suspended solids. Therefore, more stringent BOD requirements can usually be met by decreasing the effluent suspended solids. This can be accomplished by filtration, screening, and/or chemical coagulation. In cases where still further BOD removal is required, carbon absorptions or chemical oxidation can be used.

Nutrient removal usually involves the removal of nitrogen and/or phosphorous from the wastewater. Such removal can be obtained through physical and/or chemical processes (chemical precipitation, ion exchange, etc.) or by biological processes similar to secondary treatment.

D. Sludge Management Practices

One of the most difficult problems encountered in waste treatment is the adequate treatment and disposal of accumulated sludge. Such treatment traditionally consisted of biological oxidation in anaerobic digestors (without oxygen), dewatering and disposal as a soil conditioner. More recently, chemical and aerobic (with oxygen) oxidation methods have been used with the sludge being dewatered by centrifugation, vacuum filtration, or heat treatment. In some instances composting, land disposal and incineration have also been used. Sludge from package type treatment plants is usually held in aerated holding tanks and removed periodically by scavenger trucks. In the future, when it becomes necessary to remove sludge, the sludge will be analyzed before disposal, and the results will be available for the next plan update.

Sludge and scum removed from individual septic tanks (septage) presents different and unique problems to the County. This waste, which is pumped out periodically by scavengers, contains digested bacteria. It is not suitable for direct land disposal due to offensive odor and contamination potential. Alternative disposal methods are being considered for separate disposal of this septage. An alternative in which considerable success has been achieved is composting septage as well as wastes from chemical toilets. The U.S. Forest Service has developed composting methods. Septage and chemical toilet wastes contain less solids than treatment plant sludges and a premixing of septage wastes with a combination of woodchips, sawdust and old compost is used to absorb the liquids portion. Septage can also be aerated for a short time to reduce odors and break up any large clumps of solids before being composted. Composting septage and chemical toilet wastes for a three to four week period reduces the wastes to a semi-sterile material usable as a soil conditioner.

E. Disinfection

Disinfection refers to the selective destruction of disease causing organisms. All of the organisms are not destroyed during the process, thus differentiating disinfection from sterilization. In wastewater treatment, disinfection most commonly is accomplished through the use of chemical agents and is usually the last treatment process before discharging the treated effluent. The efficiency of all forms of disinfection is heavily dependent on the suspended solids level in the effluent to be disinfected, with lower solids providing for much better results.

By far the most widely used disinfecting agent is chlorine. Chlorine gas can be mixed directly with the sewage effluent but is usually mixed with water before being introduced. In small systems powdered sodium or calcium hypochlorite is sometimes used. This powder is mixed with water before being introduced into the treated effluent. The chlorine solution is introduced into the treated effluent at the head of a chlorine contact tank. This tank is designed to provide a contact time of approximately 30 minutes before the effluent is discharged.

While chlorine has proved to be an efficient disinfection agent, it has also been found to be toxic to aquatic life. Therefore, almost all NPDES Permits require effluent total residual chlorine concentrations of less than 0.5 mg/l. In some cases these standards can be met with conventional chlorination equipment by decreasing the chlorine dosage.

It has been found, in many cases, however, that when this is done, effluent bacterial standards cannot be met. In other cases the total residual chlorine requirements are so stringent that they cannot be met with conventional equipment. Two alternative methods can be used to meet these standards.

The first is to dose the effluent with enough chlorine to obtain the desired disinfection, and then to chemically remove the excess chlorine down to the required effluent limitations. This is known as dechlorination and is usually accomplished by injecting a sulphur dioxide solution into the effluent after chlorination. The equipment needed is similar to that used for chlorination; however, sophisticated automatic controls are usually required. By administrative directive, the Maryland Department of the Environment has lowered the allowable total coliform in disinfected sewage effluent to 3 MPN/100 ml. This is the threshold level of detection given the present state of the art and is significantly lower than background coliform levels in local receiving waters. To meet these requirements, a dosage of 15 mg/l of chlorine may be required (with rapid and complete mixing assured) followed by 30 minutes detention. Dechlorination, as described above, would then be required to remove excess chlorine prior to discharge. However, the dechlorination with sulphur dioxide usually depletes the dissolved oxygen level in the effluent to below required standards. Consequently, dechlorination is usually followed by post-aeration to add oxygen to the final effluent.

The second alternative is to disinfect with an agent other than chlorine. While many such agents are available, ozone is probably the most widely used. Ozone is an unstable gas that is produced when an electrical discharge is passed through oxygen. Because ozone is unstable it must be generated on site. Ozone is injected directly into the treated effluent. It is a more powerful disinfecting agent than chlorine, and therefore requires a much shorter contact time. Ozone also can be used to provide additional suspended solids and BOD removal.

However, a disadvantage is the large amount of energy (power) required to generate the ozone production.

Other disinfecting agents that can be used are bromine, iodine, ultra-violet light and heat. These, too, may have economic or environmental disadvantages.

F. Individual Treatment Systems

In much of Worcester County, it is not feasible to provide central sewer systems due to low density development and other geographic features such as lack of topographic relief. Thus, many small communities, as well as rural areas of the county, depend on individual disposal systems. Individual, on-site septic systems in Worcester County normally consist of a septic tank, a distribution box and a drainfield laid out in two or more shallow trenches that have been partially filled with sand.

1. Septic Tanks

Septic tanks are generally simple, single or double stage settling basins, located entirely underground, in which settling solids are held sufficiently long to undergo partial and possibly complete digestion. Septic tanks are intended to produce a black concentrated sludge that accumulates in the tank and which has to be removed at regular intervals. It should be noted that septic tank failures can occur through neglect by not having solids pumped out every few years. Lack of periodic maintenance will cause clogging of the absorptive soils, leading to system failure. Failure to remove the solids regularly will allow solids to overflow the system and clog any underground effluent absorption system. Scavengers operating clean out services in the County are required to dispose of sludges at a specified sludge disposal site as specified in the Sludge Management Program, advertised by the Worcester County Department of Water and Wastewater Services.

Septic tanks should be cleaned approximately every three years to prevent solids carry over and clogging in tile fields and other underground effluent disposal facilities. Worcester County has approximately 9,000 septic tank systems which require periodic cleaning.

2. Innovative/Alternative Program

The MDE I/A program under the Individual Septic Systems and Wells Program has been evaluating eight basic on-site experimental systems which have come under the general types of (1) soil treatment, (2) groundwater penetration and (3) solar. Two hundred seventy-three (273)

individual detailed site evaluations have been conducted since 1980. Through mid 1987, 79 experimental systems had been installed throughout the State, with grants of \$37,500 being provided to approximately half of the State's counties. Currently I/A staff is directly monitoring approximately 50 experimental systems throughout the State. The program is also providing continuous training to local health department personnel and contractors, through regional workshops.

The purpose of the program is to identify and evaluate additional types of on-site sewage disposal systems that can be used to remodel failing systems and overcome major site limitations. Eligibility for property owner participation in this experimental program is based on 6 criteria. Final acceptance of eligible properties into the program and the total number in any one county is dependent on meeting screening criteria and availability of local staff to provide monitoring assistance. Priority is given to improved properties with failing systems and existing pollution or public health problems.

Experimental systems may be totally financed by the property owner or partially funded by a state I/A grant, in certain counties. Eligibility and details for innovative and alternative grants are outlined in COMAR 26.03.05.

Experimentation with large innovative and alternative on-site systems is also within the scope of this program. However, there are no I/A grant funds available for these kinds of projects.

G. Existing Community Treatment Facilities

Community treatment facilities in Worcester County are currently doing a good job of meeting their permit requirements. Comprehensive planning and necessary upgrading of plants has taken place since the last update of this planning document and account for these improvements. These facilities are continuing to upgrade their systems through repair and replacement efforts, details of which are given in the Sewer Service Areas, Section 4.4.

4.1.3 Disposal/Discharge

After treatment, the effluent (water) is generally discharged into streams or rivers. In shellfish areas, the State requires a "shellfish protection pond" having capacity to store the maximum flow expected in a 24 hour period in addition to a buffer area around the actual point of discharge wherein no harvesting may occur. The pond is required to provide protection to receiving waters in case of treatment plant malfunction. The

pond may either be used only in emergencies or used continuously to provide a small amount of additional treatment (polishing) to the effluent.

Alternatively, effluent can be disposed of by land irrigation where nutrients and liquids are utilized by crops or specialized plants. Spray irrigation on land of treated effluent may be cost effective where advanced waste treatment would otherwise be required and if sufficient land is available for irrigation. Although the State of Maryland requires secondary treatment and disinfection before spray irrigation can be utilized, the Federal Environmental Protection Agency recognizes land irrigation as a complete treatment process wherein secondary treatment and even primary treatment are unnecessary prior to disposal on land. If land irrigation can be considered a complete process, it may be the most cost effective means of treatment in many areas of Worcester County.

The Worcester County Comprehensive Development Plan recommends for sewer effluent to be "discharged through ocean outfalls or treated and disposed of through land application (but not discharged into coastal bays)".

A. Sewage Disposal Options

In Worcester County, sewage disposal options and requirements are divided into conventional and alternative categories in the Groundwater Protection Report (GPR). Each option is based on the following criteria:

1. Thickness of unsaturated material beneath the bottom of the sewage disposal trenches.
2. Soil texture.
3. Lot size.

The only conventional disposal option is gravity trench, all of the rest of the options are alternatives. However, experimental systems are constantly being developed in the "State of Maryland Innovative and Alternative On-Site Sewage Disposal Program". The standard "alternative" disposal options in the GPR are sand mound, shallow pressure dosing trench and bermed infiltration ponds.

1. Absorption Trenches

Absorption trenches consist of standard perforated PVC with slag or stone or large diameter graveless pipe. Effluent from the disposal system seeps through the perforations into the soil. The length of trench required depends upon the ability of the soil to absorb the effluent. Gravity trenches are currently the only conventional sewage disposal option approved for use in Worcester County as regulated by the approved Groundwater Protection Report.

In portions of the County, high groundwater and an impervious soil layer require modifications and special care in building absorption trenches. Throughout much of these areas a porous stratum lies approximately three to ten feet below the impervious blanket. Absorption trenches must be constructed in this porous stratum and the distribution pipes hydraulically surcharged to force the effluent into the soil against the groundwater pressure. As a result, the septic tank or a distribution box must be built high enough to overcome the groundwater level. Special care must be taken in constructing the deep trenches required to prevent their partial collapse under saturated sand conditions. If not, impervious silts from the overlying stratum will fall into the pervious layer, clogging the system and leading to premature failure.

The introduction of graveless large diameter effluent pipe as an acceptable alternative reduces the dependency on stone, slag or washed gravel which is expensive and in some cases scarce. Since early 1984, a number of these systems have been installed, mostly as additions to existing tile fields.

2. Bermed Infiltration Ponds

Bermed ponds, excavated into permeable subsoil, have been successfully used to disperse effluent from septic tanks and aeration tanks in Dorchester County. The ponds are generally constructed by dragline to a minimum size of 10,000 square feet. The key to successful construction is excavation into a permeable stratum of soil. The berm is used to prevent rainfall runoff from entering the pond as well as to develop a slight hydraulic head on the groundwater table. The ponds operate partially by water evaporation and partially by absorption. In operation, the ponds have no objectionable odors or pollutant levels and fish propagate without difficulty. The ponds are similar to normal farm ponds in appearance. This type of sewage disposal is only available as an alternative sewage disposal method in the "B2" management area.

B. Point Source Discharges

The disposal of treated sewage effluent has traditionally been through discharge to some water course, be it a stream, river, lake, or ocean. More recently, treated effluent has been disposed of by application to the land. The degree of treatment that is required at a given treatment facility is determined, to a large extent, by the ability of the receiving water to assimilate the effluent discharge and the potential effects that such a discharge will have on the receiving ecosystem.

The discharge of effluent can affect the receiving waters in several ways. Undegraded organic material, represented as BOD, will continue to be decomposed by organisms in the receiving water. As in the treatment process, such degradation requires oxygen. If the BOD discharged to the waters is sufficiently high, the oxygen level in the stream could be reduced to a point where fish and other aquatic organisms cannot survive. The amount of oxygen required for survival varies significantly with the species of organisms in the water. Trout, for example, require high levels of dissolved oxygen and will die if the oxygen concentration falls below approximately 5.0 mg/l. Carp, suckers, and other less desirable species of fish, can tolerate much lower levels of dissolved oxygen. In time, oxygen will be replenished naturally from the air and algae. The rate of such "reoxygenation" depends primarily upon the characteristics of the stream and can be quite slow. Therefore, the amount of BOD that is allowed in an effluent discharge is regulated by law.

In addition to BOD, sewage effluent also contains suspended, and in some cases floating solids. Floating solids are unsightly and can cause odor problems. If the velocity of the receiving water is insufficient to keep the solids in suspension, they will settle to the bottom forming benthic sludge deposits. Such deposits are unsightly and can also cause odor problems. More importantly, they can alter the characteristics of the bottom which could effect the entire ecosystem.

It has long been known that sewage effluent can contain pathogenic (disease causing) organisms which escape conventional treatment processes. Therefore, disinfection of effluent is required before discharge. Chlorine has traditionally been used for disinfection due to its effectiveness and relatively low cost. Recent studies, however, have shown that the residual chlorine present in sewage effluent can be toxic to aquatic life. The toxicity of chlorine varies with each organism and the long term effects of residual chlorine are not presently known. Because of this, limitations are being placed on the total residual chlorine concentrations present in effluent discharges.

Effluent discharges can also affect the receiving waters in several other ways. High temperature wastes can alter the ambient temperature of the receiving water which could change the entire aquatic ecosystem. Toxic substances (heavy metals, pesticides, etc.) could be discharged which escape conventional treatment. These problems are usually not encountered in domestic sewage effluent but are more likely to occur when industrial wastes are treated. Also, the nutrients (nitrogen and phosphorous) present in sewage effluent can stimulate algae and other plant growth, making the water unfit for recreation or other uses.

In the foregoing discussion some of the possible effects of effluent discharges were briefly described. Because of the potential problems which can result from

such discharges, the quality of the effluent from every treatment plant in the State is established and enforced by State regulatory agencies. These requirements vary from plant to plant and are usually based on the physical characteristics and use of the receiving water. The Maryland State General Water Quality Standards and Classification system with regard to Worcester County is presented in Chapter 2. In general, the smaller the size of the receiving water the more stringent the requirements will be. Special requirements have been established limiting total coliform counts in sewage discharges to shellfish harvesting waters (Use II waters) to 70 MPN/100 ml.

C. National Pollutant Discharge Elimination System Permits (NPDES)

In 1971, Congress passed the Federal Water Pollution Control Act Amendments of 1972. The objective of this legislation (P.L. 92-500) was to restore and preserve the integrity of the nation's waters. It was a sweeping revision of the then existing law. In 1977 major amendments were made to the law. Several of the 1977 amendments deal directly with the needs and problems of small communities, rural areas and agriculture. While the goal of obtaining zero discharge of pollutants into navigable waters by 1985 was retained, the 1977 amendments recognized the difficulties of attaining this goal. In effect, for publicly-owned treatment facilities, the 1977 amendments provide for best practicable wastewater treatment technology (BPWTT). These standards are similar to those EPA has approved for secondary treatment.

The 1987 Amendments (The Clean Water Act of 1987) phased out the Federal Construction Grants Program and set up a revolving Loan Fund Program in its place. The deadline for compliance with secondary treatment requirements was kept at July 1, 1988. In addition, the Amendments emphasized sludge management, combined sewer overflow control, stormwater permits, and point source toxics control.

Under the legislation, each state was directed to establish water quality standards for all waters within the State, in accordance with EPA guidelines, and to enforce these standards through the issuance of discharge permits. Existing State Water Quality Standards would remain in force providing they met with the approval of EPA.

Pursuant to these regulations all point source discharges (sources where a specific outfall can be identified) must apply for a National Pollutant Discharge Elimination System Permit (NPDES Permit). These permits are issued and enforced by the Maryland Department of the Environment and specify the allowable ranges for chemical, physical, and biological parameters of discharge. Such parameters may include biochemical oxygen demand (BOD), suspended solids (SS), total residual chlorine, coliform organisms, pH, dissolved oxygen

(DO) and in some cases flow, temperature, nitrogen, phosphorus, and industrial by-products.

The 1977 Amendments to PL 92-500 (the Clean Water Act of 1977) revised the deadlines for compliance but kept the procedures of the NPDES program essentially intact.

D. Industrial Discharges

Industrial discharges to rivers and streams are also controlled by NPDES permits. In Worcester County most of the industries requiring NPDES permits for treatment systems are agricultural or poultry products processors. Other industries proposing to locate in the County should review the Zoning Ordinance for specific classifications allowing the proposed use. All permits for individual systems in the County are processed through the Worcester County Planning, Permits and Inspections Department which will furnish further guidance in meeting their requirements. It is to be noted that Worcester County encourages the development of new industry and will endeavor to expedite State mandated requirements wherever possible.

The pollution potential and control thereof of the waste discharges from seasonal canning industries and seafood packing plants is of concern to the County. Unfortunately, the period of peak pollution loads from these sources usually coincides with the low flow periods for the receiving streams.

Properly designed and suitably operated spray irrigation systems or other land disposal methods should alleviate the problem from the canning industry. Spray irrigation is a process that utilizes evaporation, percolation, evapotranspiration (absorption by plants and grasses) and other forces of nature to aid in disposal of the treated effluent. Spray irrigation prevents effluent concentrations in a body of water and permits recharge of the groundwater aquifer. The State Water Resources Administration and the Maryland Environmental Service with the assistance of the University of Maryland and the Federal Government has initiated a project to develop a water pollution control plan for the seafood industry as a whole and particularly for seafood packing plants. Results of these studies may improve water quality in the County. Studies have been directed towards treatment of process wastewaters from seafood packing plants, many of which are located in isolated areas where no central treatment facilities are available. Effective, low cost treatment is being emphasized so that required capital investments will not be prohibitive. Results to date indicate that oyster and clam processors can meet minimum 1977 and 1984 standards promulgated by EPA using static screens and disinfection.

E. Non-Point Source Discharge

Community and industrial waste discharges are not the only source of water pollution. Urban and agricultural runoff from rainfalls can contribute massive amounts of pollution.

Such pollutants generally take the form of sediments, pesticides and wastes from livestock and pets. Boating activities and the raw discharge of sanitary waste from same is a factor in the environment. Seasonal wintering of waterfowl in the rivers, streams and marshes around Worcester County contributes to the fecal coliform level in the water areas.

Methods of agricultural pollution reduction are: 1) change in cropping patterns; 2) change method and/or frequency of application of pesticides and fertilizers; 3) change cultivation patterns; 4) substitute biological for chemical method of pest control; 5) install terraces; 6) install grassed waterways; 7) install sediment traps, basins, or debris dams; 8) create marsh areas in front of eroding shoreline banks; 9) diversion of runoff; and 10) treatment of feed lot wastes.

Non-point source pollution is not limited to agricultural practice. Urban runoff from rainfall carries extensive pollutants into streams and rivers. Studies have indicated the "first flush" of streets by rainfall has about the same concentration of pollution as raw domestic sewage. Urban runoff occurs overland directly to streams as a non-point source of pollution or through piped drainage systems which have point discharges.

Sediment from grading, forestry operations and farming can be a significant contributor on non-point source pollution. Sediment control is now mandated for construction projects throughout Maryland to minimize the effects of pollution from this source.

4.2 FINANCING SEWAGE COLLECTION AND TREATMENT FACILITIES

The County and its municipalities have the legal means to finance sewerage facilities through the issuance of general obligation bonds backed by the full faith and credit of the respective jurisdiction. Escalating costs and requirements for adequate waste treatment would, however, place a severe strain on the ability of any jurisdiction to fully finance mandated new systems or improvements and/or extensions. Accordingly, Federal and State assistance is required in the financing of sewage treatment works.

Yearly revenue for debt and interest service on local bond issues can be raised in a variety of ways depending on local preference, including general tax (ad valorem)

assessment, front-foot assessment, connection charges, surcharge on water billings and an increase in sewer-rate billings (where applicable).

Most of the costs involved in planning, designing and constructing interceptor sewers, pumping stations and wastewater treatment facilities and lateral sewers for established communities with documented failing septic systems were financed through grants administered by the Maryland Department of Environment (MDE) in conjunction with the United States Environmental Protection Agency. Grants for conventional treatment facilities and/or gravity collection systems provided about 87.5% of required financial expenditures with local governments supplying the remaining 12.5% of the costs.

At the present time no federal or state funds are available to offset land acquisition (except for on-site effluent disposal) or operation and maintenance costs of these facilities. The effect of required expenditures on a local jurisdiction's taxable base must, therefore, be thoroughly evaluated and considered before it is decided to proceed with the design and construction of a central system. This evaluation should be included in a 201 Facilities Plan (Step 1) prepared for the area in question.

Although the federal government had been the major source of funding for wastewater treatment facilities in the past two decades, it is clearly removing itself from the direct funding of such projects. Amendments to the Clean Water Act in 1981 greatly reduced the types of projects eligible for federal construction grants. Under the 1987 Clean Water Act (P.L. 100-4), the construction grants were phased out in fiscal year 1990. They were replaced in the beginning of the fiscal year 1989, by a state revolving loan fund. Federal monies provided in fiscal year 1989 and fiscal year 1990 consisted of a combination of grants and revolving loan funds. However, after fiscal year 1990 the federal monies are only available for deposit in the State's revolving loan fund. There is no federal money for grants after this time and after 1995 no further federal funds will be available for wastewater treatment facilities.

Beginning in 1995 the State and the local jurisdictions will have sole responsibility for full funding of wastewater projects and compliance with the requirements of the Federal and State laws. The creation of the Maryland Water Quality Revolving Loan Fund gives the State an opportunity to establish a perpetual source of capital for loans to construct sewerage and other pollution abatement projects.

To ensure that there is no interruption in the receipt of Federal funds for wastewater projects, legislation has been enacted to respond to the requirements of the 1987 Clean Water Act. The Maryland law provides for the establishment of the Water Quality Financing Administration within the Department of the Environment. The Administration has the responsibility for maintaining and administering the revolving loan fund and is empowered to issue bonds, notes and other types of obligations.

Although the 1981 amendments to the Federal Water Pollution Control Act severely restricted the categories of projects eligible for assistance, these restrictions are removed for the loan program and the categories of projects eligible for loans has been significantly broadened. However, the "Enforceable Requirements" must be satisfied first before other categories of projects can be financed.

Incorporated communities have the legal authority to issue Public Improvements Bonds to finance their share of community sewerage projects. However, due to the small rate of projected growth in many towns, their bonding capability may not be sufficient to completely fund the local share of sewerage projects without excessive indebtedness. Since these communities serve rural areas, they are eligible for grant assistance from the U.S. Department of Agriculture-Farmers Home Administration (similar to financial assistance for community water systems). The federal agency is authorized to allocate grants up to 50 percent and low interest loans up to 100 percent for the portion of the costs of public sewerage systems that do not receive other grant monies. These grants and loans are available to assist rural communities with a population of less than 10,000 people. Also, financial assistance is available from the Department of Housing and Urban Development (HUD) within the U.S. Department of Health, Education, and Welfare for construction of central sewerage facilities. These funds are available as part of the "Community Development Block Grant Program" administered by this federal agency and can finance up to 100% of the total construction costs for central sewerage facilities with no population limitations and no local share input. However, funds from both these federal agencies is currently limited.

Sewer (and water) projects should be self-supporting. In all cases, best business and accounting methods should prevail. Bond money should not be used for maintenance, operation or debt service. Amortization of bond issues should approach a straight line basis. The cost of physical connections to various systems should not be merged with "area" or "basic" charges levied to first-time users.

Developers of housing, commercial and industrial projects should contribute to the cost of providing sewer (and water) service. All public works agreements related to development should be as nearly uniform as possible, approved as to legal form and sufficiency and secured to the satisfaction of the Worcester County Department of Water and Wastewater Services, the municipality or other agency having jurisdiction. Operating costs and service charges for same should be reviewed annually.

Every project should be carefully reviewed for financial feasibility before the commitment of public funds for construction is made.

The County should encourage development in the areas served by existing treatment plants in order to utilize their full capacity and thereby spread charges over as large a user base as possible. Only by building such a user base can charges be kept within reason.

Annexation cannot be a condition precedent to the provision of sewer service by a municipality if grants by EPA have been used in constructing the treatment works. However, the municipality does have the right to establish differential rates for in-town versus out of town users.

4.3 MARINAS

Boating is a major industrial and recreational activity in Worcester County. Potential water quality problems associated with marinas and boating deserve special discussion and consideration. By State definition, a marina encompasses any place where a boat containing on-board toilet facilities is moored. Table 4-7 lists the marinas in Worcester County and their corresponding sewage pumpout capabilities. Proposed Maryland Department of Environment regulations regarding marinas state that "the basic intent of this regulation is to prevent the discharge of sewage from boats while moored, berthed or docked at marina locations throughout the State." In order to achieve this intent the regulation sets minimum standards for pump-out facilities to remove sewage from on-board holding tanks and for on-land sewage treatment at marina sites. Additionally, Federal regulations call for all new boats built after 1980 to be equipped with on-board sewage holding tanks and that there be a gradual phasing in of holding tanks for all existing boats.

Both State and Federal final regulations should be completed in the near future. They will require the reduction of the existing serious pollution which is caused by indiscriminate dumping of wastes from boats with and without holding tanks. However, this will also present special problems at marinas. Due to the addition of special chemicals (fungicides, bactericide, pH controls, etc.) to the on-board holding tanks, when these wastes are pumped out to a central treatment plant at a marina or discharged directly to a public sewer there is a large and potentially upsetting shock load effect on biological treatment processes. Neutralization, equalization and other pretreatment methods may be necessary prior to direct treatment. Adequate on-shore sanitary facilities must also be provided at all marinas.

Potentially serious pollution problems could occur from unsupervised usage of pumpout facilities and this area merits special attention and regulation by the Worcester County Department of Water and Wastewater Services. The State should cooperate by providing grants for installation and operation of pumpout facilities at public marinas since many users will not be of County residence. Adequate notation of the location of pumpout facilities on fishing charts and boating maps published by the State will also be necessary if the program is to be a success.

4.4 EXISTING SEWERAGE SYSTEMS

Municipal

All four of the municipalities within the County, namely Ocean City, Snow Hill, Berlin and Pocomoke City are served by central sewerage systems which are owned, operated and maintained by the municipal governments. For a description of system facilities, see Tables 4-1 to 4-4 and drawings at the end of this chapter.

Service Areas

The Worcester County Commissioners by law are the public sewer provider in the unincorporated areas of Worcester County. Existing service areas include Ocean Pines, West Ocean City, Assateague Point, Edgewater Acres and River Run.

Worcester County Department of Water and Wastewater Services

The Worcester County Department of Water and Wastewater Services is responsible for the planning, development, and construction of water and sewer facilities within the designated and approved service areas. The Worcester County Commissioners serve as the Controlling Authority for shared water and sewer facilities as provided for in the County Shared Facility Law.

Shared Facilities

The Worcester County Shared Facilities Law was enacted by the County Commissioners on March 31, 1987 and amended on July 28, 1992 and on March 8, 1994.

The Law defines a Shared Facility as a water or sewer system serving more than one (1) lot or single family residence held in separate ownership. A Limited Shared Facility serves less than twenty (20) units and a Community Shared Facility serves twenty (20) units or more.

A Limited Shared Facility may be privately owned but is designed, constructed and operated under the supervision of the Worcester County Department of Water and Wastewater Services.

A Community Shared Facility is owned by the Worcester County Commissioners and operated by the Worcester County Department of Water and Wastewater Services and for developments is typically designed and constructed by developers under the supervision of the Department of Water and Wastewater Services.

All Shared Facilities are required to be included in the Worcester County Water and Sewerage Plan and to have established Service Areas. The Worcester County

Commissioners are responsible for establishing both Limited Shared Facility Service Areas and Community Shared Facility Service Areas. All Shared Facilities (Limited and Community) are required to enter into a Shared Facility Agreement with the Worcester County Commissioners and to obtain Construction Permits from the Maryland Department of Environment.

Private Community and Institutional

A number of private community developments, schools, parks, etc. within the County have constructed sewerage systems to serve residents and users. These facilities are listed in Table 4-3, and shown on the appropriate drawings at the end of this chapter.

Industrial

While some industries within the County are connected to municipal sewerage systems, most, including the larger ones, provide their own wastewater treatment facilities. These are also listed in Table 4-3, and shown on the appropriate drawings at the end of this chapter.

Drawing Designations

"SEWERAGE SERVICE AREA" means an area currently served or planned to be served by a community, multi-use or shared sewerage sanitary facilities, or for which service is allocated or reserved.

"S-1" means areas served or planned to be served by community, multi-use, or shared sanitary facilities which are either existing, under construction, or are planned to be built WITHIN TWO YEARS.

"S-2" means areas where improvements to or extension or construction of new community, multi-use, or shared facilities are planned within a THREE TO FIVE YEAR PERIOD.

"S-3" means areas where improvements to or extensions or construction of new community, multi-use, or shared facilities are planned within SIX TO TEN YEAR PERIOD.

4.4.1 OCEAN PINES AND ENVIRONS SERVICE AREA SEWERAGE SYSTEM

A. Existing Sewerage Systems (Figure 4-6)

Ownership

The Ocean Pines sewerage system is owned by the Worcester County Commissioners and operated by the Worcester County Department of Water and Wastewater Services. The system serves approximately 4,800 homes which includes approximately 6,000 year round residents and over 12,000 residents during peak season. The system also serves the commercial areas of Mumfords Landing, Sports Core, Manklin Meadows, Section 10A and the White Horse Park Campground.

Sewerage Flow

Sewage flows entering the treatment plant vary between 0.6 mgd and 1.1 mgd. Therefore, the average daily per capita rate during the peak season is 100 gpcd. The population during the off season is approximately 55% of the peak season population, thus the flows are greatly reduced during the off season (October through April). The Maryland Department of Environment considers average daily flow for the peak month to determine available capacity.

Wastewater Collection

The sewage collection system consists of approximately 60 miles of pipe, 13 vacuum collection stations and 2 gravity-fed wetwells. Phase one, placed in service in 1970, consists of all of Ocean Pines lying north of Maryland Route 90. Phase two consists of all of Ocean Pines lying south of Maryland Route 90 and was put into service in 1973. As of 1992, all existing residential areas were served by vacuum collection systems and the commercial areas were served by a combination of both vacuum and gravity systems. The vacuum collection mains range in size from 4" to 8". The gravity mains range in size from 6" to 10". The most recent study completed concerning the collection system was the "Ocean Pines Master Plan for Water and Wastewater Facilities, July, 1988". The 589 Corporation properties are served by gravity mains.

Wastewater Transport

Wastewater collected at vacuum station receiver tanks or gravity sewer wetwells is transported through force mains to the wastewater treatment plant. There are 15 lift stations throughout Ocean Pines that pump the wastewater through a manifold of force mains to the treatment plant. There are approximately 25 miles of force mains leading from the lift stations to the treatment plant, with diameters ranging from 4 inches to 8 inches. Approximate discharge pumping capacities of stations are as follows:

<u>Station Area</u>	<u>1992 Capacity (GPM)</u>
A	400
B	440
C	205
D	210
E	500
F	400
G	67
H	310
I	67
J	67
K	270
L	67
M	270
N	67
Q-R	365
S	875
Y	900

The transport system was also studied under the 1988 Master Plan.

Treatment Facilities

The Ocean Pines Wastewater Treatment Plant is currently rated at 1.0 mgd with effluent discharge to the St. Martins River. The National Pollution Discharge Elimination System (NPDES) Permit 91-DP-0708 sets limitations for the plant at 1.0 mgd discharge rate.

This permit provides that these limitations will be applicable for 1.5 mgd plant if, before the April 30, 1997 expiration date, the plant has been expanded to 1.5 mgd. The plant is currently being expanded to 1.5 mgd and is expected to be completed in January, 1995.

The plant currently utilizes an activated sludge with nitrification and biological nutrient removal and chemical treatment process for wastewater treatment.

Adequacy

Increased growth and consistent development of the remaining recorded lots will require on-going expansion and upgrading of the existing sewerage system. Several improvements such as pump station upgrades, force main improvements, and wastewater treatment plant expansions will be necessary.

B. Potential Service Area

Due to the approximately 4,800 existing developed lots and the remaining approximately 2,269 platted building lots that are vacant, it does not seem feasible to extend the service area outside of Ocean Pines. Also, private developers own ten unplatted sections within Ocean Pines which may contain approximately 4,000 additional equivalent dwelling units (EDU). It is estimated that by the year 2005, approximately 9100 of the potential 11,118 EDU's will have been developed within Ocean Pines. A total of 1,850 EDU's are planned for development in the 589 Corporation Properties.

C. Sewerage System Development

Sewerage system development includes correction of inadequate and improperly installed vacuum collection mains and upgrading and expansion of force mains and lift stations. Extension and expansion of both the collection and transport systems will be necessary to serve the remaining platted and unplatted lots. Gravity collection systems and a total of five pumping stations are planned for the 589 Corporation properties.

Vacuum System

The 1988 Master Plan states that future pump upgrades should be made at Stations "A", "E", "F", "I", and "L". It may be necessary to upgrade inefficient vacuum mains which were not installed with the necessary sawtooth profile at some time in the future.

Wastewater Transport System

Some of the existing discharge pumping stations and/or force mains will require upgrading to accommodate projected flows. According to the Master Plan, upgrades of Station "G", "J", "L", "N", and "R" will be required. These upgrades will consist of improving pumping facilities, upgrading force mains, or a combination of both. New pumping stations will be built in Mumfords Landing, Innerlinks, Sections 16 and 15B/17, with a major transport pumping station in Section 16.

Treatment Facility

The 1988 Master Plan projected the Ocean Pines Wastewater Treatment Plant would require expansion to 2.0 MGD by 1990 and expansion to 3.0 MGD by the year 2000. As of 1993, this information is outdated. The plant is currently being expanded to 1.5 MGD, with a future upgrade to 2.0 MGD planned.

The 589 Corporation owns a substantial portion of unplatted land in the southern portion of Ocean Pines. This Corporation completed a Master Plan for Water and Sewer for all lands in June, 1993. Results of this plan will be

The 589 Corporation owns a substantial portion of unplatted land in the southern portion of Ocean Pines. This Corporation completed a Master Plan for Water and Sewer for all of their lands in September, 1993. It is suggested that an overall Master Plan be completed in FY 1994 to update the outdated information in the 1988 plan.

4.4.2 TOWN OF BERLIN SEWERAGE SYSTEM

A. Existing Sewer Systems (See Figure 4-7)

Ownership

The municipal sewerage system is owned and operated by the Town of Berlin and serves a population of 3,000.

Sewage Flow

Sewage flows entering the plant average at 0.36 MGD and peak at 0.40 MGD. The average daily per capita rate is therefore 120 gpcd.

Sewage Collection and Interceptor System

The outlying areas are collected by gravity and directed into pumping stations that discharge into force mains that range in size from 6" to 15" in diameter. These mains convey wastewater to sewer manholes from which sewage flows via gravity conditions. The gravity mains flow towards a treatment facility just outside of the corporate limits near Bottle Branch.

Treatment Facilities

The Town of Berlin service area utilizes a wastewater treatment plant with secondary treatment and discharges plant effluent into Bottle Branch, a tributary of Trappe Creek. The design capacity of the plant is 0.60 mgd. However, because the plant is exceeding the limits of its NPDES Permit (#80-DP-0669), the Town has been restricted to a 0.25 mgd discharge into Bottle Branch. Presently, the Town is still not able to meet NPDES limitations under this restriction, and is actively pursuing an alternative to current sewage treatment and disposal methods.

Adequacy

The existing treatment facility is of sufficient size to handle existing and future flows up to 0.60 mgd. However, the conditions of the NPDES Permit are not presently being met. There does not appear to be an above average

infiltration/inflow problem and the collection system is adequately handling the existing flows.

B. Potential Service Area

Immediate Priority

The Town of Berlin will extend service along MD Route 346 west and east of MD Route 818, if these areas are annexed. The Town will also extend service north along MD Route 818. Other areas east of US Route 113 are noted for service, including a hospital north of MD Route 346 and an industrial area north of Flower Street.

Up To Five Years

If annexed, growth areas west of Town will be provided service. An additional area east of US Route 113 to Bottle Branch is a potential growth area.

Five to Ten Years

The Town of Berlin will extend service to areas annexed during this period. Update based on the Town's revisions.

C. Sewerage System Development

As a result of the inability of the Town of Berlin to meet its current discharge permit limits, an alternative to discharging effluent to Bottle Branch is being developed. The plan calls for the design and construction of a 672 acre spray irrigation site located on Lee Road in Worcester County. The Town would convey sewage, treated at the existing facility, to the new spray irrigation facility via a 12" force main to be installed along MD Route 374 and Purnell Crossing Road to Lee Road. A lagoon system is proposed which would provide 90 days of storage during periods when spray irrigation would not be feasible. The spray irrigation field would encompass an area of 140 acres.

The Town will use the planned spray irrigation site for seasonal discharge of effluent, approximately 5 months per year. The existing treatment facility will be upgraded to meet discharge limitations for discharge to Bottle Branch during months when spray disposal is not feasible.

The existing treatment facility is proposed for up-grade by the addition of a flow equalization tank and an effluent discharge pumping station.

4.4.3 TOWN OF OCEAN CITY SEWERAGE SYSTEM

A. Existing Sewerage Systems (Figures 4-10 through 4-13)

Ownership

The municipal system is owned and operated by the Mayor and Council of Ocean City. The system, including Ocean City and the West Ocean City subservice area, serves approximately 10,000 and 2,500 year-round residents, respectively, and 180,000 and 8,100 residents during peak season, respectively. The sewerage system also serves the commercial areas of Ocean City and West Ocean City.

Sewage Flow

Sewage flows entering the Ocean City Wastewater Treatment Plant range between 1.0 mgd and 16.0 mgd with an average of 5.0 mgd. Therefore, the maximum daily per capita sewage rate during the peak season is 85 gpcd. The Maryland Department of Environment uses average daily flows for two peak months to determine available capacity.

Wastewater Collection

The sewage collection system for the Town of Ocean City Sewerage System consists of two separate service areas, the Ocean City Sewer Service Area and the West Ocean City Sewer Sub-Service Area, which discharge to the Ocean City Wastewater Treatment Plant located at 64th Street. The Ocean City Sewer Service Area consists of a network of gravity collection systems with various pumping stations and associated force mains.

a. Ocean City Sewer Service Area (Figures 4-11 through 4-13)

The area north of the 64th Street Wastewater Treatment Plant consists of a gravity collection system and two sewage pumping stations. The main gravity collection system starts at 140th Street and extends south along MD Route 528 approximately one mile to Jamestown Road Pump Station (PS-3). The gravity lines in this section range in size from 21" to 30". The next section of the gravity collection system begins at Jamestown Road as a 30" main and continues south approximately 1 1/4 miles to 64th Street where it becomes a 36" line and discharges into the 48" main which flows directly to the Ocean City Wastewater Treatment Plant. Also, there is a 36" gravity collection main located in the Montego Bay area which extends from 142nd Street south to Pump Station No. 8, which pumps the sewage south along MD Route 528 in a 30" force

main to the Jamestown Road Pump Station. Sewage which is received at this pump station from Pump Station No. 8, and the gravity collection system between 140th Street and Jamestown Road, is then pumped south along MD Route 528 in a 30" force main and discharges at the Ocean City Wastewater Treatment Plant.

The area south of the 64th Street Wastewater Treatment Plant has a gravity collection system with two sewage pumping stations. The gravity collection system between 9th Street and the Ocean City Inlet consists of lines ranging in size from 16" to 12" and discharges into sewage Pump Station No. 1 located at 2nd Street. The sewage is then pumped in an 18" force main northerly to a gravity collection system between 9th street and 25th street which in turn discharges into pump station No.2 located at 15th street. The sewage is then pumped into the gravity collection system at 15th Street. The second segment of gravity collection starts at 15th Street as a 33" line and extends north only along Baltimore Avenue to 27th Street, where it crosses to Philadelphia Avenue. There is a 14" gravity sewer line in Philadelphia Avenue extending from 15th Street to 27th Street. The gravity sewer main at 27th Street is 36" diameter and extends northerly to 33rd Street where it becomes a 42" main. The 42" main continues north from 33rd Street to 64th Street where it discharges into the 48" main extending to the Ocean City Wastewater Treatment Plant.

b. West Ocean City Sewer Sub-Service Area (Figure 4-10)

The West Ocean City Sewer Sub-Service Area is the area west of Ocean City between the Sinepuxent Bay and Herring Creek and extending 1 mile south of U.S. Route 50 and 1.5 miles north of US Route 50 encompassing approximately 4.5 square miles.

The sewage collection system located in West Ocean City consists of a gravity collection system separated into four areas with each containing a sewage pumping station.

The first area is the southeastern section of West Ocean City and contains a network of 8" gravity collection mains approximately 4.5 miles in length. Sewage is collected in an 8" main located in Golf Course Road which discharges into Pump Station No. 4. The sewage from Pump Station No. 4 is pumped approximately 2,500 feet in an 8" force main along Golf Course Road where it is discharged into a 12" gravity main located adjacent to U.S. Route 50.

The second area, the southwestern part of West Ocean City, contains approximately 3.5 miles of 8" gravity collection mains discharging into Pump Station No. 3, located at the intersection of MD Route 707 and U.S. Route 50. The sewage is pumped from Station No. 3 in an 8" force main approximately 300 feet to the 12" gravity system located adjacent to U.S. Route 50.

The third area, the northwestern part of West Ocean City, contains approximately 7.5 miles of 8" gravity collection mains discharging into Pump Station No.2, located at the intersection of Keyser Point Road and Torquay Road. The sewage is pumped from Station No. 2 through an 8" force main approximately 4,200 feet where it discharges into a 12" gravity collection main located in Golf Course Road.

The fourth area, the northeastern part of West Ocean City, consists of 6.5 miles of a gravity collection system ranging in size from 8" to 18". The gravity collection system also receives the sewage discharge from Pump Station Nos. 2, 3, and 4. The gravity collection system discharges into Pump Station No. 1 located on Center Drive near Riggins Ridge Road.

Pump Station No. 1 receives and pumps the entire sewage flow from West Ocean City through a subaqueous 14" force main under Sinepuxent Bay to the Ocean City collection system, where the sewage is discharged into a 33" gravity collection main in Baltimore Avenue at 15th Street.

Wastewater Treatment Facilities

The Ocean City Wastewater Treatment Plant is currently rated at 14.0 mgd with effluent discharge to the Atlantic Ocean. National Pollutant Discharge Elimination System (NPDES) Permit 90-DP-0596 has the following effluent limitations and monitoring requirements:

<u>Effluent Characteristic</u>	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Monitoring Frequency</u>	<u>Sample Type</u>
BOD 5	30 mg/l	45 mg/l	Daily	24 hr. compost.
Suspended Solids	30 mg/l	45 mg/l	Daily	24 hr. compost.
Maximum/Minimum				
Fecal Coliforms	14 MPN/100ml Median value		3 x weekly	Grab
Total Residual Chlorine	Non-Detectable		3 x weekly	Grab
Dissolved Oxygen	5.0 mg/l		3 x weekly	Grab
pH	8.5 & 6.5		3 x weekly	Grab
Flow	12.0 MGD		Continuous	Recorded

The wastewater treatment plant currently has a treatment process utilizing primary treatment, pure oxygen activated sludge secondary treatment, with effluent discharge via an ocean outfall at 64th Street.

Adequacy

At present, the operation of the Ocean City Wastewater Treatment Plant produces an effluent which consistently meets the permit requirements.

B. Potential Service Area

The Mayor and Council of Ocean City at this time has no firm plans for expansion of their service area. On August 1, 1989 the Worcester County Commissioners by resolution declared West Ocean City as an area of limited sewer availability, after having determined that the existing sewer collection system in the West Ocean City Sub-Service Area would not accommodate the maximum densities that existing zoning classifications would allow. This resolution also imposed limits on the issuance of building permits for multi-family and certain commercial structures in order to provide for the orderly growth of the area.

C. Sewage System Development

Sewage system facilities to serve the existing and forecasted growth over the next 20 years are as follows:

<u>Date</u>	<u>Population</u>	
	<u>Year-Round</u>	<u>Seasonal</u>
1990	12,500	188,100
2000	16,450	215,200
2010	21,000	238,500

Average Daily Flow (mgd)

<u>Date</u>	<u>Off-Peak (Winter)</u>	<u>Seasonal (Summer)</u>	<u>Yearly Average</u>
1990	1.0	12.0	5.0
2000	1.3	16.0	5.7
2010	1.7	17.0	6.4

Maximum Daily Sewage Flows (mgd)

Date	Off-Peak	Seasonal
1990	1.1	16.0
2000	1.4	20.0
2010	1.8	21.0

The former Sanitary Commission completed a Master Sewer Plan in late 1993. This plan evaluated the existing collection system, the treatment plant and the ocean outfall for existing capacity and for planned improvements for future growth.

4.4.4 MYSTIC HARBOUR SERVICE AREA SEWERAGE SYSTEM

A. Existing Sewer System (Figure 4-14)

Ownership

Mystic Harbour Corporation

Population

Peak Season: 201
Off-Season: 100

Sewage Flows

Average: 0.030 mgd
Peak: 0.015 mgd
Average Per
Capita Rate: 250 gpcd

Collection System

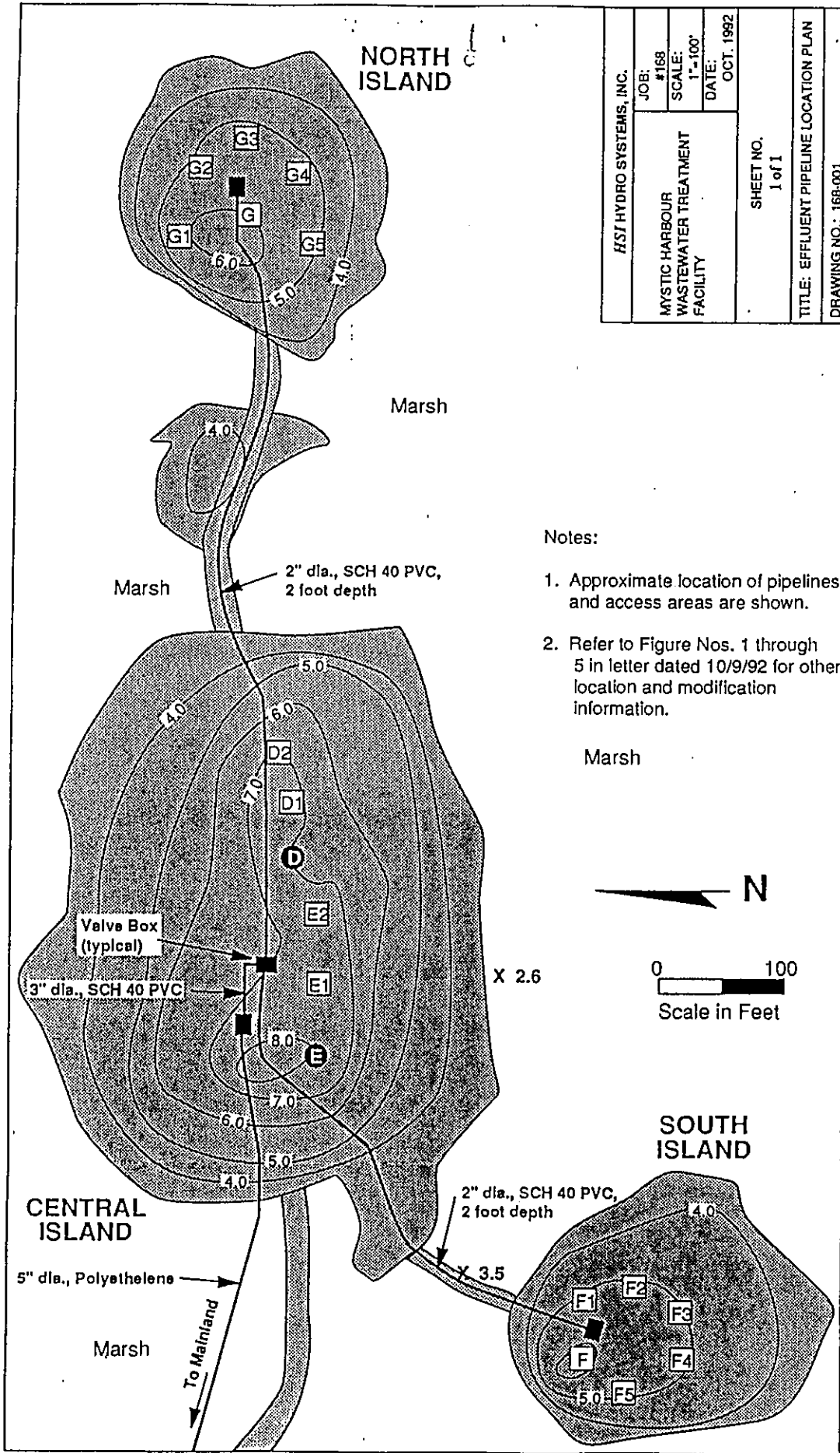
Mains: 12" to 15" Diameter Gravity
6" to 8" Diameter Force Main

Pumping Stations: Six located throughout Development
outletting to gravity to main.

Treatment Facilities

Type of Treatment: 5-Step Biological System
Point of Discharge: Shallow Well Injection
Rated Plant Capacity: 0.120 mgd
NPDES Permit #: 86-DP-2273

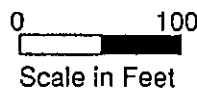
H/SI HYDRO SYSTEMS, INC.		JOB:	#168
MYSTIC HARBOUR WASTEWATER TREATMENT FACILITY		SCALE:	1"=100'
		DATE:	OCT. 1992
		SHEET NO.	1 of 1
		TITLE:	EFFLUENT PIPELINE LOCATION PLAN
		DRAWING NO.:	168-001



Notes:

1. Approximate location of pipelines and access areas are shown.
2. Refer to Figure Nos. 1 through 5 in letter dated 10/9/92 for other location and modification information.

Marsh



SOUTH ISLAND

Problems

The first sewage disposal system designed here was an Innovative/Alternative design utilizing rapid sand infiltration ponds. Due to either poor construction or the inability of the existing soils to allow the system to function properly, the system never worked. However, a hydro-geologic survey determined that shallow-well injection would be an alternative for this particular site. This method of discharge is currently being used. The expansion of the project beyond existing phases will depend on compliance with the State Discharge Permits and with the Worcester County Shared Facilities Agreement.

B. Potential Service Area

Mystic Harbour entered into an agreement to treat up to 8500 gpd of sewer from Captains Point and is subject to periodic renewal. When the agreement is acted upon, the reserve capacity shall be deducted from Mystic Harbour's available capacity. In addition, Mystic Harbour plans to serve an adjoining property to the south (Hageman property).

C. Sewerage System Development

Additional phases of construction will be initiated if the Phase Two sewage flows are acceptable. If the flows are acceptable, the development will continue to add dwelling units until all phases of construction are complete. If the flows and discharge via shallow well injection are not acceptable, alternatives to sewage disposal will be determined.

D. Public Ownership

By Shared Facility Agreement, the Mystic Harbour Sewer System shall be transferred to the Worcester County Commissioners for ownership upon completion of the development. At this time the Worcester County Department of Water and Wastewater Services oversees the facilities.

4.4.5 NEWARK SERVICE AREA SEWERAGE SYSTEM

A. Existing Sewerage Systems (Figure 4-18)

Ownership

The community sewerage system of the Newark Service Area is owned by the Worcester County Commissioners and operated by the Worcester County Department of Water and Wastewater Services. The system serves 65 residential connections along Bowen Road and Patey Woods Road.

Sewage Flow

The sewage flows entering the treatment facility range between an average of 0.011 mgd and a maximum of 0.015 mgd.

Sewage Collection System

The Newark Sewage Collection System consists of 8" sewer mains which convey wastewater to the headworks of the treatment plant. These mains are located beneath crop fields rather than within the rights-of-way of roadways.

Treatment Facilities

The Newark Service Area utilizes a two cell facultative lagoon with a rated capacity of 0.07 mgd. In 1989, Cl₂ and SO₂ treatment was added at a cost of approximately \$65,000. The National Pollutant Discharge Elimination Service (NPDES) Permit (#83-DP-0141) allows 0.07 mgd with a point of discharge to Marshall Creek. The plant is currently operating within its discharge limit. Additionally, the NPDES permit restricts the discharge of effluent to Marshall Creek to nine months out of the year. The NPDES Permit number for the Newark Facility is MD0020630. The Permit specifies the following discharge limitations with respect to the plant effluent:

Effluent Characteristic	Monthly Average	Weekly Average	Monitoring Frequency	Sample Type
BOD 5	30 mg/l	45 mg/l	weekly	8 hr. compost.
Suspended Solids	30 mg/l	45 mg/l	weekly	8 hr. compost.
TKN 4/1 - 5/31	8 mg/l	12 mg/l	weekly	8 hr. compost.
9/1 - 10/31	8 mg/l	12 mg/l	weekly	8 hr. compost.
	Max./Min.			
Fecal Coliforms	200 MPN/100 ml	N/A	weekly	grab

Effluent Characteristic	Monthly Average	Weekly Average	Monitoring Frequency	Sample Type
Total Residual Chlorine Dissolved	0.10 MG/1	N/A	daily	grab
Oxygen 4/1-5/31	N/A	7.0 mg/1	daily	grab
9/1-10/31	N/A	7.0 mg/1		
11/1-3/31	N/A	5.0 mg/1		
pH	8.5	6.5	daily	grab
Flow Rate	48 gpm	N/A	continuous	recorded

NOTE: No discharge is permitted from 6/1 through 8/31

Adequacy

The existing treatment facility is more than adequate to accommodate the flows from the existing service area. The 1989 addition of C1 2 and SO 2 treatment should aid in keeping the discharged effluent well within the NPDES limitations. Infiltration/inflow may cause a temporary overloading to the existing pipe capacities and prohibit extensive growth. However, this is not an area of planned intense development at this time.

B. Potential Service Area

Geographically, the Newark Service Area is not in an area of targeted development. However, if any development were to occur it would probably be along US Route 113. The service area could be extended to include a portion of US Route 113 and any concentration of new homes adjacent to existing served areas. Also, it is evident that not all of the 250 residents of Newark are tied into the municipal sewage system, as there are presently only 65 connections. Should it occur that any of the on-site sewage disposal systems fail, connections would be made to the community facility.

C. Sewerage System Development

Sewerage system development may include an infiltration/inflow study to determine the magnitude, causes and significant locations of infiltration/inflow. If infiltration/inflow is considered to be a major problem, correction of the problem is more cost effective than providing for its treatment. However, there are no current plans for upgrading, extension or replacement of the existing sewerage system.

4.4.6 TOWN OF SNOW HILL SEWERAGE SYSTEM

A. Existing Sewerage Systems (Figure 4-22)

Ownership

The Snow Hill Wastewater Treatment Facility is owned by the City of Snow Hill and serves approximately 2200 residents. The plant, as presently designed, can handle average daily flows to approximately 2.0 mgd.

Sewage Flow

Although the full rated capacity of the treatment plant is about 2.0 MGD, the average and peak daily flows are somewhat less. The average daily flow is approximately 475,000 gpd, while the peak daily flow is approximately 0.650 mgd.

Sewage Collection System

Wastewater is collected and conveyed to the treatment facility via a network of sewer mains ranging in diameter from 8" to 14". Five lift stations are also used to convey the sewage to the headworks of the treatment plant. One of the lift stations is owned and operated by Worcester County and is used exclusively for waste produced by the County Jail. A second lift station is owned and operated by the Heritage Court Apartment Complex. The other three pump stations are Town-owned and -maintained. These stations are located at the intersection of Willow and Commerce Streets; the intersection of Ironshire and Church Streets; and the intersection of Evergreen Court and Market Street. Three overflow outfall structures presently exist to divert raw sewage to the Pocomoke River in times of emergency.

Wastewater Treatment Facilities

The Snow Hill Wastewater Treatment Facility is currently rated at 2.0 mgd and discharges its effluent into the Pocomoke River. The National Pollutant Discharge Elimination System (NPDES) has prescribed the following effluent limitations and monitoring requirements for the Snow Hill facility under permit # 90-DP-0717:

Effluent Characteristic	Monthly Average	Maximum Average	Monitoring Frequency	Sample Type
BOD 5	30 mg/1	45 mg/1	2 week	8 hr. composite
Suspended Solids	30 mg/1	45 mg/1	2 week	8 hr. composite
Fecal Coliform	Mean log average 200 MPN/100 ml		1 week	grab
Total Residual Chlorine	Non-Detectable		2 day	grab
Dissolved Oxygen	5.0 mg/1 N/A		2/day	grab
pH	6.5/8.5		2/day	grab

The wastewater treatment plant currently has a treatment process utilizing a bar screen, a grit chamber, two primary clarifiers, four rotating biological contactors, two secondary clarifiers, a chlorine contact chamber and sulfur dioxide addition for dechlorination.

Adequacy

The operation of the Snow Hill Wastewater Treatment Facility produces an effluent which consistently meets the permit requirement. In preserving the adequacy of the sewer collection system during the last decade, the City of Snow Hill separated its combined sewer system during the early 1980's.

Generally the sewage collection system is adequate, but because of deterioration, due to age and tree root growth, many of the collection mains are subject to ground water infiltration and blockage problems. The Willow Street pump station is in need of rehabilitation or replacement due to deterioration from age.

Potential Service Area

The City of Snow Hill currently has no bonafide plan to extend the municipal sewerage collection system to adjacent areas to the City.

Areas adjacent to the City that are being evaluated for potential service include the following:

- Bay Street East to US Route 113
- Washington Street South to US Route 113
- Church Street South to US Route 113
- Approximately one mile North on MD Route 12

4.4.7 TOWN OF POCOMOKE CITY SEWERAGE SYSTEM

A. Existing Sewerage System (See Figure 4-27)

Ownership

The Pocomoke City Wastewater Treatment Facility is owned and operated by Pocomoke City. The system serves approximately 4000 persons via a collection system and treatment works. Sewage treatment and collection is not provided to any properties that are not located within the corporate limits of Pocomoke City.

Sewage Flow

The average daily sewage flow to the treatment facility is approximately 0.7 mgd. The peak flow rate to the treatment plant is approximately 1.2 mgd.

Wastewater Collection

The wastewater collection system for Pocomoke City incorporates gravity sewer mains, force sewer mains and eight sewage pumping stations to collect and convey raw sewage to the treatment plant. A major pumping station on Clarke Avenue at McMichael Street pumps all sewage to be treated to the city's 86 acre lagoon site on Dunn Swamp Road via a 24" force main.

Wastewater Treatment Facilities

The wastewater treatment plant for Pocomoke City ultimately discharges to the Pocomoke River. The National Pollutant Discharge Elimination System (NPDES) Permit 91-DP-0674A has the following effluent limitations and monitoring requirements:

Effluent Characteristic	Maximum	Minimum	Monitoring Frequency	Sample Type
BOD 5	30 mg/l	45 mg/l	twice weekly	24 hr. composite
Suspended Solids	90 mg/l	N/A	twice weekly	24 hr. composite
Fecal Coliform	200 MPN/100 ml		twice weekly	grab
Total Residual Chlorine	0.10 mg/l		three times weekly	grab
Dissolved Oxygen	5.0 mg/l		three times weekly	grab
pH	8.5	6.5	three times weekly	grab
Flow	1.2 MGD		continuous	

Several components are utilized at the Pocomoke City Wastewater Treatment Facility to adequately treat sewage. Among these components are screen, grit chamber, two waste stabilization lagoons for primary and secondary treatment, chlorine injection for disinfection and sulfur dioxide injection for dechlorination. Each of the two waste stabilization lagoons is 43 acres in size.

Adequacy

At present, the operation of the Pocomoke City Wastewater Treatment Facility produces an effluent which consistently meets the permit requirements.

B. Potential Service Area

The areas adjacent to Pocomoke City would be among the first areas considered for extension of municipal sewer.

C. Sewerage System Development

There are no immediate plans for improvements to the existing treatment facility or for extending the existing collection system to service additional areas. However, the City has included many nearby areas in its S-2 (up to 5 year) category.

SEWERAGE SYSTEM PROFILES

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME : OCEAN PINES
AREA SERVED : OCEAN PINES, MUMFORDS LANDING, SPORTS CORE, MANKLIN MEADOWS AND THE WHITEHORSE PARK CAMPGROUND

OWNED BY : WORCESTER COUNTY WATER AND WASTEWATER SERVICES
OPERATED BY : WORCESTER COUNTY WATER AND WASTEWATER SERVICES

POPULATION SERVED	:	1992	2000	2010
	:	4,500	7,500	9,000
UNSERVED	:	0	1.3	1.5
GPCD	:	250	250	250

CAPACITY (MGD):				
DEMAND	:	1.125	1.875	2.0
PLANNED	:	1.0	2.0	2.0
PERMITTED (NPDES)	:			

COLLECTION SYSTEM : 54 MILES OF INTERCEPTOR, 16 PUMP STATIONS, FORCE MAINS 3" TO 8" VACUUM COLLECTION MAINS, 6" TO 10" GRAVITY MAINS.

TREATMENT PLANT :
LOCATION (N/E) : 207,762/1,336,072
TYPE : TERTIARY
SITE SIZE (ACRES) : OCCUPIED: 5 VACANT: 6

CAPACITY (MGD):
SITE CAPACITY : SECONDARY: 3.0 ADVANCED: 3.0
EXISTING CAPACITY : 1.0
EXISTING FLOW : AVERAGE: PEAK: .80
SLUDGE DISPOSAL :

DISCHARGE:
TYPE OF : SURFACE
LOCATION OF : ST. MARTINS RIVER
NPDES PERMIT NO. : #79-DP-0708, FLOW 1.0 MGD

COMMENTS:
PLANNED EXPANSION: UPGRADE TO 1.5 MGD BY 1995. REINFORCEMENT AND EXTENSION OF EXISTING VACUUM COLLECTION MAINS AND FORCE MAINS, EXPANSION OF EXISTING LIFT STATIONS, ADDITIONAL PUMPING STATIONS AND GRAVITY COLLECTION SYSTEMS TO SERVE 589 CORPORATIONS PROPERTIES.

ALTERATION, :
ABANDONMENT, :
OR OTHER CHANGES :
ALLOCATION :
AGREEMENTS :
POLICIES : NO NEW DISCHARGE POLICY.
FACILITY PLAN :

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME : TOWN OF OCEAN CITY SEWERAGE SYSTEM

AREA SERVED : OCEAN CITY SANITARY DISTRICT AND THE WEST OCEAN CITY SUB-SERVICE AREA

OWNED BY : MAYOR AND COUNCIL OF OCEAN CITY

OPERATED BY : OCEAN CITY WASTEWATER DEPARTMENT

POPULATION SERVED	:	1992	2000	2010
UNSERVED	:	180,000	205,000	225,000
GPCD	:	0	70	70

CAPACITY (MGD):

DEMAND	:	12.0	15.0	17.0
PLANNED	:	14.0	16.0	17.0
PERMITTED (NPDES)	:			

COLLECTION SYSTEM : GRAVITY COLLECTION SYSTEM, PUMPING STATIONS AND FORCE MAINS.

TREATMENT PLANT :

LOCATION (N/E) : 207,550/1,354,066

TYPE : SECONDARY

SITE SIZE (ACRES) : OCCUPIED: 9 VACANT: 0

CAPACITY (MGD):

SITE CAPACITY	:	SECONDARY: 14.0	ADVANCED:
EXISTING CAPACITY	:	14.0	
EXISTING FLOW	:	AVERAGE: 5.0	PEAK: 12.36
SLUDGE DISPOSAL	:	THOMAS JOHNSON FARM - CEDARTOWN ROAD; DAVID BRUNING FARM - BASKETSWITCH ROAD;	

DISCHARGE:

TYPE OF : SURFACE

LOCATION OF : ATLANTIC OCEAN

NPDES PERMIT NO. : # 90-DP-0596

COMMENTS:

PLANNED EXPANSION : EXPANSION, UPGRADING OF THE EXISTING COLLECTION SYSTEM, ANALYSIS OF OCEAN OUTFALL

ALTERATION, ABANDONMENT, OR OTHER CHANGES AGREEMENTS POLICIES : CONSENT ORDER
WEST OCEAN CITY SEWER SUB-SERVICE AREA IS AN AREA OF LIMITED SEWER AVAILABILITY AS PER AUGUST 1, 1989 RESOLUTION.

FACILITY PLAN :

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME : NEWARK
AREA SERVED : NEWARK SEWERAGE SERVICE AREA
OWNED BY : WORCESTER COUNTY COMMISSIONERS
OPERATED BY : DEPARTMENT OF WATER AND WASTEWATER SERVICES

POPULATION SERVED (EDU) : 1992 2000 2010
SERVED (EDU) : 65 74 84
UNSERVED (EDU) : 0
GPCD (EDU) : 230/EDU

CAPACITY (MGD):
DEMAND : .015 .017 .019
PLANNED : .052 .52 .52
PERMITTED (NPDES) :

COLLECTION SYSTEM : 8" SEWER MAINS LOCATED BENEATH THE CROPFIELDS.

TREATMENT PLANT :
LOCATION (N/E) : 155,715/1,290,765
TYPE : 2 CELL FACULTATIVE LAGOON
SITE SIZE (ACRES) : OCCUPIED: 3 VACANT: 0

CAPACITY (MGD):
SITE CAPACITY : SECONDARY: .14 ADVANCED:
EXISTING CAPACITY : .07
EXISTING FLOW : AVERAGE: PEAK: .015
SLUDGE DISPOSAL :

DISCHARGE:
TYPE OF : SURFACE
LOCATION OF : MARSHALL CREEK
NPDES PERMIT NO. : .07 MGD, #83-DP-0141

COMMENTS:
PLANNED EXPANSION :
ALTERATION, :
ABANDONMENT, :
OR OTHER CHANGES :
ALLOCATION :
AGREEMENTS :
POLICIES :
FACILITY PLAN :

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME	:	SNOW HILL		
AREA SERVED	:	TOWN OF SNOW HILL		
OWNED BY	:	MAYOR AND COUNCIL OF SNOW HILL		
OPERATED BY	:	TOWN OF SNOW HILL		
POPULATION	:	1992	2000	2010
SERVED	:	2200	2535	2841
UNSERVED	:	0		
GPCD	:	295	295	295
CAPACITY (MGD)	:			
DEMAND	:	.65	.738	.838
PLANNED	:	2.0	2.0	2.0
PERMITTED (NPDES)	:			
COLLECTION SYSTEM	:	GRAVITY SEWER MAINS RANGING 8" TO 14" IN DIAMETER. NEW FORCE MAIN - ALONG MARKET STREET EASTWARD TO MCDONALDS.		
TREATMENT PLANT	:			
LOCATION (N/E)	:	127,392/1,258,923		
TYPE	:	SECONDARY		
SITE SIZE (ACRES)	:	OCCUPIED: 4	VACANT: 0	
CAPACITY (MGD)	:			
SITE CAPACITY	:	SECONDARY: 2.0	ADVANCED:	
EXISTING CAPACITY	:	2.0		
EXISTING FLOW	:	AVERAGE: .65	PEAK: 1.0	
SLUDGE DISPOSAL	:			
DISCHARGE	:			
TYPE OF	:	SURFACE		
LOCATION OF	:	POCOMOKE RIVER		
NPDES PERMIT NO.	:	#90-DP-0717, FLOW 0.5 MGD		
COMMENTS	:			
PLANNED EXPANSION	:	PLANNED EXPANSION OF COLLECTION SYSTEM		
ALTERATION	:			
ABANDONMENT	:			
OR OTHER CHANGES	:			
ALLOCATION	:			
AGREEMENTS	:			
POLICIES	:			
FACILITY PLAN	:			

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME : POCOMOKE CITY

AREA SERVED : POCOMOKE CITY SEWERAGE SERVICE AREA

OWNED BY : MAYOR AND COUNCIL OF POCOMOKE CITY

OPERATED BY : POCOMOKE CITY

POPULATION SERVED (EDU)	:	1992	2000	2010
UNSERVED (EDU)	:	4000	4327	4907
GPCD (EDU)	:	0		
	:	263	263	263

CAPACITY (MGD):

DEMAND	:	1.0	1.13	1.29
PLANNED	:	1.0		
PERMITTED (NPDES)	:	1.2		

COLLECTION SYSTEM : GRAVITY SEWER MAINS, FORCE SEWER MAINS AND 8 PUMPING STATIONS.

TREATMENT PLANT LOCATION (N/E) : 83,802/1,315,227

TYPE : LAGOONS

SITE SIZE (ACRES) : OCCUPIED: 86 VACANT: 0

CAPACITY (MGD):

SITE CAPACITY	:	SECONDARY: 2.0	ADVANCED: 1.5
EXISTING CAPACITY	:	1.2	
EXISTING FLOW	:	AVERAGE: .70	PEAK: 1.2
SLUDGE DISPOSAL	:		

DISCHARGE:

TYPE OF : SURFACE

LOCATION OF : POCOMOKE RIVER

NPDES PERMIT NO. : #91-DP-0674A, FLOW 1.2

COMMENTS:

PLANNED EXPANSION : POSSIBLE ADDITION OF THIRD LAGOON AND/OR AERATION OF EXISTING LAGOONS TO INCREASE CAPACITY; POSSIBLE EXTENSIONS OF SEVERAL SEWER LINES IN THE NEAR FUTURE

ALTERATION, ABANDONMENT, OR OTHER CHANGES :

ALLOCATION AGREEMENTS :

POLICIES :

FACILITY PLAN :

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME : BERLIN

AREA SERVED : TOWN OF BERLIN

OWNED BY : MAYOR AND COUNCIL OF BERLIN

OPERATED BY : TOWN OF BERLIN

POPULATION	:	1992	2000	2010
SERVED (EDU)	:	3000	3500	5100
UNSERVED (EDU)	:	0		
GPCD (EDU)	:	120	120	120

CAPACITY (MGD):

DEMAND	:	.36	.42	.61
PLANNED	:	.60	.60	.60
PERMITTED (NPDES)	:			

COLLECTION SYSTEM : OUTLYING AREAS ARE COLLECTED BY GRAVITY AND DIRECTED INTO PUMPING STATIONS THAT DISCHARGE INTO FORCE MAINS THAT RANGE FROM 6" TO 15".

TREATMENT PLANT:

LOCATION (N/E) : 181,003/1,315,227

TYPE : SECONDARY TREATMENT

SITE SIZE (ACRES) : OCCUPIED: 4 VACANT: 2

CAPACITY (MGD):

SITE CAPACITY	:	SECONDARY: 2.0	ADVANCED: 1.5
EXISTING CAPACITY	:	.60	
EXISTING FLOW	:	AVERAGE: .30	PEAK: .40
SLUDGE DISPOSAL	:		

DISCHARGE:

TYPE OF : SURFACE

LOCATION OF : BOTTLE BRANCH, A TRIBUTARY TO TRAPPE CREEK

NPDES PERMIT NO. : #80-DP-0669

COMMENTS:

PLANNED EXPANSION : SWITCH TO SPRAY IRRIGATION DISPOSAL WHICH IS PLANNED FOR 1995.

ALTERATION, :

ABANDONMENT, :

OR OTHER CHANGES :

ALLOCATION :

AGREEMENTS :

POLICIES :

FACILITY PLAN :

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME : MYSTIC HARBOUR
AREA SERVED : MYSTIC HARBOUR
OWNED BY : MYSTIC HARBOUR CORPORATION
OPERATED BY : MYSTIC HARBOUR UTILITIES/RICHARD RAU
POPULATION : 1992 2000 2010
SERVED (EDU) : 201 590 720
UNSERVED (EDU) : 58
GPCD (EDU) : 250 250 250
CAPACITY (MGD):
DEMAND : .060 .148 .180
PLANNED : .060 .120 .180
PERMITTED (NPDES) : .120
COLLECTION SYSTEM : MAINS: 12" AND 15" DIAMETER; 6" AND 8" FORCE MAINS, 6 PUMPING STATIONS
TREATMENT PLANT:
LOCATION (N/E) : 185,000/1,330,264
TYPE : 5-STEP BIOLOGICAL SYSTEM
SITE SIZE (ACRES) : OCCUPIED: 8 VACANT: 16
CAPACITY (MGD):
SITE CAPACITY : SECONDARY: 0.250 ADVANCED: 0.180
EXISTING CAPACITY : SECONDARY: 0.250
EXISTING FLOW : AVERAGE: 0.032 PEAK: 0.042
(1992) (1992)
SLUDGE DISPOSAL :
DISCHARGE:
TYPE OF : SHALLOW SUBSURFACE RECHARGE
LOCATION OF :
NPDES PERMIT NO. : #86-DP-2273
COMMENTS:
PLANNED EXPANSION :
ALTERATION, :
ABANDONMENT, :
OR OTHER CHANGES :
ALLOCATION :
AGREEMENTS : TO TREAT UP TO 8,500 GPD OF SEWER FROM THE CAPTAIN'S POINT PROJECT (PLANNED SYSTEM). THE CAPACITY WILL BE DEDUCTED FROM MYSTIC HARBOUR'S AVAILABLE CAPACITY.
POLICIES :
FACILITY PLAN :

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME	:	MILL POND		
AREA SERVED	:	MILL POND		
OWNED BY	:	TOWN OF SELBYVILLE, DELAWARE		
OPERATED BY	:	TOWN OF SELBYVILLE, DELAWARE		
POPULATION SERVED (EDU)	:	1992	2000	2010
UNSERVED (EDU)	:	26	26	26
GPCD (EDU)	:	0	0	0
POPULATION SERVED (EDU)	:	300	300	300
CAPACITY (MGD):				
DEMAND	:	.0078	.0078	.0078
PLANNED	:	.0078	.0078	.0078
PERMITTED (NPDES)	:			
COLLECTION SYSTEM	:	COMMUNITY SYSTEM = 26 FAMILY LOTS		
TREATMENT PLANT:				
LOCATION (N E)	:			
TYPE	:	PUMPED TO SELBYVILLE, DELAWARE		
		WASTEWATER TREATMENT PLANT, ABG. 9750 GPD.		
SITE SIZE (ACRES)	:			
CAPACITY (MGD):				
SITE CAPACITY	:			
EXISTING CAPACITY	:			
EXISTING FLOW	:			
SLUDGE DISPOSAL	:			
DISCHARGE:				
TYPE OF	:			
LOCATION OF	:			
NPDES PERMIT NO.	:			
COMMENTS:				
PLANNED EXPANSION	:			
ALTERATION,	:			
ABANDONMENT,	:			
OR OTHER CHANGES	:			
ALLOCATION	:			
AGREEMENTS	:	AGREEMENT WITH TOWN OF SELBYVILLE TO		
		SERVE 26 EDU'S		
POLICIES	:			
FACILITY PLAN	:			

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME: ST. MARTINS ON THE BAY

AREA SERVED :

OWNED BY : ST. MARTINS GROUP

OPERATED BY :

POPULATION:	1992	2000	2010
SERVED (EDU) :	28	52	65
UNSERVED (EDU) :	0		
GPCD (EDU) :	300	300	300

CAPACITY (MGD):			
DEMAND :	.0084	.0156	.020
PLANNED :	.020	.020	.020
PERMITTED (NPDES) :			

COLLECTION SYSTEM:

TREATMENT PLANT:		
LOCATION (N/E) :	N213,000	E1,325,000
TYPE :	SEPTIC TANKS	
SITE SITE (ACRES) :		VACANT

CAPACITY (MGD):		
SITE CAPACITY :	SECONDARY: N/A	ADVANCED: N/A
EXISTING CAPACITY :	.0084 MGD	
EXISTING FLOW :		PEAK: .0084 MGD
SLUDGE DISPOSAL :		

DISCHARGE:	
TYPE OF :	SUB-SURFACE
LOCATION OF :	
NPDES PERMIT NO. :	

COMMENTS:

PLANNED EXPANSION :
 ALTERATION, :
 ABANDONMENT, :
 OR OTHER CHANGES :
 ALLOCATION :
 AGREEMENTS :
 POLICIES :
 FACILITY PLAN :

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME : FRONTIER TOWN

AREA SERVED : FRONTIER TOWN

OWNED BY : PARKEL CORPORATION

OPERATED BY :

POPULATION	:	1992	2000	2010
SERVED (EDU)	:	584 SITES	584 SITES	584 SITES
UNSERVED (EDU)	:	0		
GPCD (EDU)	:	90/SITE	90/SITE	90/SITE

CAPACITY (MGD):

DEMAND	:	.053	.053	.053
PLANNED	:	.053	.053	.053
PERMITTED (NPDES)	:			

COLLECTION SYSTEM : GRAVITY COLLECTION TO PUMPING STATION AND 4" FORCE MAIN TO TREATMENT FACILITY

TREATMENT PLANT :

LOCATION (N/E) : N172,587 E1,331,637

TYPE : SEPTIC TANKS

SITE SIZE (ACRES) : VACANT:

CAPACITY (MGD):

SITE CAPACITY	:	SECONDARY N/A	ADVANCED N/A
EXISTING CAPACITY	:	.053 MGD	
EXISTING FLOW	:		PEAK:
SLUDGE DISPOSAL	:		

DISCHARGE:

TYPE OF : SUB-SURFACE BELOW GRADE

LOCATION OF :

NPDES PERMIT NO. :

COMMENTS:

PLANNED EXPANSION :

ALTERATION, :

ABANDONMENT, :

OR OTHER CHANGES :

ALLOCATION :

AGREEMENTS :

POLICIES :

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME : DELMARVA DOWNS
AREA SERVED : DELMARVA DOWNS
OWNED BY : OCEAN DOWNS RACING ASSOCIATION
OPERATED BY :
POPULATION : 1992 2000 2010
SERVED (EDU) :
UNSERVED (EDU) :
GPCD (EDU) :
CAPACITY (MGD):
DEMAND : .010 .010 .010
PLANNED : .010 .010 .010
PERMITTED (NPDES) :
COLLECTION SYSTEM :
TREATMENT PLANT :
LOCATION (N/E) : N193,5000 E1,326,700
TYPE : SEPTIC TANKS
SITE SIZE (ACRES) : VACANT:
CAPACITY (MGD):
SITE CAPACITY : SECONDARY N/A ADVANCED N/A
EXISTING CAPACITY : .01 MGD
EXISTING FLOW : PEAK: .01 MGD
SLUDGE DISPOSAL :
DISCHARGE:
TYPE OF : SUB-SURFACE
LOCATION OF :
NPDES PERMIT NO. :
COMMENTS:
PLANNED EXPANSION :
ALTERATION, :
ABANDONMENT, :
OR OTHER CHANGES :
ALLOCATION :
AGREEMENTS :
POLICIES :
FACILITY PLAN :

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME : NANTUCKET POINT/TOWNES OF NANTUCKET

AREA SERVED : NANTUCKET POINT/TOWNES OF NANTUCKET

OWNED BY : WORCESTER COUNTY COMMISSIONERS

OPERATED BY : DEPARTMENT OF WATER AND WASTEWATER SERVICES

POPULATION	:	1992	2000	2010
SERVED (EDU)	:	154	154	154
UNSERVED (EDU)	:	0	0	0
GPCD (EDU)	:	300	300	300

CAPACITY (MGD):

DEMAND	:			
PLANNED	:	.15	.15	.15
PERMITTED (NPDES)	:			

COLLECTION SYSTEM : WASTEWATER IS COLLECTED AND CONVEYED TO THE SUSSEX COUNTY WWTP, VIA SEWER MAINS RANGING FROM 8" TO 10" IN DIAMETER.

TREATMENT PLANT : SUSSEX WWTP, DELAWARE

LOCATION (N/E) :

TYPE :

SITE SIZE (ACRES)	:	OCCUPIED:	VACANT:
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CAPACITY (MGD):			
SITE CAPACITY	:	SECONDARY:	ADVANCED:
EXISTING CAPACITY	:		
EXISTING FLOW	:	AVERAGE:	PEAK:
SLUDGE DISPOSAL	:		

DISCHARGE:

TYPE OF :

LOCATION OF :

NPDES PERMIT NO. :

COMMENTS:

PLANNED EXPANSION :

ALTERATION, :

ABANDONMENT, :

OR OTHER CHANGES :

ALLOCATION :

AGREEMENTS : SUSSEX COUNTY, DELAWARE AGREED TO SERVE 500 EDU'S

POLICIES :

FACILITY PLAN :

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME : RED CARPET INN
AREA SERVED : RED CARPET INN (FORMER TWIN TOWERS)
OWNED BY :
OPERATED BY :
POPULATION SERVED (EDU) : 1992 2000 2010
UNSERVED (EDU) :
GPCD (EDU) :
CAPACITY (MGD):
DEMAND : .019 .019 .019
PLANNED : .019 .019 .019
PERMITTED (NPDES) :
COLLECTION SYSTEM :
TREATMENT PLANT :
LOCATION (N/E) : N75,280 E1,220,370
TYPE : SECONDARY
SITE SIZE (ACRES) : OCCUPIED 0.5 VACANT 0
CAPACITY (MGD):
SITE CAPACITY : SECONDARY .02 ADVANCED 0
EXISTING CAPACITY : .019 MGD
EXISTING FLOW : PEAK:
SLUDGE DISPOSAL :
DISCHARGE:
TYPE OF : SURFACE
LOCATION OF : WAGRAM CREEK
NPDES PERMIT NO. : #83-DP-0767M
COMMENTS:
PLANNED EXPANSION :
ALTERATION, :
ABANDONMENT, :
OR OTHER CHANGES :
ALLOCATION :
AGREEMENTS :
POLICIES :
FACILITY PLAN :

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME	:	QUALITY COURT MOTEL		
AREA SERVED	:	QUALITY COURT MOTEL		
OWNED BY	:	PAUL BATTISTONI		
OPERATED BY	:			
POPULATION SERVED (EDU)	:	1992	2000	2010
UNSERVED (EDU)	:			
GPCD (EDU)	:			
CAPACITY (MGD):				
DEMAND	:	.011	.015	.015
PLANNED	:	.015	.015	.015
PERMITTED (NPDES)	:			
COLLECTION SYSTEM	:			
TREATMENT PLANT	:			
LOCATION (N/E)	:	N74,963 E1,219,820		
TYPE	:	SECONDARY		
SITE SIZE (ACRES)	:	OCCUPIED 0.5	VACANT 0	
CAPACITY (MGD):				
SITE CAPACITY	:	SECONDARY 0.15	ADVANCED 0	
EXISTING CAPACITY	:	.015 MGD		
EXISTING FLOW	:		PEAK:	
SLUDGE DISPOSAL	:			
DISCHARGE:				
TYPE OF	:	SURFACE		
LOCATION OF	:	WAGRAM CREEK		
NPDES PERMIT NO.	:			
COMMENTS:				
PLANNED EXPANSION	:			
ALTERATION,	:			
ABANDONMENT,	:			
OR OTHER CHANGES	:			
ALLOCATION	:			
AGREEMENTS	:			
POLICIES	:			
FACILITY PLAN	:			

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME	:	BERLIN SHOPPING CENTER		
AREA SERVED	:	BERLIN SHOPPING CENTER		
OWNED BY	:	LOUIE J. AND BEATRICE M. PAGLIERANI		
OPERATED BY	:	KENNETH BENNER		
POPULATION SERVED (EDU)	:	1992	2000	2010
UNSERVED (EDU)	:			
GPCD (EDU)	:			
CAPACITY (MGD):				
DEMAND	:	.004	.004	.004
PLANNED	:	.004	.004	.004
PERMITTED (NPDES)	:			
COLLECTION SYSTEM	:			
TREATMENT PLANT:				
LOCATION (N/E)	:	N191,100 E1,300,000		
TYPE	:	EXTENDED AERATION		
SITE SIZE (ACRES)	:	VACANT:		
CAPACITY (MGD):				
SITE CAPACITY	:	SECONDARY	ADVANCED:	
EXISTING CAPACITY	:	.004 MGD		
EXISTING FLOW	:		PEAK: .004	
SLUDGE DISPOSAL	:			
DISCHARGE:				
TYPE OF	:	SURFACE		
LOCATION OF	:			
NPDES PERMIT NO.	:	#88-DP-0899		
COMMENTS:				
PLANNED EXPANSION	:			
ALTERATION,	:			
ABANDONMENT,	:			
OR OTHER CHANGES	:			
ALLOCATION	:			
AGREEMENTS	:			
POLICIES	:			
FACILITY PLAN	:			

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME	:	PINES PLAZA		
AREA SERVED	:	PINES PLAZA		
OWNED BY	:	PINES PLAZA LIMITED PARTNERSHIP		
OPERATED BY	:			
POPULATION SERVED (EDU)	:	1992	2000	2010
UNSERVED (EDU)	:			
GPCD (EDU)	:			
CAPACITY (MGD):				
DEMAND	:	.011	.011	.011
PLANNED	:	.011	.011	.011
PERMITTED (NPDES)	:			
COLLECTION SYSTEM	:			
TREATMENT PLANT:				
LOCATION (N/E)	:	205,000/1,326,000		
TYPE	:	SECONDARY		
SITE SIZE (ACRES)	:			
VACANT:				
CAPACITY (MGD):		.011		
SITE CAPACITY	:	SECONDARY .019		
EXISTING CAPACITY	:	.011		
EXISTING FLOW	:	AVERAGE:		PEAK: .011
SLUDGE DISPOSAL	:			
DISCHARGE:				
TYPE OF	:	SUB-SURFACE		
LOCATION OF	:			
NPDES PERMIT NO.	:			
COMMENTS:				
PLANNED EXPANSION	:	NONE		
ALTERATION,	:			
ABANDONMENT,	:			
OR OTHER CHANGES	:			
ALLOCATION	:			
AGREEMENTS	:			
POLICIES	:			
FACILITY PLAN	:			

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME	:	ROUTE 589 McDONALDS		
AREA SERVED	:	MCDONALDS, PENINSULA BANK, RE-MAX REAL ESTATE OFFICE		
OWNED BY	:	RICHARD OTT		
OPERATED BY	:			
POPULATION SERVED (EDU)	:	1992	2000	2010
UNSERVED (EDU)	:	4	4	4
GPCD (EDU)	:	0	0	0
	:	4000	4000	4000
CAPACITY (MGD):				
DEMAND	:	.016	.016	.016
PLANNED	:			
PERMITTED (NPDES)	:			
COLLECTION SYSTEM	:			
TREATMENT PLANT:				
LOCATION (N/E)	:	203,000/1,326,000		
TYPE	:	SEPTIC TANKS		
SITE SIZE (ACRES)	:	OCCUPIED:	VACANT:	
CAPACITY (MGD):				
SITE CAPACITY	:	SECONDARY:	N/A	ADVANCED: N/A
EXISTING CAPACITY	:			
EXISTING FLOW	:	AVERAGE:	PEAK:	
SLUDGE DISPOSAL	:			
DISCHARGE:				
TYPE OF	:	SUB-SERVICE		
LOCATION OF	:			
NPDES PERMIT NO.	:			
COMMENTS:				
PLANNED EXPANSION	:			
ALTERATION,	:			
ABANDONMENT,	:			
OR OTHER CHANGES	:			
ALLOCATION	:			
AGREEMENTS	:			
POLICIES	:			
FACILITY PLAN	:			

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME	:	ROUTE 50 MCDONALDS		
AREA SERVED	:	MCDONALDS		
OWNED BY	:	EARL TAYLOR		
OPERATED BY	:			
POPULATION SERVED (EDU)	:	1992	2000	2010
UNSERVED (EDU)	:			
GPCD (EDU)	:			
CAPACITY (MGD):				
DEMAND	:	.004	.004	.004
PLANNED	:	.004	.004	.004
PERMITTED (NPDES)	:			
COLLECTION SYSTEM	:			
TREATMENT PLANT:				
LOCATION (N/E)	:	N190,000 E1,310,000		
TYPE	:	SEPTIC TANKS		
SITE SIZE (ACRES)	:		VACANT:	
CAPACITY (MGD):				
SITE CAPACITY	:	SECONDARY N/A	ADVANCED N/A	
EXISTING CAPACITY	:	.004 MGD		
EXISTING FLOW	:		PEAK: 0.4 MGD	
SLUDGE DISPOSAL	:			
DISCHARGE:				
TYPE OF	:	SUB-SURFACE		
LOCATION OF	:			
NPDES PERMIT NO.	:			
COMMENTS:				
PLANNED EXPANSION	:			
ALTERATION,	:			
ABANDONMENT,	:			
OR OTHER CHANGES	:			
ALLOCATION	:			
AGREEMENTS	:			
POLICIES	:			
FACILITY PLAN	:			

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME	:	POCOMOKE PURE OIL TRUCK STOP		
AREA SERVED	:	POCOMOKE PURE OIL TRUCK STOP		
OWNED BY	:			
OPERATED BY	:			
POPULATION SERVED (EDU)	:	1992	2000	2010
UNSERVED (EDU)	:			
GPCD (EDU)	:			
CAPACITY (MGD):				
DEMAND	:	.006	.006	.006
PLANNED	:	.006	.006	.006
PERMITTED (NPDES)	:			
COLLECTION SYSTEM	:			
TREATMENT PLANT:				
LOCATION (N/E)	:	N71,742 E1,220,000		
TYPE	:	SECONDARY		
SITE SIZE (ACRES)	:	OCCUPIED .5	VACANT 0	
CAPACITY (MGD):				
SITE CAPACITY	:	SECONDARY .006	ADVANCED .006	
EXISTING CAPACITY	:	.006 MGD		
EXISTING FLOW	:		PEAK:	
SLUDGE DISPOSAL	:			
DISCHARGE:				
TYPE OF	:	SURFACE		
LOCATION OF	:	WAGRAM CREEK		
NPDES PERMIT NO.	:	#83-DP-1356		
COMMENTS:				
PLANNED EXPANSION	:			
ALTERATION,	:			
ABANDONMENT,	:			
OR OTHER CHANGES	:			
ALLOCATION	:			
AGREEMENTS	:			
POLICIES	:			
FACILITY PLAN	:			

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME	:	LAKE HAVEN TRAILER PARK		
AREA SERVED	:	LAKE HAVEN TRAILER PARK		
OWNED BY	:	NICHOLAS P. KARAGEORGOS, ETAL		
OPERATED BY	:			
POPULATION	:	1992	2000	2010
SERVED (EDU)	:	125	125	125
UNSERVED (EDU)	:	0		
GPCD (EDU)	:	300	300	300
CAPACITY (MGD):				
DEMAND	:	.038	.038	.038
PLANNED	:	.038	.038	.038
PERMITTED (NPDES)	:			
COLLECTION SYSTEM	:			
TREATMENT PLANT:				
LOCATION (N/E)	:	N193,379 E1,322,640		
TYPE	:	SEPTIC TANKS		
SITE SIZE (ACRES)	:		VACANT:	
CAPACITY (MGD):				
SITE CAPACITY	:	SECONDARY N/A	ADVANCED N/A	
EXISTING CAPACITY	:	.038 MGD		
EXISTING FLOW	:		PEAK:	.038 MGD
SLUDGE DISPOSAL	:			
DISCHARGE:				
TYPE OF	:	SUB-SURFACE		
LOCATION OF	:			
NPDES PERMIT NO.	:			
COMMENTS:				
PLANNED EXPANSION	:			
ALTERATION,	:			
ABANDONMENT,	:			
OR OTHER CHANGES	:			
ALLOCATION	:			
AGREEMENTS	:			
POLICIES	:			
FACILITY PLAN	:			

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME	:	RIVERVIEW MOBILE HOME PARK		
AREA SERVED	:	RIVERVIEW MOBILE HOME PARK		
OWNED BY	:	JAMES LATCHUM		
OPERATED BY	:			
POPULATION SERVED (EDU)	:	1992	2000	2010
UNSERVED (EDU)	:	66	66	66
GPCD (EDU)	:	300	300	300
CAPACITY (MGD):				
DEMAND	:	.0198	.0198	.0198
PLANNED	:	.0198	.0198	.0198
PERMITTED (NPDES)	:			
COLLECTION SYSTEM	:			
TREATMENT PLANT:				
LOCATION (N/E)	:	N220,792 E1,319540		
TYPE	:	SEPTIC TANKS		
SITE SIZE (ACRES)	:		VACANT:	
CAPACITY (MGD):				
SITE CAPACITY	:	SECONDARY N/A	ADVANCED N/A	
EXISTING CAPACITY	:	.0198 MGD		
EXISTING FLOW	:		PEAK:	
SLUDGE DISPOSAL	:			
DISCHARGE:				
TYPE OF	:	SUB-SURFACE		
LOCATION OF	:			
NPDES PERMIT NO.	:			
COMMENTS:				
PLANNED EXPANSION	:			
ALTERATION,	:			
ABANDONMENT,	:			
OR OTHER CHANGES	:			
ALLOCATION	:			
AGREEMENTS	:			
POLICIES	:			
FACILITY PLAN	:			

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME : **BALI HI RECREATIONAL VEHICLE PARK**

AREA SERVED : **BALI HI RECREATIONAL VEHICLE PARK**

OWNED BY : **BALI HI, INC.**

OPERATED BY :

POPULATION	:	1992	2000	2010
SERVED (EDU)	:	178	178	178
UNSERVED (EDU)	:			
GPCD (EDU)	:	140	140	140

CAPACITY (MGD):

DEMAND	:	.025	.025	.025
PLANNED	:	.025	.025	.025
PERMITTED (NPDES)	:			

COLLECTION SYSTEM :

TREATMENT PLANT:

LOCATION (N/E)	:	N220,000	E1,335,000
TYPE	:	SEPTIC TANKS	
SITE SIZE (ACRES)	:		VACANT:

CAPACITY (MGD):

SITE CAPACITY	:	SECONDARY N/A	ADVANCED N/A
EXISTING CAPACITY	:		
EXISTING FLOW	:		PEAK:
SLUDGE DISPOSAL	:		

DISCHARGE:

TYPE OF	:	SUB-SURFACE
LOCATION OF	:	
NPDES PERMIT NO.	:	

COMMENTS:

PLANNED EXPANSION :

ALTERATION, :

ABANDONMENT, :

OR OTHER CHANGES :

ALLOCATION :

AGREEMENTS :

POLICIES :

FACILITY PLAN :

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME	:	SUNSET LAKES MOBILE HOME PARK		
AREA SERVED	:	SUNSET LAKES MOBILE HOME PARK		
OWNED BY	:	ROBERT CLARK		
OPERATED BY	:			
POPULATION	:	1992	2000	2010
SERVED (EDU)	:	34 EDU	34 EDU	34 EDU
UNSERVED (EDU)	:			
GPCD (EDU)	:	300/EDU	300/EDU	300/EDU
CAPACITY (MGD):				
DEMAND	:	.018	.018	.018
PLANNED	:	.018	.018	.018
PERMITTED (NPDES)	:			
COLLECTION SYSTEM	:			
TREATMENT PLANT:				
LOCATION (N/E)	:	N175,000	E1,316,000	
TYPE	:	SEPTIC TANKS		
SITE SIZE (ACRES)	:		VACANT:	
CAPACITY (MGD):				
SITE CAPACITY	:	SECONDARY N/A	ADVANCED N/A	
EXISTING CAPACITY	:	.102 MGD		
EXISTING FLOW	:		PEAK:	
SLUDGE DISPOSAL	:			
DISCHARGE:				
TYPE OF	:	SUB-SURFACE		
LOCATION OF	:			
NPDES PERMIT NO.	:			
COMMENTS:				
PLANNED EXPANSION	:			
ALTERATION,	:			
ABANDONMENT,	:			
OR OTHER CHANGES	:			
ALLOCATION	:			
AGREEMENTS	:			
POLICIES	:			
FACILITY PLAN	:			

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME : **EAGLES NEST BY THE BAY (FORMERLY CASTAWAYS)**

AREA SERVED : **EAGLES NEST BY THE BAY**

OWNED BY : **ROBERT FENTON**

OPERATED BY :

POPULATION	:	1992	2000	2010
SERVED (EDU)	:	42	42	42
UNSERVED (EDU)	:			
GPCD (EDU)	:	300	300	300

CAPACITY (MGD):

DEMAND	:	.013	.013	.013
PLANNED	:	.013	.013	.013
PERMITTED (NPDES)	:			

COLLECTION SYSTEM :

TREATMENT PLANT:

LOCATION (N/E) : **N176,230 E1,339,821**

TYPE : **SEPTIC TANKS**

SITE SIZE (ACRES) : **VACANT:**

CAPACITY (MGD):

SITE CAPACITY	:	SECONDARY N/A	ADVANCED N/A
EXISTING CAPACITY	:		
EXISTING FLOW	:		PEAK:
SLUDGE DISPOSAL	:		

DISCHARGE:

TYPE OF : **SUB-SURFACE**

LOCATION OF :

NPDES PERMIT NO. :

COMMENTS:

PLANNED EXPANSION :

ALTERATION, :

ABANDONMENT, :

OR OTHER CHANGES :

ALLOCATION :

AGREEMENTS :

POLICIES :

FACILITY PLAN :

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME	:	EAGLES NEST TRAILER PARK		
AREA SERVED	:	EAGLES NEST TRAILER PARK		
OWNED BY	:	ROBERT FENTON		
OPERATED BY	:	ROBERT FENTON		
POPULATION	:	1992	2000	2010
SERVED (EDU)	:	324	324	324
UNSERVED (EDU)	:			
GPCD (EDU)	:	300/TRLR	300/TRLR	300/TRLR
	:	140/CMPS.	140/CMPS.	140/CMPS.
CAPACITY (MGD):				
DEMAND	:	.058	.058	.058
PLANNED	:	.058	.058	.058
PERMITTED (NPDES)	:			
COLLECTION SYSTEM	:			
TREATMENT PLANT:				
LOCATION (N/E)	:	N176,864	E1,339,504	
TYPE	:	SEPTIC TANKS		
SITE SIZE (ACRES)	:		VACANT:	
CAPACITY (MGD):				
SITE CAPACITY	:	SECONDRY N/A	ADVANCED N/A	
EXISTING CAPACITY	:			
EXISTING FLOW	:		PEAK:	
SLUDGE DISPOSAL	:			
DISCHARGE:				
TYPE OF	:	SUB-SURFACE		
LOCATION OF	:			
NPDES PERMIT NO.	:			
COMMENTS:				
PLANNED EXPANSION	:			
ALTERATION,	:			
ABANDONMENT,	:			
OR OTHER CHANGES	:			
ALLOCATION	:			
AGREEMENTS	:			
POLICIES	:			
FACILITY PLAN	:			

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME	:	PINES SHORES GOLF COURSE		
AREA SERVED	:	PINES SHORES GOLF COURSE		
OWNED BY	:	AL JANIS		
OPERATED BY	:	AL JANIS		
POPULATION SERVED (EDU)	:	1992	2000	2010
UNSERVED (EDU)	:			
GPCD (EDU)	:			
CAPACITY (MGD):				
DEMAND	:	.0075	.0075	.0075
PLANNED	:	.0075	.0075	.0075
PERMITTED (NPDES)	:			
COLLECTION SYSTEM	:			
TREATMENT PLANT:				
LOCATION (N/E)	:	209,000/1,321,000		
TYPE	:	SEPTIC TANKS		
SITE SIZE (ACRES)	:	OCCUPIED:	VACANT:	
CAPACITY (MGD):				
SITE CAPACITY	:	SECONDARY:	ADVANCED:	
EXISTING CAPACITY	:			
EXISTING FLOW	:	AVERAGE:	PEAK:	
SLUDGE DISPOSAL	:			
DISCHARGE:				
TYPE OF	:	SUB-SURFACE		
LOCATION OF	:			
NPDES PERMIT NO.	:			
COMMENTS:				
PLANNED EXPANSION	:			
ALTERATION,	:			
ABANDONMENT,	:			
OR OTHER CHANGES	:			
ALLOCATION	:			
AGREEMENTS	:			
POLICIES	:			
FACILITY PLAN	:			

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME : BAY CLUB GOLF COURSE
AREA SERVED : BAY CLUB GOLF COURSE
OWNED BY : HANK MAJEWSKI
OPERATED BY :
POPULATION SERVED (EDU) : 1992 2000 2010
UNSERVED (EDU) :
GPCD (EDU) :
CAPACITY (MGD):
DEMAND : .005 .005 .005
PLANNED : .005 .005 .005
PERMITTED (NPDES) :
COLLECTION SYSTEM :
TREATMENT PLANT:
LOCATION (N/E) :
TYPE : SEPTIC TANKS
SITE SIZE (ACRES) : OCCUPIED: VACANT:
CAPACITY (MGD):
SITE CAPACITY : SECONDARY: ADVANCED:
EXISTING CAPACITY :
EXISTING FLOW : AVERAGE: PEAK:
SLUDGE DISPOSAL :
DISCHARGE:
TYPE OF : SUB-SURFACE
LOCATION OF :
NPDES PERMIT NO. :
COMMENTS:
PLANNED EXPANSION :
ALTERATION, :
ABANDONMENT, :
OR OTHER CHANGES :
ALLOCATION :
AGREEMENTS :
POLICIES :
FACILITY PLAN :

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME	:	EAGLE LANDING GOLF COURSE		
AREA SERVED	:	EAGLE LANDING GOLF COURSE		
OWNED BY	:	MAYOR AND COUNCIL OF OCEAN CITY		
OPERATED BY	:			
POPULATION SERVED (EDU)	:	1992	2000	2010
UNSERVED (EDU)	:			
GPCD (EDU)	:			
CAPACITY (MGD):				
DEMAND	:	.005	.005	.005
PLANNED	:	.005	.005	.005
PERMITTED (NPDES)	:			
COLLECTION SYSTEM	:			
TREATMENT PLANT:				
LOCATION (N/E)	:			
TYPE	:	SEPTIC TANKS		
SITE SIZE (ACRES)	:	OCCUPIED:	VACANT:	
CAPACITY (MGD):				
SITE CAPACITY	:	SECONDARY:	ADVANCED:	
EXISTING CAPACITY	:			
EXISTING FLOW	:	AVERAGE:	PEAK:	
SLUDGE DISPOSAL	:			
DISCHARGE:				
TYPE OF	:	SUB-SURFACE		
LOCATION OF	:			
NPDES PERMIT NO.	:			
COMMENTS:				
PLANNED EXPANSION	:			
ALTERATION,	:			
ABANDONMENT,	:			
OR OTHER CHANGES	:			
ALLOCATION	:			
AGREEMENTS	:			
POLICIES	:			
FACILITY PLAN	:			

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME	:	BEACH CLUB GOLF COURSE		
AREA SERVED	:	BEACH CLUB GOLF COURSE		
OWNED BY	:	BEACH CLUB LIMITED PARTNERSHIP		
OPERATED BY	:	BEACH CLUB LIMITED PARTNERSHIP		
POPULATION SERVED (EDU)	:	1992	2000	2010
UNSERVED (EDU)	:			
GPCD (EDU)	:			
CAPACITY (MGD):				
DEMAND	:	.005	.005	.005
PLANNED	:	.005	.005	.005
PERMITTED (NPDES)	:			
COLLECTION SYSTEM	:			
TREATMENT PLANT:				
LOCATION (N/E)	:			
TYPE	:	SEPTIC SYSTEM		
SITE SIZE (ACRES)	:	OCCUPIED:	VACANT:	
CAPACITY (MGD):				
SITE CAPACITY	:	SECONDARY:	ADVANCED:	
EXISTING CAPACITY	:			
EXISTING FLOW	:	AVERAGE:	PEAK:	
SLUDGE DISPOSAL	:			
DISCHARGE:				
TYPE OF	:	SUBSURFACE		
LOCATION OF	:			
NPDES PERMIT NO.	:			
COMMENTS:				
PLANNED EXPANSION	:	ADDITIONAL 18 HOLE COURSE		
ALTERATION,	:			
ABANDONMENT,	:			
OR OTHER CHANGES	:			
ALLOCATION	:			
AGREEMENTS	:			
POLICIES	:			
FACILITY PLAN	:			

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME	:	OCEAN CITY GOLF & YACHT CLUB		
AREA SERVED	:	OCEAN CITY GOLF & YACHT CLUB		
OWNED BY	:	OCEAN CITY GOLF AND YACHT CLUB, INC.		
OPERATED BY	:	OCEAN CITY GOLF AND YACHT CLUB, INC.		
POPULATION SERVED (EDU)	:	1992	2000	2010
UNSERVED (EDU)	:			
GPCD (EDU)	:			
CAPACITY (MGD):				
DEMAND	:	.010	.010	.010
PLANNED	:	.010	.010	.010
PERMITTED (NPDES)	:			
COLLECTION SYSTEM	:			
TREATMENT PLANT:				
LOCATION (N/E)	:	155,755/1,323,062		
TYPE	:	SEPTIC TANKS		
SITE SIZE (ACRES)	:	OCCUPIED:	VACANT:	
CAPACITY (MGD):				
SITE CAPACITY	:	SECONDARY:	ADVANCED:	
EXISTING CAPACITY	:	.01		
EXISTING FLOW	:	AVERAGE:	PEAK:	
SLUDGE DISPOSAL	:			
DISCHARGE:				
TYPE OF	:	SUB-SURFACE		
LOCATION OF	:			
NPDES PERMIT NO.	:			
COMMENTS:				
PLANNED EXPANSION	:			
ALTERATION,	:			
ABANDONMENT,	:			
OR OTHER CHANGES	:			
ALLOCATION	:			
AGREEMENTS	:			
POLICIES	:			
FACILITY PLAN	:			

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME	:	NASSAWANGO GOLF COURSE		
AREA SERVED	:	NASSAWANGO GOLF COURSE		
OWNED BY	:	NASSAWANGO COUNTRY CLUB, INC.		
OPERATED BY	:	NASSAWANGO COUNTRY CLUB, INC.		
POPULATION SERVED (EDU)	:	1992	2000	2010
UNSERVED (EDU)	:			
GPCD (EDU)	:			
CAPACITY (MGD):				
DEMAND	:	.005	.005	.005
PLANNED	:	.005	.005	.005
PERMITTED (NPDES)	:			
COLLECTION SYSTEM	:			
TREATMENT PLANT:				
LOCATION (N/E)	:			
TYPE	:			
SITE SIZE (ACRES)	:	OCCUPIED:		VACANT:
CAPACITY (MGD):				
SITE CAPACITY	:	SECONDARY:		ADVANCED:
EXISTING CAPACITY	:			
EXISTING FLOW	:	AVERAGE:		PEAK:
SLUDGE DISPOSAL	:			
DISCHARGE:				
TYPE OF	:			
LOCATION OF	:			
NPDES PERMIT NO.	:			
COMMENTS:				
PLANNED EXPANSION	:			
ALTERATION,	:			
ABANDONMENT,	:			
OR OTHER CHANGES	:			
ALLOCATION	:			
AGREEMENTS	:			
POLICIES	:			
FACILITY PLAN	:			

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME : ASSATEAGUE ISLAND STATE PARK
AREA SERVED : ASSATEAGUE ISLAND STATE PARK
OWNED BY : STATE OF MARYLAND, DEPARTMENT OF NATURAL RESOURCES
OPERATED BY : STATE OF MARYLAND, DEPARTMENT OF NATURAL RESOURCES

POPULATION : 1992 2000 2010
SERVED (EDU) :
UNSERVED (EDU) :
GPCD (EDU) :

CAPACITY (MGD):
DEMAND : .045
PLANNED : 1.0 1.0 1.0
PERMITTED (NPDES) :

COLLECTION SYSTEM : A SINGLE COLLECTION SYSTEM FOR THE PARK DOES NOT EXIST SINCE EACH AREA OF THE PARK IS SERVED BY AN INDIVIDUAL SUB-SURFACE SEWAGE DISPOSAL SYSTEM.

TREATMENT PLANT:
LOCATION (N/E) : 146,705/1,332,957
TYPE : SEPTIC TANKS AND LEACHING FIELDS
SITE SIZE (ACRES) : OCCUPIED: VACANT:

CAPACITY (MGD):
SITE CAPACITY : SECONDARY: N/A ADVANCED: N/A
EXISTING CAPACITY : 0.045
EXISTING FLOW : AVERAGE: PEAK:
SLUDGE DISPOSAL :

DISCHARGE:
TYPE OF : SUB-SURFACE
LOCATION OF :
NPDES PERMIT NO. :

COMMENTS:
PLANNED EXPANSION : NONE
ALTERATION, :
ABANDONMENT, :
OR OTHER CHANGES :
ALLOCATION :
AGREEMENTS :
POLICIES :
FACILITY PLAN :

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME	:	POCOMOKE RIVER STATE FOREST AND PARK		
AREA SERVED	:	MILBURN LANDING		
OWNED BY	:	STATE OF MARYLAND, DEPARTMENT OF NATURAL RESOURCES		
OPERATED BY	:	STATE OF MARYLAND, DEPARTMENT OF NATURAL RESOURCES		
POPULATION SERVED (EDU)	:	1992	2000	2010
UNSERVED (EDU)	:			
GPCD (EDU)	:			
CAPACITY (MGD):				
DEMAND	:	.0025	.0035	.004
PLANNED	:	.004	.004	.004
PERMITTED (NPDES)	:			
COLLECTION SYSTEM	:	EACH AREA OF THE PARK IS PROVIDED WITH A INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM		
TREATMENT PLANT:				
LOCATION (N/E)	:	110,000/1,233,696		
TYPE	:	SEPTIC TANKS, LEACHING FIELDS		
SITE SIZE (ACRES)	:	OCCUPIED:	VACANT:	
CAPACITY (MGD):				
SITE CAPACITY	:	SECONDARY: N/A	ADVANCED: N/A	
EXISTING CAPACITY	:			
EXISTING FLOW	:	AVERAGE:	PEAK:	
SLUDGE DISPOSAL	:			
DISCHARGE:				
TYPE OF	:	SUB-SURFACE		
LOCATION OF	:			
NPDES PERMIT NO.	:			
COMMENTS:				
PLANNED EXPANSION	:	NONE		
ALTERATION,	:			
ABANDONMENT,	:			
OR OTHER CHANGES	:			
ALLOCATION	:			
AGREEMENTS	:			
POLICIES	:			
FACILITY PLAN	:			

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME : POCOMOKE RIVER STATE FOREST AND PARK

AREA SERVED : SHAD LANDING

OWNED BY : STATE OF MARYLAND, DEPARTMENT OF NATURAL RESOURCES

OPERATED BY : STATE OF MARYLAND, DEPARTMENT OF NATURAL RESOURCES

POPULATION : 1992 2000 2010
SERVED (EDU) :
UNSERVED (EDU) :
GPCD (EDU) :

CAPACITY (MGD):
DEMAND : .015 .025 .030
PLANNED : .03 .03 .03
PERMITTED (NPDES) :

COLLECTION SYSTEM : EACH AREA OF THE PARK IS PROVIDED WITH A SUBSURFACE SEWAGE DISPOSAL SYSTEM.

TREATMENT PLANT:
LOCATION (N/E) : 115,122/1,249,081
TYPE : SEPTIC TANKS
SITE SIZE (ACRES) : OCCUPIED: VACANT:

CAPACITY (MGD):
SITE CAPACITY : SECONDARY: N/A ADVANCED: N/A
EXISTING CAPACITY :
EXISTING FLOW : AVERAGE: PEAK:
SLUDGE DISPOSAL :

DISCHARGE:
TYPE OF : SUB-SURFACE
LOCATION OF :
NPDES PERMIT NO. :

COMMENTS:
PLANNED EXPANSION : NONE
ALTERATION, :
ABANDONMENT, :
OR OTHER CHANGES :
ALLOCATION :
AGREEMENTS :
POLICIES :
FACILITY PLAN :

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME : ASSATEAGUE POINTE
AREA SERVED : ASSATEAGUE POINTE
OWNED BY : WORCESTER COUNTY COMMISSIONERS
OPERATED BY : DEPARTMENT OF WATER AND WASTEWATER SERVICES

POPULATION	:	1992	2000	2010
SERVED (EDU)	:	201	583	583
UNSERVED (EDU)	:	0		
GPCD (EDU)	:	110		

CAPACITY (MGD):
DEMAND : .021 .021 .032
PLANNED : .064 .064 .064
PERMITTED (NPDES) :

COLLECTION SYSTEM :

TREATMENT PLANT:
LOCATION (N/E) : N172,000 E1,335,000
TYPE : SECONDARY SPRAY IRRIGATION
SITE SIZE (ACRES) : VACANT:

CAPACITY (MGD):
SITE CAPACITY : SECONDARY .064 ADVANCED:
EXISTING CAPACITY : .064 MGD
EXISTING FLOW : PEAK: .064
SLUDGE DISPOSAL :

DISCHARGE:
TYPE OF : GROUND
LOCATION OF :
NPDES PERMIT NO. : #89-DP-2608

COMMENTS:
PLANNED EXPANSION :
ALTERATION, :
ABANDONMENT, :
OR OTHER CHANGES :
ALLOCATION : 522 EDUs ARE FOR INDIVIDUAL LOTS, WITH REMAINING 61 EDUs ALLOCATED TO THE SITE'S COMMERCIAL PROPERTY

AGREEMENTS :
POLICIES : PROBLEMS APPARENTLY EXIST IN THE AREA WITH GROUNDWATER POLLUTION FROM FAILING SEPTIC SYSTEMS, IN PARTICULAR THE SUBDIVISION OF SNUG HARBOR. THE COUNTY COMMISSIONERS SHOULD INVESTIGATE POTENTIAL ALTERNATIVE SERVICE ARRANGEMENTS, INCLUDING THE POSSIBILITY OF SERVICE UTILIZING THE ASSATEAGUE POINTE TREATMENT PLANT.

FACILITY PLAN :

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME : PERDUE FARMS, INC.
AREA SERVED : HATCHERY FACILITY
OWNED BY : PERDUE FARMS, INC.
OPERATED BY : PERDUE FARMS, INC.
POPULATION :
SERVED (EDU) :
UNSERVED (EDU) :
GPCD (EDU) :
CAPACITY (MGD):
DEMAND :
PLANNED :
PERMITTED (NPDES) :
COLLECTION SYSTEM : EXISTING
TREATMENT PLANT:
LOCATION (N/E) :
TYPE : EXISTING
SITE SIZE (ACRES) :
CAPACITY (MGD):
SITE CAPACITY :
EXISTING CAPACITY :
EXISTING FLOW :
SLUDGE DISPOSAL :
DISCHARGE:
TYPE OF : WASH DOWN WATER DISPOSED OF BY SPRAY
IRRIGATION USING SOLID SET LOW PRESSURE,
LOW TRAJECTORY TYPE SPRINKLERS; SANITARY
WASTE UTILIZES SUBSURFACE DISPOSAL
LOCATION OF :
NPDES PERMIT NO. :
COMMENTS:
PLANNED EXPANSION :
ALTERATION, :
ABANDONMENT, :
OR OTHER CHANGES :
ALLOCATION :
AGREEMENTS :
POLICIES :
FACILITY PLAN :

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME : SHOWELL FARMS, INC.
AREA SERVED : SHOWELL FARMS POULTRY PROCESSING PLANT
OWNED BY : SHOWELL FARMS, INC.
OPERATED BY : SHOWELL FARMS, INC.
POPULATION :
SERVED (EDU) :
UNSERVED (EDU) :
GPCD (EDU) :
CAPACITY (MGD):
DEMAND : .075
PLANNED : .075
PERMITTED (NPDES) :
COLLECTION SYSTEM :
TREATMENT PLANT:
LOCATION (N/E) :
TYPE : EXTENDED AERATION AND ACTIVATED SLUDGE
SITE SIZE (ACRES) :
CAPACITY (MGD):
SITE CAPACITY :
EXISTING CAPACITY : 0.75
EXISTING FLOW : 0.75
SLUDGE DISPOSAL : LAND APPLICATION
DISCHARGE:
TYPE OF : SLOW RATE SPRAY IRRIGATION
LOCATION OF :
NPDES PERMIT NO. :
COMMENTS:
PLANNED EXPANSION :
ALTERATION, :
ABANDONMENT, :
OR OTHER CHANGES :
ALLOCATION :
AGREEMENTS :
POLICIES :
FACILITY PLAN :

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME : **BISHOPVILLE HATCHERY**
AREA SERVED : **SHOWELL GROWERS, INC. HATCHERY FACILITY**
OWNED BY : **SHOWELL GROWERS, INC.**
OPERATED BY : **SHOWELL GROWERS, INC.**
POPULATION :
SERVED (EDU) :
UNSERVED (EDU) :
GPCD (EDU) :
CAPACITY (MGD):
DEMAND : **12,000 GPD**
PLANNED :
PERMITTED (NPDES) :
COLLECTION SYSTEM : **SEWER LINES TO LIFT PUMP**
TREATMENT PLANT:
LOCATION (N/E) :
TYPE : **PACKAGE AERATED TREATMENT PLANT, SAND FILTRATION, SUBSURFACE DISPOSAL BED**
SITE SIZE (ACRES) :
CAPACITY (MGD):
SITE CAPACITY :
EXISTING CAPACITY : **0.02 MGD**
EXISTING FLOW : **0.008 MGD AVERAGE 0.012 MGD PEAK**
SLUDGE DISPOSAL : **LAND APPLICATION**
DISCHARGE:
TYPE OF : **SPRAY IRRIGATION, WITH SUBSURFACE DISPOSAL BEDS TO BE UTILIZED IN INCLEMENT WEATHER**
LOCATION OF :
NPDES PERMIT NO. :
COMMENTS:
PLANNED EXPANSION :
ALTERATION, :
ABANDONMENT, :
OR OTHER CHANGES :
ALLOCATION :
AGREEMENTS :
POLICIES :
FACILITY PLAN :

PLANNED SEWERAGE SYSTEMS

SYSTEM NAME	:	THE LANDINGS		
PRIORITY/CAT	:	S-1		
AREA SERVED	:			
POPULATION SERVED (EDU'S)	:	1995 40	2000 80	2010 121
CONSTRUCTED BY	:	DEVELOPER		
OWNED BY	:	WORCESTER COUNTY COMMISSIONERS		
OPERATED BY	:	DEPARTMENT OF WATER AND WASTEWATER SERVICES		
PLANNED COLLECTION SYSTEM	:			
PLANNED TREATMENT FACILITY TYPE	:			
CAPACITY (MGD)	:	1995	2000	2010
DEMAND PLANNED	:	0.024 .082	.012 .082	0.036 .082
DESIGN	:			
NPDES PERMITTED	:			
DISCHARGE: TYPE LOCATION	:			
ESTIMATED CONSTRUCTION TIMES: BEGIN COMPLETION	:	1995		
COMMENTS: ALLOCATION AGREEMENTS POLICIES FACILITY PLAN	:			

PLANNED SEWERAGE SYSTEMS

SYSTEM NAME : Lighthouse Sound
 PRIORITY/CATEGORY :
 AREA SERVED : Lighthouse Sound
 1998 2000 2010
 POPULATION SERVED : Golf course +/-81 EDUs
 CONSTRUCTED BY : *OEL No. 37 P.F.
 OWNED BY : Worcester County Division Water and Waste Water
 OPERATED BY : Department of Public Works
 PLANNED COLLECTION SYSTEM : Central gravity with pump station and force main

PLANNED TREATMENT FACILITY TYPE : Secondary with filtration

	1998	2000	2010
CAPACITY (MGD)	.058 mgd	.058 mgd	.058 mgd
DEMAND PLANNED	.058 mgd	.058 mgd	.058 mgd
DESIGN	.058 mgd	.058 mgd	.058 mgd

NPDES PERMITTED :

DISCHARGE: Land Application

TYPE : Spray Irrigation

LOCATION : Golf Course

ESTIMATED CONSTRUCTION TIMES: 18 months

BEGIN : Spring, 1998
 COMPLETION : Spring, 2000

COMMENTS:

ALLOCATION :
 AGREEMENTS :
 POLICIES :
 FACILITY PLAN :

*Operating Engineers Local No. 37 Pension Fund (OEL No. 37 P.F.) or Assigns

PLANNED SEWERAGE SYSTEMS

SYSTEM NAME : RIDDLE FARM

PRIORITY/CAT : S-1

AREA SERVED : RIDDLE FARM

POPULATION SERVED	:	1998	2000	2010
(EDU'S)	:	234	375	675

CONSTRUCTED BY : DEVELOPER

OWNED BY : WORCESTER COUNTY COMMISSIONERS

OPERATED BY : DEPARTMENT OF WATER AND WASTEWATER SERVICES

PLANNED COLLECTION SYSTEM : GRAVITY MAINS/PUMP STATION/FORCE MAIN

PLANNED TREATMENT FACILITY TYPE : TERTIARY/LAGOON WITH FILTRATION

CAPACITY (MGD) :

DEMAND	:	0.065	0.103	0.186
PLANNED	:	0.200	0.200	0.200

DESIGN :

NPDES PERMITTED :

DISCHARGE TYPE LOCATION : LAND APPLICATION
: SPRAY IRRIGATION
: GOLF COURSE AND ENHANCED LAND

ESTIMATED CONSTRUCTION TIMES BEGIN : 1998
COMPLETION :

COMMENTS ALLOCATION : 25 EDU'S HAVE BEEN ALLOCATED TO THE PROPOSED 36 HOLE GOLF COURSE. THE REMAINING EDU'S HAVE BEEN ALLOCATED FOR THE PROPOSED RESIDENTIAL DEVELOPMENT.

AGREEMENTS POLICIES FACILITY PLAN :

PLANNED SEWERAGE SYSTEMS

SYSTEM NAME	:	RIVER RUN		
PRIORITY/CAT	:	S-1		
AREA SERVED	:	RIVER RUN RESIDENTIAL PLANNED COMMUNITY		
		1995	2000	2010
POPULATION SERVED (EDU):		50	100	204
CONSTRUCTED BY	:	DEVELOPER		
OWNED BY	:	WORCESTER COUNTY COMMISSIONERS		
OPERATED BY	:	DEPARTMENT OF WATER AND WASTEWATER SERVICES		
PLANNED COLLECTION SYSTEM	:			
PLANNED TREATMENT FACILITY TYPE	:			
		1995	2000	2010
CAPACITY (MGD)	:	.102		
DEMAND PLANNED	:	0.015	0.030	0.06
	:	0.102	0.102	0.102
DESIGN	:			
NPDES PERMITTED	:			
DISCHARGE: TYPE	:	SPRAY IRRIGATION		
LOCATION	:			
ESTIMATED CONSTRUCTION TIMES:				
BEGIN	:	1995		
COMPLETION	:			
COMMENTS:				
ALLOCATION AGREEMENTS	:	INTERIM SUBSURFACE DISPOSAL SYSTEM CURRENTLY SERVING 41 UNITS TO BE ABANDONED ONCE PERMANENT SPRAY IRRIGATION SYSTEM IS COMPLETED		
POLICIES FACILITY PLAN	:			

PLANNED SEWERAGE SYSTEMS

SYSTEM NAME : HOMEPORT
 PRIORITY/CAT : S-1
 AREA SERVED : HOMEPORT PLANNED UNIT DEVELOPMENT, WEST OCEAN CITY
 POPULATION SERVED : 43,460 GPD (164 EDU'S=82 FOR WEST OCEAN CITY+ 82 FOR MYSTIC
 (EDU'S) HARBOUR)
 CONSTRUCTED BY :
 OWNED BY : WORCESTER COUNTY COMMISSIONERS
 OPERATED BY : DEPARTMENT OF WATER AND WASTEWATER SERVICES
 PLANNED COLLECTION SYSTEM : INTERNAL - COMBINATION OF GRAVITY SEWERS WITH PUMPING STATIONS AND FORCE MAIN; EXTERNAL - PUMPING STATIONS WITH FORCE MAINS TO OCEAN CITY WASTEWATER TREATMENT PLANT AND TO MYSTIC HARBOUR WASTEWATER TREATMENT PLANT.
 PLANNED TREATMENT FACILITY :
 TYPE : OCEAN CITY TREATMENT PLANT/MYSTIC HARBOUR TREATMENT PLANT
 CAPACITY (MGD) :
 DEMAND : 43,460 GPD
 PLANNED : 43,460 GPD
 DESIGN :
 NPDES PERMITTED : 90-DP-0596 AND 86-D0-2273
 DISCHARGE :
 TYPE : OCEAN OUTFALL AND SHALLOW WELL INJECTION
 LOCATION :
 ESTIMATED CONSTRUCTION TIMES :
 BEGIN :
 COMPLETION :
 COMMENTS :
 ALLOCATION :
 AGREEMENTS :SEWER SERVICE FOR 20,500 GPD (82 EDU'S) IS BY AGREEMENT WITH THE DEVELOPERS OF MYSTIC HARBOUR. FOR THOSE PORTIONS OF THE PROJECT LOCATED WITHIN THE WEST OCEAN CITY SUB-SERVICE AREA OF WORCESTER COUNTY SANITARY DISTRICT NO. 1, APPROXIMATELY 22,960 GPD (82 EDU'S) OF PUBLIC SEWER SERVICE IS TO BE PROVIDED BY THE WORCESTER COUNTY SANITARY COMMISSION'S EXISTING SYSTEM.
 POLICIES :
 FACILITY PLAN :

PLANNED SEWERAGE SYSTEMS

SYSTEM NAME : CEDAR KNOLL
PRIORITY/CAT : S-1
AREA SERVED : CEDAR KNOLL SUBDIVISION
POPULATION SERVED : 8 SINGLE-FAMILY RESIDENTIAL LOTS MAXIMUM
CONSTRUCTED BY :
OWNED BY : CEDAR KNOLL ASSOCIATION
OPERATED BY : CEDAR KNOLL ASSOCIATION
PLANNED COLLECTION SYSTEM : INDIVIDUAL PUMPING STATIONS AND SMALL DIAMETER FORCE MAINS
PLANNED TREATMENT FACILITY TYPE : INDIVIDUAL SEPTIC TANKS (PER LOT) WITH CENTRAL (COMMUNITY) SUBSURFACE DISPOSAL
CAPACITY (MGD) : 4,800 GALLONS DAILY FLOW
DEMAND PLANNED :
DESIGN :
NPDES PERMITTED :
DISCHARGE: TYPE : ON-SITE SUBSURFACE DISPOSAL THROUGH LOW PRESSURE DOSING
LOCATION :
ESTIMATED CONSTRUCTION TIMES:
BEGIN :
COMPLETION :
COMMENTS:
ALLOCATION :
AGREEMENTS :
POLICIES :
FACILITY PLAN :

PLANNED SEWERAGE SYSTEMS

SYSTEM NAME : SEAPOINTE
PRIORITY/CAT : S-1
AREA SERVED : SEAPOINTE SUBDIVISION

POPULATION SERVED : 8 SINGLE-FAMILY LOTS AND AMENITIES
CONSTRUCTED BY :
OWNED BY : BRITTINGHAM TRUSTEES
OPERATED BY : BRITTINGHAM TRUSTEES
PLANNED COLLECTION SYSTEM : GRAVITY
PLANNED TREATMENT FACILITY TYPE : SEPTIC TANKS AND SAND MOUNDS

CAPACITY (MGD) : 4,360 GPD
DEMAND PLANNED :
DESIGN :
NPDES PERMITTED :
DISCHARGE: TYPE : SAND MOUNDS
LOCATION : ON-SITE
ESTIMATED CONSTRUCTION TIMES:
BEGIN :
COMPLETION :
COMMENTS:
ALLOCATION :
AGREEMENTS :
POLICIES :
FACILITY PLAN :

PLANNED SEWERAGE SYSTEMS

SYSTEM NAME : OCEAN CITY AIRPORT
PRIORITY/CAT : S-1
AREA SERVED : OCEAN CITY AIRPORT

POPULATION SERVED :
CONSTRUCTED BY :
OWNED BY : MAYOR AND COUNCIL OF OCEAN CITY
OPERATED BY : MAYOR AND COUNCIL OF OCEAN CITY
PLANNED COLLECTION SYSTEM : LIFT STATION WITH FORCE MAIN
PLANNED TREATMENT FACILITY TYPE : PRIMARY (SEPTIC TANKS)

CAPACITY (MGD) : 4,500 GPD
DEMAND PLANNED :
DESIGN :
NPDES PERMITTED :
DISCHARGE: TYPE : SAND MOUNDS
LOCATION :

ESTIMATED CONSTRUCTION TIMES:
BEGIN :
COMPLETION :

COMMENTS:
ALLOCATION :
AGREEMENTS :
POLICIES :
FACILITY PLAN :

PLANNED SEWERAGE SYSTEMS

SYSTEM NAME	:	TOWN OF SNOW HILL		
PRIORITY/CAT	:	S-1		
AREA SERVED	:	EAST MARKET STREET		
POPULATION SERVED (EDU'S)	:	1992	2000	2010
		---	30 EDU	30 EDU
CONSTRUCTED BY	:	NOT YET KNOWN		
OWNED BY	:	TOWN OF SNOW HILL		
OPERATED BY	:	TOWN OF SNOW HILL		
PLANNED COLLECTION SYSTEM	:	3" FORCE MAIN BEGINNING AT THE EVERGREEN TERRACE PUMP STATION AND TERMINATING AT THE PROPOSED MCDONALD'S RESTAURANT.		
PLANNED TREATMENT FACILITY	:			
TYPE	:	N/A		
CAPACITY (MGD)	:	1995	2000	2010
		N/A	N/A	N/A
DEMAND PLANNED	:	N/A		
DESIGN	:	N/A		
NPDES PERMITTED	:	N/A		
DISCHARGE TYPE	:	N/A		
LOCATION	:	N/A		
ESTIMATED CONSTRUCTION TIMES	:			
BEGIN	:	1995		
COMPLETION	:	1995		
COMMENTS	:			
ALLOCATION	:			
AGREEMENTS	:			
POLICIES	:			
FACILITY PLAN	:			

TABLES

SEWERAGE SYSTEMS

**TABLE 4-1
SEWERAGE DEMANDS AND PLANNED CAPACITY FOR EXISTING AND/OR PLANNED PUBLIC AND PRIVATE
COMMUNITY AND MULTI-USE SEWERAGE SYSTEMS**

FIG No.	SEWERAGE SERVICE AREA PRIVATELY OWNED MULTI-USE	PRESENT-1992					
		POPULATION			GPCD (GALS)	CAPACITY (mgd)	
		TOTAL	SERVED	UNSERVED		DEMAND	PLANNED
4-1	Riverview MHP	66 EDU	66 EDU	0	300/EDU	0.0198	0.0198
4-2	Bali HI RV Park	178 EDU	178 EDU	0	140/EDU	0.025	0.025
4-5	Pine Shores Golf Course			0		0.0075	0.0075
4-5	Pines Plaza			0		0.011	0.011
4-7	Bay Club Golf Course			0		0.005	0.005
4-7	Berlin Shopping Center			0		0.004	0.004
4-7	Beach Club Golf Course			0		0.005	0.005
4-7	Sunset Lake MHP	34 EDU	34 EDU	0	300/EDU	0.018	0.018
4-8	Delmarva Downs			0		0.010	0.010
4-8	McDonalds/Route 50			0		0.004	0.004
4-16	Frontier Town	584 camp sites	584 camp sites	0	90/Site	0.053	0.053
4-17	Castaways Trailer Park	42 EDU	42 EDU	0	300/EDU	0.013	0.013
4-17	Eagle's Landing Golf Course			0		0.005	0.005
4-17	Eagle's Nest Trailer Park	337 EDU	337 EDU	0	250/trailer 140/Site	0.058	0.058
4-19	Ocean City Golf & Yacht Club			0		0.010	0.010
4-25	Nassawango Golf Course			0		0.005	0.005
4-29	Budget Motel			0		0.019	0.019
4-29	Quality Court Motel			0		0.011	0.015
4-29	Pocomoke Pure Oil Truck Stop			0		0.006	0.006

TABLE 4-2
 PROJECTED SEWERAGE DEMANDS AND PLANNED CAPACITIES FOR COMMUNITY
 AND MULTI-USE SEWERAGE SYSTEMS

FIG No.	SEWERAGE SERVICE AREA COMMUNITY	GPCD gals EDU (*)	1995				2000				2010			
			POPULATION EDU (*)		CAPACITY (MGD)		POPULATION EDU (*)		CAPACITY (MGD)		POPULATION EDU (*)		CAPACITY (MGD)	
			TOTAL	UNSERVED	DEMAND	PLANNED	TOTAL	UNSERVED	DEMAND	PLANNED	TOTAL	UNSERVED	DEMAND	PLANNED
4-7	Berlin	120	3060	0	0.4	0.6	3500	0	0.42	0.6	5100	0	0.61	0.6
4-18	Newark	230 EDU	69*	0	0.016	0.07	74*	0	0.017	0.070	84	0	0.019	0.070
4-22	Snow Hill	295	2347	0	0.692	2.0	2505	0	0.738	2.0	2841	0	0.838	2.0
4-27	Pocomoke City	263	4055	0	1.06	1.2	4327	0	1.13	1.2	4907	0	1.29	1.8
4-10	Ocean City	70	192,500	0	13.48	14.0	205,000	0	14.35	16.0	225,000	0	15.75	16.0
4-11	Ocean City and West Ocean City													
4-12	Ocean City and West Ocean City													
4-13	Ocean City and West Ocean City													
4-14	Ocean City and West Ocean City													

**TABLE 4-2
PROJECTED SEWERAGE DEMANDS AND PLANNED CAPACITIES FOR COMMUNITY
AND MULTI-USE SEWERAGE SYSTEMS**

FIG No.	SEWERAGE SERVICE AREA PRIVATELY OWNED MULTI-USE	GPCD gals EDU (*)	1995				2000				2010			
			POPULATION EDU (*)		CAPACITY (MGD)		POPULATION EDU (*)		CAPACITY (MGD)		POPULATION EDU (*)		CAPACITY (MGD)	
			TOTAL	UNSERVED	DEMAND	PLANNED	TOTAL	UNSERVED	DEMAND	PLANNED	TOTAL	UNSERVED	DEMAND	PLANNED
4-1	Riverview MHP	300/EDU	66*	0	0.0198	0.0198	66*	0	0.0198	0.0198	66*	0	0.0198	0.0198
4-2	Bali HI RV Park	140/EDU	178*	0	0.025	0.025	178*	0	0.025	0.025	178*	0	0.025	0.025
4-5	Pine Shores Golf Course			0	0.0075	0.0075		0	0.0075	0.0075		0	0.0075	0.0075
4-5	Pines Plaza			0	0.011	0.011		0	0.011	0.011		0	0.011	0.011
4-7	Bay Club Golf Course			0	0.005	0.005		0	0.005	0.005		0	0.005	0.005
4-7	Berlin Shopping Center			0	0.004	0.004		0	0.004	0.004		0	0.004	0.004
4-7	Beach Club Golf Course			0	0.005	0.005		0	0.005	0.005		0	0.005	0.005
4-7	Sunset Lakes MHP	300/EDU	34*	0	0.018	0.018	34*	0	0.018	0.018	34*	0	0.018	0.018
4-8	Delmarva Downs			0	0.010	0.010		0	0.010	0.010		0	0.010	0.010
4-8	McDonalds/Rt. 50			0	0.004	0.004		0	0.004	0.004		0	0.004	0.004
4-16	Frontier Town	90/SITE	584 sites	0	0.053	0.053	584 sites	0	0.053	0.053	584 SITES	0	0.053	0.053
4-17	Castaways Trailer Park	300/EDU	42*	0	0.013	0.013	42*	0	0.013	0.013	42*	0	0.013	0.013
4-17	Eagles Landing Golf Crs			0	0.005	0.005		0	0.005	0.005		0	0.005	0.005
4-17	Eagles Nest Trailer Park(70trrlrs)(140cmpr)	250/140	337*	0	0.058	0.058	337*	0	0.058	0.058	337*	0	0.058	0.058
4-19	O.C. Golf & Yacht Cl.			0	0.010	0.010		0	0.010	0.010		0	0.010	0.010
4-25	Nassawango Golf Course			0	0.005	0.005		0	0.005	0.005		0	0.005	0.005
4-29	Budget Motel			0	0.019	0.019		0	0.019	0.019		0	0.019	0.019
4-29	Quality Courts Motel			0	0.015	0.015		0	0.015	0.015		0	0.015	0.015
4-29	Pocomoke Pure Oil Truck Stop			0	0.006	0.006		0	0.006	0.006		0	0.006	0.006
4-31	A. Reggie Mariner Mariner's Country Down	300*	36*	0	0.011	0.011	36*	0	0.011	0.011	36*	0	0.011	0.011

TABLE 4-3
INVENTORY OF EXISTING PUBLIC AND/OR PRIVATE COMMUNITY
AND OTHER MULTI-USE SEWAGE TREATMENT PLANTS

FIG. No.	OWNER AND OPERATING AGENCY Community	TYPE OF TREATMENT	PLANT SITE			MAX. SITE CAPACITY (mgd)		EXISTING CONDITIONS			PLANNED EXPANSION OR EXPECTED ABANDONMENT DATE IF INTERIM	
			COORDINATE LOCATION	SIZE (ACRES)		POINT OF DISCHARGE	SECONDARY	ADVANCED	CAPACITY (mgd)	FLOW (mgd)		
				OCCUPIED	VACANT					AVERAGE		PEAK
4-1	Riverview MHP	Septic Tanks	N 220,792 E 1,319,540			Sub-Surface	N/A	N/A	.0198			None
4-1	Showell Poultry	Extended Aeration	N 230,000 E 1,317,286			On-Ground			.0010		.001	
4-2	Bali Hi RV Park	Septic Tanks	N 220,000 E 1,335,000			Sub-Surface	N/A	N/A	.0250		.025	None
4-4	Perdue Hatchery	(Domestic) Septic Tank	N 213,432 E 1,311,531			On Ground & Careys Branch						
4-4	Perdue Hatchery	Spray Irrigation	N 213,432 E 1,311,531			On Ground			.005			
4-4	Showell Poultry	Aerated Lagoons	N 210,264 E 1,311,531			Shingle Lndg. Prong						
4-5	Pine Shores Golf Course	Septic Tank	N 209,000 E 1,321,000			Sub-Surface	N/A	N/A	.005			0.075
4-5	Pines Plaza	Secondary	N 205,000 E 1,326,000			Sub-Surface	.019	N/A	.011		.011	None
4-7	Berlin Shopping Center	Extended Aeration	N 190,100 E 1,300,000						.004			None
4-7	Chesapeake Foods	Aerated Lagoons	N 187,709 E 1,311,003			Trappe Creek					.750	
4-7	Sunset Lakes MHP	Septic Tanks	N 175,000 E 1,316,000			Sub-Surface	N/A	N/A	.0102			None
4-8	Delmarva Downs	Septic Tanks	N 193,500 E 1,326,700			Sub-Surface	N/A	N/A	.0100		.010	None
4-8	McDonalds/ Rt. 50	Septic Tanks	N 190,000 E 1,310,000			Sub-Surface	N/A	N/A	.0040		.004	None
4-16	Frontier Town	Septic Tanks	N 172,587 E 1,331,667			Sub-Surface	N/A	N/A	.0530		.053	None

TABLE 4-3
 INVENTORY OF EXISTING PUBLIC AND/OR PRIVATE COMMUNITY
 AND OTHER MULTI-USE SEWAGE TREATMENT PLANTS

FIG. No.	OWNER AND OPERATING AGENCY Community	TYPE OF TREATMENT	PLANT SITE			MAX. SITE CAPACITY (mgd)		EXISTING CONDITIONS			PLANNED EXPANSION OR EXPECTED ABANDONMENT DATE IF INTERIM	
			COORDINATE LOCATION	SIZE (ACRES)		POINT OF DISCHARGE	SECONDARY	ADVANCED	CAPACITY (mgd)	FLOW (mgd)		
				OCCUPIED	VACANT					AVERAGE		PEAK
4-17	Castaways Trailer Park	Septic Tanks	N 176,230 E 1,339,821			Sub-Surface	N/A	N/A	.013		.013	None
4-17	Eagles Nest Trailer Park (70 Trailers) (140 Campsites)	Septic Tanks	N 176,864 E 1,339,504			Sub-Surface	N/A	N/A	.058		.058	None
4-19	O.C. Golf Course & Yacht Club	Septic Tanks	N 155,755 E 1,323,062			Sub-Surface	N/A	N/A	.010			

TABLE 4-3
 INVENTORY OF EXISTING PUBLIC AND/OR PRIVATE COMMUNITY
 AND OTHER MULTI-USE SEWAGE TREATMENT PLANTS

FIG. No.	OWNER AND OPERATING AGENCY Community	TYPE OF TREATMENT	PLANT SITE				MAX. SITE CAPACITY (mgd)		EXISTING CONDITIONS			PLANNED EXPANSION OR EXPECTED ABANDONMENT DATE IF INTERIM
			COORDINATE LOCATION	SIZE (ACRES)		POINT OF DISCHARGE	SECONDARY	ADVANCED	CAPACITY (mgd)	FLOW (mgd)		
				OCCUPIED	VACANT					AVERAGE	PEAK	
4-22	Holly Farms Poultry	Septic Tanks	N 133,170 E 1,258,420			Ground & Pocomoke River						None
4-23	Glad Mar Dairy Farm	Spray Irrigation	N 106,758 E 1,222,640			On Ground						
4-29	Budget Motel	Secondary	N 75,280 E 1,220,370	0.5	0	Wagram Creek	.020	.020	.019			None
4-29	Pocomoke Pure Oil Truck Stop	Secondary	N 71,742 E 1,220,000	0.5	0	Wagram Creek	.006	.006	.006			None
4-29	Quality Courts Motel	Secondary	N 74,963 E 1,219,820	0.5	0	Wagram Creek	.015	.015	.015			None
4-30	Greenback Cannery	Spray Irrigation	N 70,422 E 1,264,118	2.0		On Ground		.015			.007	None
	Eagles Landing Golf Course	Secondary							.005	.005		None
	Beach Club Golf Course	Secondary							.005	.005		None
	Bay Club Golf Course	Secondary							.005	.005		None

TABLE 4-3
INVENTORY OF EXISTING PUBLIC AND/OR PRIVATE COMMUNITY
AND OTHER MULTI-USE SEWAGE TREATMENT PLANTS

FIG. No.	OWNER AND OPERATING AGENCY Community	TYPE OF TREATMENT	PLANT SITE			MAX. SITE CAPACITY (mgd)		EXISTING CONDITIONS			PLANNED EXPANSION OR EXPECTED ABANDONMENT DATE IF INTERIM	
			COORDINATE LOCATION	SIZE (ACRES)		POINT OF DISCHARGE	SECONDARY	ADVANCED	CAPACITY (mgd)	FLOW (mgd)		
				OCCUPIED	VACANT					AVERAGE		PEAK
4-5	Showell Elementary School	Extended Aeration	N 208,290 E 1,318,395			Sub-Surface			.011		.0067	
4-7	Stephen Decatur High School	Septic Tanks	N 190,158 E 1,318,870			Sub-Surface	N/A	N/A	.028			None
4-19	Assateague Island Nat'l Seashore H.Q.	Tertiary	N 156,336 E 1,330,264			Sinepuxent Bay	.012	.012	.012	.001	.005	
4-21	Assateague Island Nat'l Seashore	Septic Tanks	N 141,425 E 1,330,792			Sub-Surface	N/A	N/A	.017			
4-21	Assateague Island State Park	Septic Tanks	N 146,705 E 1,332,957			Sub-Surface	N/A	N/A	.030			
4-24	Milburn Landing SP	Septic Tanks	N 110,000 E 1,233,696			Sub-Surface	N/A	N/A	.006			
4-25	Shad Landing S.P.	Septic Tanks	N 115,122 E 1,249,081			Sub-Surface	N/A	N/A	.007			
	Bay Club Golf Course	Septic Tanks				Sub-Surface			.005			
	Beach Club Golf Course	Spray Irrig.				Ground			.005			
	Eagles Landing	Spray Irrig.				Ground			.005			

TABLE 4-4
INVENTORY OF SEWERAGE PROBLEM AREAS

FIGURE NO:	SEWERAGE SERVICE AREA	POPULATION	AREA (ACRES)	NATURE OF PROBLEM	PLANNED CORRECTION DATE AND ACTION
4-1	SHOWELL POULTRY			FUTURE PERMIT LIMITATIONS WILL REQUIRE ADD'L TREATMENT BEYOND EX. CAPACITY.	
4-7	BERLIN WWTP	2656		PLANT NOT MEETING PERMIT LIMITATIONS	SWITCH TO SPRAY IRRIGATION - PLANNED 1994
4-7	CHESAPEAKE FOODS			FUTURE PERMIT LIMITATIONS WILL REQUIRE ADD'L TREATMENT BEYOND EX. CAPACITY.	
4-7	BERLIN RT. 346			HOMES CLOSE TOGETHER. NO ROOM FOR SYSTEM REPLACEMENT.	INCORPORATED INTO TOWN AND EXTEND MUNICIPAL SERVICE. PLANNED 1992.
4-26	GIRDLETREE			EX. SEPTIC SYSTEMS ARE AT FULL CAPACITY-NO ROOM FOR REPLACEMENT-SOME PRIVIES.	
4-27	POCOMOKE/PITT CIRCLE RO. AREA			EX. SEPTIC SYSTEMS ARE AT FULL CAPACITY-NO ROOM FOR REPLACEMENT-SOME PRIVIES.	THIS AREA IS OUTSIDE THE CORPORATE LIMITS OF POCOMOKE CITY.
4-28	STOCKTON			EX. SEPTIC SYSTEMS ARE AT FULL CAPACITY-NO ROOM FOR REPLACEMENT-SOME PRIVIES.	

TAB. 2-5
WATER QUALITY PROBLEMS DUE TO STORM DRAINAGE OUTFALLS AND NON-POINT SOURCES

FIGURE NO:	SEWERAGE SERVICE AREA	NATURE OF PROBLEM	REACH AFFECTED
2-8	ST. MARTINS RIVER	AREAS CLOSED TO SHELLFISHING	SEE FIGURE 2-8
2-8	TURVILLE CREEK	AREAS CLOSED TO SHELLFISHING	SEE FIGURE 2-8
2-8	HERRING CREEK	AREAS CLOSED TO SHELLFISHING	SEE FIGURE 2-8
2-8	OCEAN CITY COMMERCIAL HARBOR	AREAS CLOSED TO SHELLFISHING	SEE FIGURE 2-8

TABLE 4-7
 MARINAS MAINTAINING 10 SLIP OR MORE
 WORCESTER COUNTY, MARYLAND
 EFFECTIVE DATE: APRIL 15, 1990

NAME	LOCATION	SEWAGE PUMPOUT FACILITIES
54th Street Marina	Ocean City	None
Advanced Marina	Ocean City	None
Baha Marine, Inc.	Ocean City	None
Bayside Boatel	Ocean City	None
Barnacle Bill's Marina	Ocean City	None
Captain Bill Bunting	Ocean City	None
Fisherman's Marina	Ocean City	None
Hemphill's Dock	St. Martins Neck	None
O.C. Fishing Center	Ocean City	None
O.D. Marina	Ocean City	None
O.C. Yacht Club	Ocean City	None
Ocean Pines Marina	Ocean Pines	Yes/\$10 fee for non-members
Pocomoke City Marina	Pocomoke	Yes
Shad Landing Marina	Shad Landing State Park	Yes / No Fee
Shanty Town Marina	Ocean City	None
West Bay Marine	West Ocean City	None

SOURCE: Maryland Department of Natural Resources Boating Administration

Discharge Permits in County Order Active Status -- Industrials Only

RECYCLED ENVIRONMENTAL

GILL BURNING FORMS

NAME	CITY	ZIP	CNTY PERMIT	NPDES Number	ID	STATUS	Status Date	Expire Date	S I G W
2 BARRETT CHEVROLET, OLDS INC.	BERLIN	21811	WRCS 87-DP-2392		M00023547640	ISSUED	07/26/89	07/26/94	G I
3 BLADES MATERIALS, INC.	POCOMOKE CITY	21851	90-DP-0045		MOPDP9840045	ISSUED	01/04/91	01/04/96	G I
4 C & R SEAFOOD	WEST OCEAN CITY		87-DP-0282	M00024422	MOPDP9870282	ISSUED	01/28/88	01/28/93	S I
5 COOY'S CITGO	SNOW HILL	21863	88-DP-2493	M00063231	MOPDP9882493	ISSUED	08/10/89	08/10/93	S I
6 DELMARVA OIL, INC.	BERLIN	21811	90-DP-2812A	M00065251	MOPDP9902812	APPLICATION REVIEW	05/06/92	03/20/96	S I
	POCOMOKE	21851	92-DP-0962	M00020591	MOPDP9870962	APPLICATION REVIEW	09/24/91		S I
7 DISTRICT COURT BUILDING	SNOW HILL	21863	87-DP-0962	M00020591		ISSUED/REFILED	09/24/91	02/24/92	S I
8			91-DP-2928		MOPDP9912928	ISSUED	09/17/92	09/17/97	G I
9 FROSTROM & SONS, INC.	POCOMOKE CITY	21851	88-DP-2481		MOPDP9882481	ISSUED	08/15/89	08/15/94	G I
10 HOLLY FARMS FOODS, INC.	SNOW HILL	21863	87-DP-0956		MOPDP9870956	ISSUED	04/15/88	04/15/93	G I
11 HOLLY FARMS FOODS, INCORPORATED	SNOW HILL	21863	88-DP-1288	M00053643	MOPDP9881288	ISSUED	02/15/89	02/15/94	S I
12 HUDSON FOODS, INC.	BERLIN	21801	90-DP-0375	M00002071	M00063197958	ISSUED	07/30/91	07/30/96	S I
13 JONES, RICHARD E.	POCOMOKE		88-DP-1692		MOPDP9881692	ISSUED	12/26/89	12/26/94	G I
14 KARY ASPHALT, INC.	BISHOPVILLE	21813	91-DP-2881		MOPDP9912881	ISSUED	01/27/92	01/27/97	G I
15 KELLY FOODS CORPORATION	BERLIN	21811	91-DP-0266	M00001309	MOPDP9820266	APPLICATION REVIEW	05/13/91		S I
			82-DP-0266	M00001309		ISSUED/REFILED	05/13/91	11/10/91	S I
16 MASSEY, CARLTON, INC.	POCOMOKE CITY	21851	87-DP-1765		MOPDP9871765	ISSUED	12/10/87	12/10/92	G I
17 MID-ATLANTIC FOODS, INC.	POCOMOKE CITY	21851	88-DP-2091A	M00060429	MOPDP9882091	ISSUED	02/21/92	11/03/93	S I
18 MIDDLE STATES HOLDING CO-COKESBURY FARM	POCOMOKE		92-DP-2265		MOPDP9882265	APPLICATION REVIEW	12/04/91		G I
			85-DP-2265			ISSUED/REFILED	12/04/91	02/20/92	G I
19 MIDDLE STATES HOLDING CO-PUBLIC LND.FARM	SNOW HILL	21863	92-DP-2268		MOPDP9882268	APPLICATION REVIEW	12/04/91		G I
			86-DP-2268			ISSUED/REFILED	12/04/91	02/20/92	G I
20 MIDDLE STATES HOLDING CO-SNOW HILL FARM	SNOW HILL	21863	92-DP-2269		MOPDP9882269	APPLICATION REVIEW	12/04/91		G I
			86-DP-2269			ISSUED/REFILED	12/04/91	02/20/92	S I
21 MIDDLE STATES HOLDING CO-WHITING FARM	BERLIN	21811	92-DP-2136		MOPDP9842136	APPLICATION REVIEW	12/04/91		G I
			84-DP-2136			ISSUED/REFILED	12/04/91	02/20/92	G I
22 MIDWAY CHEV-OLDS-CAD-PONT-BUICK, INC.	POCOMOKE CITY	21851	91-DP-0049		M00036327962	BEING PROCESSED	12/28/90		G I
23 MOORE BUSINESS FORMS, INC.	SNOW HILL	21863	88-DP-1321	M00054011	M00022679963	ISSUED	03/10/89	03/10/94	S I
24 PERDUE FARMS INCORPORATED	BERLIN	21811	91-DP-2916	M00065951	M00000765537	APPLICATION REVIEW	05/31/91		S I
	SHOWELL	21862	88-DP-2555A		MOPDP9882555	ISSUED	05/28/92	10/20/93	S I
25 POCOMOKE LANDFILL	POCOMOKE		87-DP-2050		MOPDP9872050	ISSUED	12/22/87	12/22/92	G I
26 PUBLIC LANDING HARBOR MARINA & SEAFOOD	PUBLIC LANDING		89-DP-2056	M00060178	MOPDP9892056	ISSUED	03/27/89	03/27/94	S I
27 SANOFI ANIMAL HEALTH, INC.	BERLIN	21811	90-DP-0369A		MOPDP9880369	ISSUED	09/11/91	08/24/95	G I
28 SAVAGE ICE CO./T/A BERLIN ICE CO.	BERLIN	21811	88-DP-1415	M00055107	MOPDP9881415	ISSUED	08/25/88	08/25/93	S I
29 SCARBOROUGH OIL CO., INC.	SNOW HILL	21863	93-DP-2340	M00062227	MOPDP9872340	APPLICATION REVIEW	07/24/92		S I
			87-DP-2340	M00062227		ISSUED/REFILED	07/24/92	02/06/92	S I
30 SHERWOOD ON THE SHORE	BERLIN	21811	91-DP-2474	M00065790	MOPDP9882474	BEING PROCESSED	05/01/91		S I
			88-DP-2474			ISSUED/REFILED	03/05/91	06/16/93	G I
31 SHORE DISPOSAL, INC.	POCOMOKE	21851	92-DP-2933		MOPDP9922933	APPLICATION REVIEW	07/24/91		G I
32 SHOWELL FARMS, INC.	SHOWELL	21862	89-DP-0051A	M00000965	M00980408884	APPLICATION REVIEW	09/20/91	01/15/96	S I
	BISHOPVILLE	21813	92-DP-0814	M00050849	MOPDP9870814	APPLICATION REVIEW	12/23/91		S I
			89-DP-2624	M00063860	MOPDP9892624	ISSUED	04/28/89	04/28/94	S I
			87-DP-0814A	M00050849	MOPDP9870814	ISSUED/REFILED	12/23/91	06/30/92	S I
33 SHOWELL FARMS, INC. - SHOWELL MILLING	BISHOP		90-DP-2219	M00061336	MOPDP9882219	ISSUED	07/30/90	08/30/95	S I
34 STATE HIGHWAY ADMIN.	SNOW HILL	21863	88-DP-2496	M00063258	MOPDP9882496	ISSUED	07/22/88	07/22/93	S I
35 TRI-STATE OIL CO.	SNOW HILL	21863	92-DP-1755	M00057819	MOPDP9861755	ISSUED	04/29/92	04/29/97	S I
36 WORCESTER COUNTY LANDFILL-SNOW HILL	SNOW HILL	21863	89-DP-2664		MOPDP9892664	ISSUED	10/27/89	10/27/94	G I
37 WORCESTER COUNTY LANDFILL-SNOW HILL SITE	SNOW HILL	21863	90-DP-2162		MOPDP9882162	ISSUED	06/13/90	06/13/95	S I

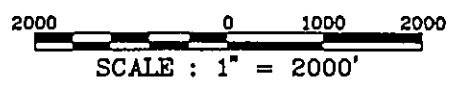
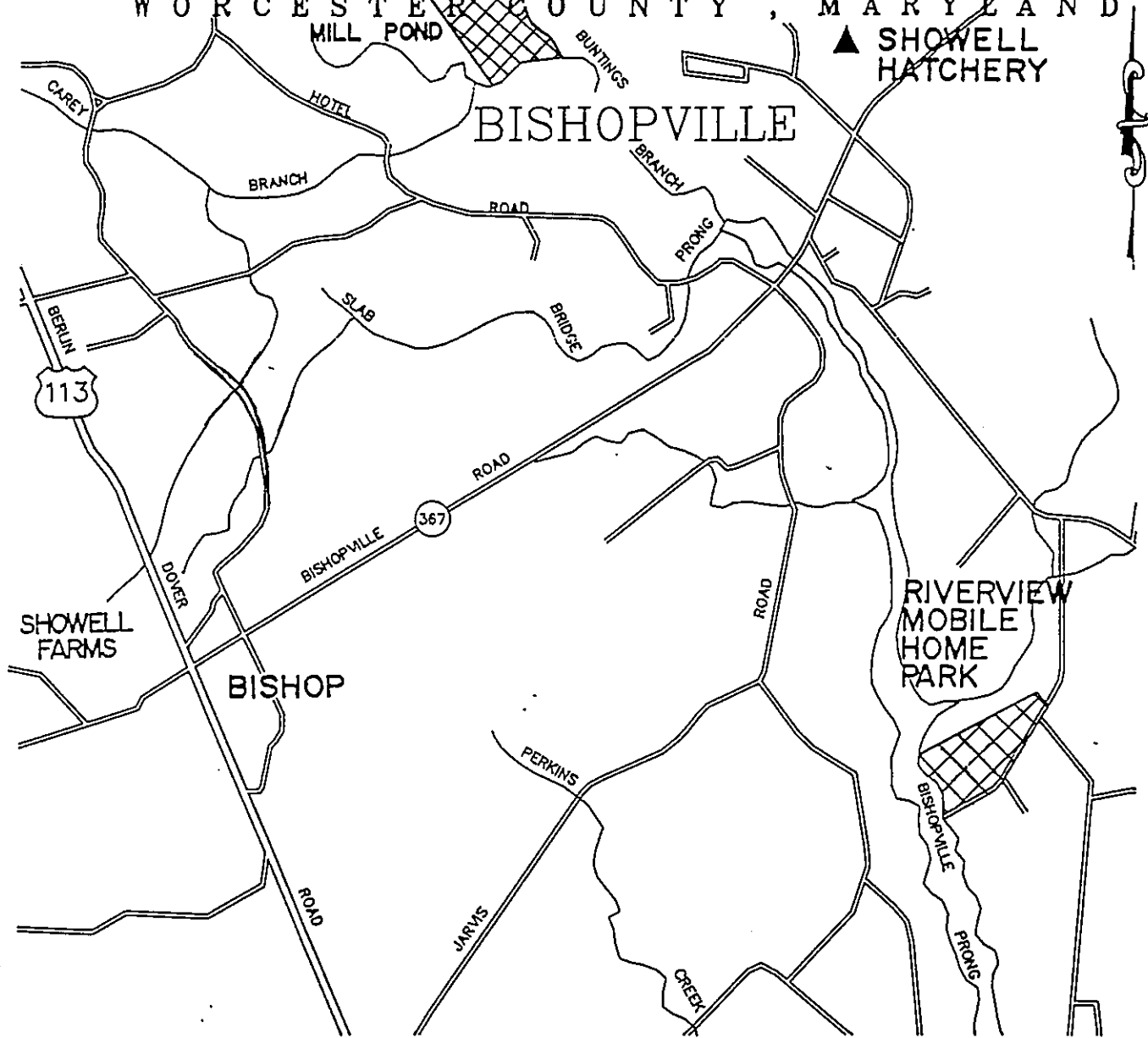
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Record#	FACILITY	ST_DP_NO	FED_DP_NO	ISSUE_DATE	EXPIR_DATE	DESIGN_FLO	FLOW
28	Berlin Shp Cnt	88-DP-0899	MD0024911	06/01/89	05/31/94	0.0040	0.0040
29	Berlin WWTP	91-DP-0669	MD0022632	01/01/86	12/31/90	0.6000	0.2500
301	Newark WWTP	83-DP-0141	MD0020632	12/01/88	11/30/93	0.0700	0.0700
311	Ocean City	90-DP-0596	MD0020044	07/01/90	06/30/95	14.0000	14.0000
313	Ocean Pines	91-DP-0708	MD0023477	05/01/92	04/30/97	1.0000	1.5000
345	Pocomoke	91-DP-0674	MD0022551	07/01/91	06/30/96	1.4000	1.2000
347	Pocomoke Tr/St	92-DP-1356	MD0054330	01/01/93	12/31/97	0.0030	0.0030
397	Snow Hill WWTP	90-DP-0717	MD0022764	08/01/90	07/31/95	0.5000	0.5000
435	Budget Motel	92-DP-0767	MD0023027	03/01/87	12/31/91	0.0190	0.0190
444	Assateague I.NS	92-DP-2530	MD0021091	10/20/87	10/20/92	0.0170	0.0168


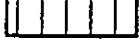
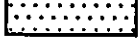
MAPS

SEWERAGE SERVICE
AREAS









SUSSEX COUNTY, DELAWARE
 WORCESTER COUNTY, MARYLAND



CATEGORIES


-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS

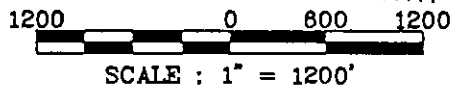
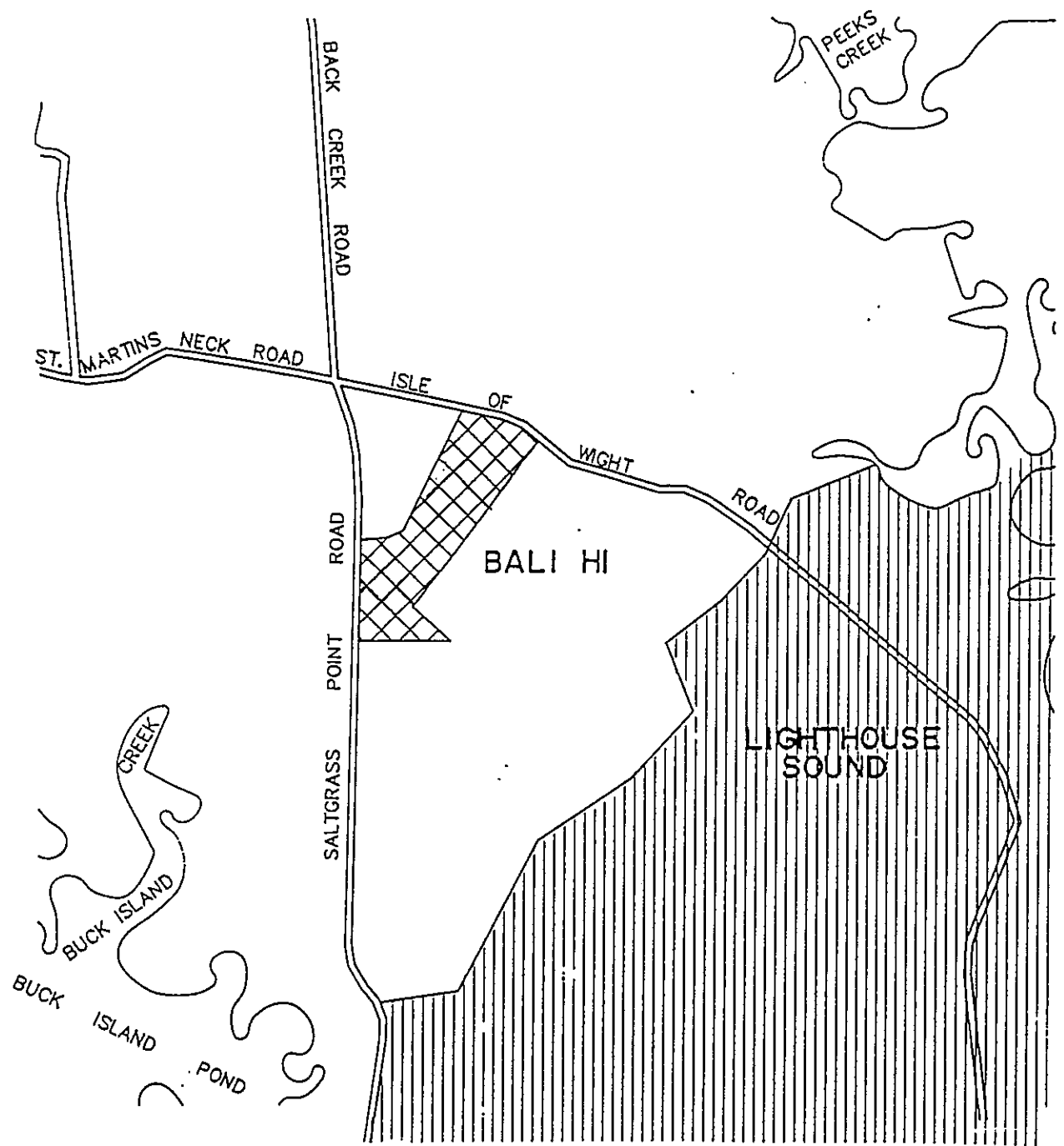
LEGEND

ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT		
SEWAGE PUMPING STATION		
FORCE MAIN		
INTERCEPTOR & OUTFALL		




**BISHOPVILLE & ENVIRONS
 SEWERAGE SERVICE AREA**

**WORCESTER COUNTY
 COMPREHENSIVE WATER
 AND SEWERAGE PLAN**

 CONSULTING ENGINEERS AND SURVEYORS
Andrews, Miller & Assoc., Inc.
 508 MARYLAND AVENUE • CAMBRIDGE, MARYLAND • 21613
 PHONE (301) 228 - 7117



CATEGORIES


-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS

LEGEND

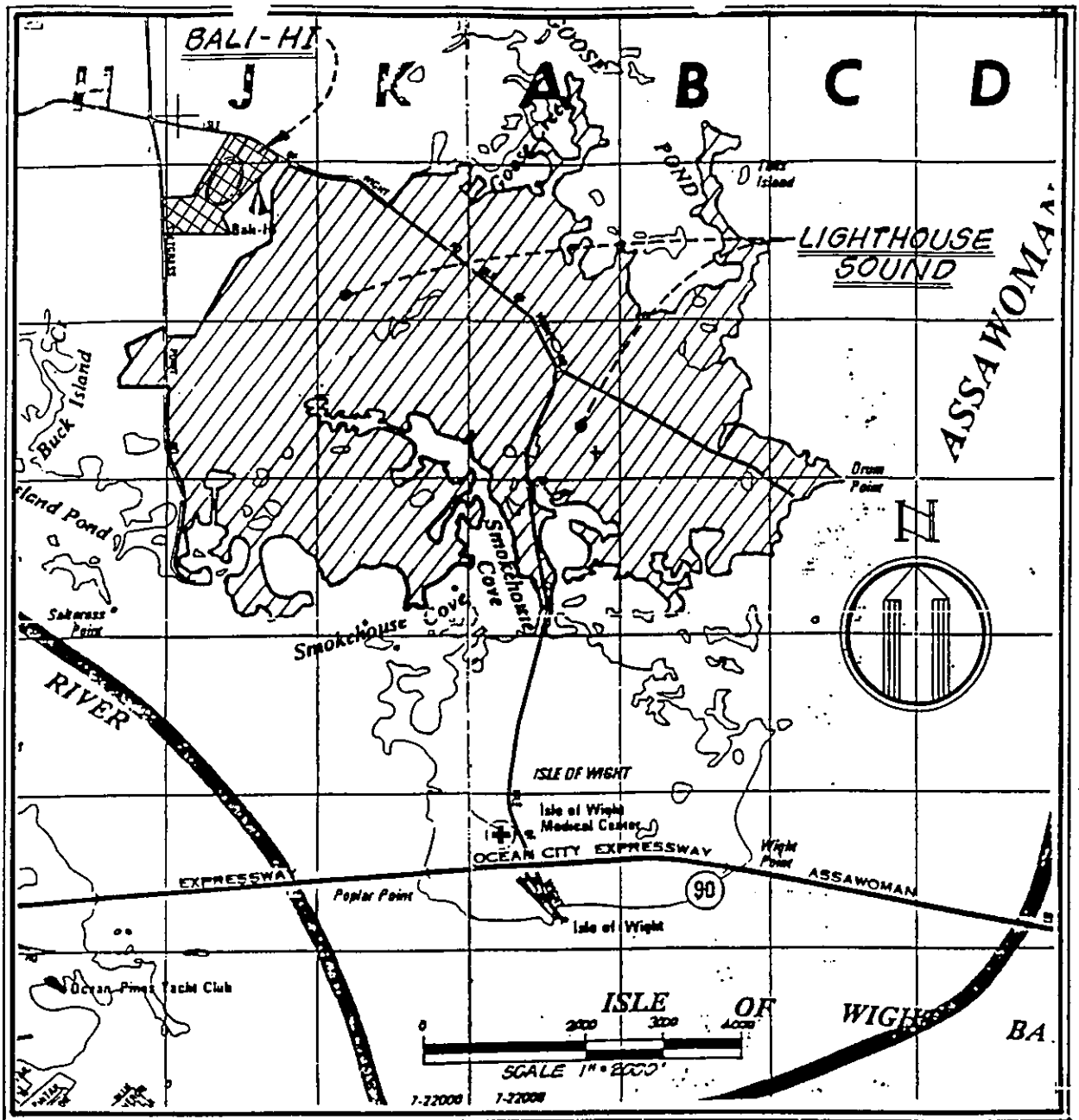
ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT	▲	△
SEWAGE PUMPING STATION	■	□
FORCE MAIN
INTERCEPTOR & OUTFALL	---	---

**SAINT MARTIN NECK & ENVIRONS
SEWERAGE SERVICE AREA**




**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**



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 PHONE (301) 228 - 7117



CATEGORIES

-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS

LEGEND

ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT	▲	△
SEWAGE PUMPING STATION	■	□
FORCE MAIN
INTERCEPTOR & OUTFALL	---	---

**SAINT MARTIN NECK & ENVIRONS
SEWERAGE SERVICE AREA**




**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**

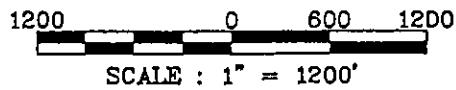
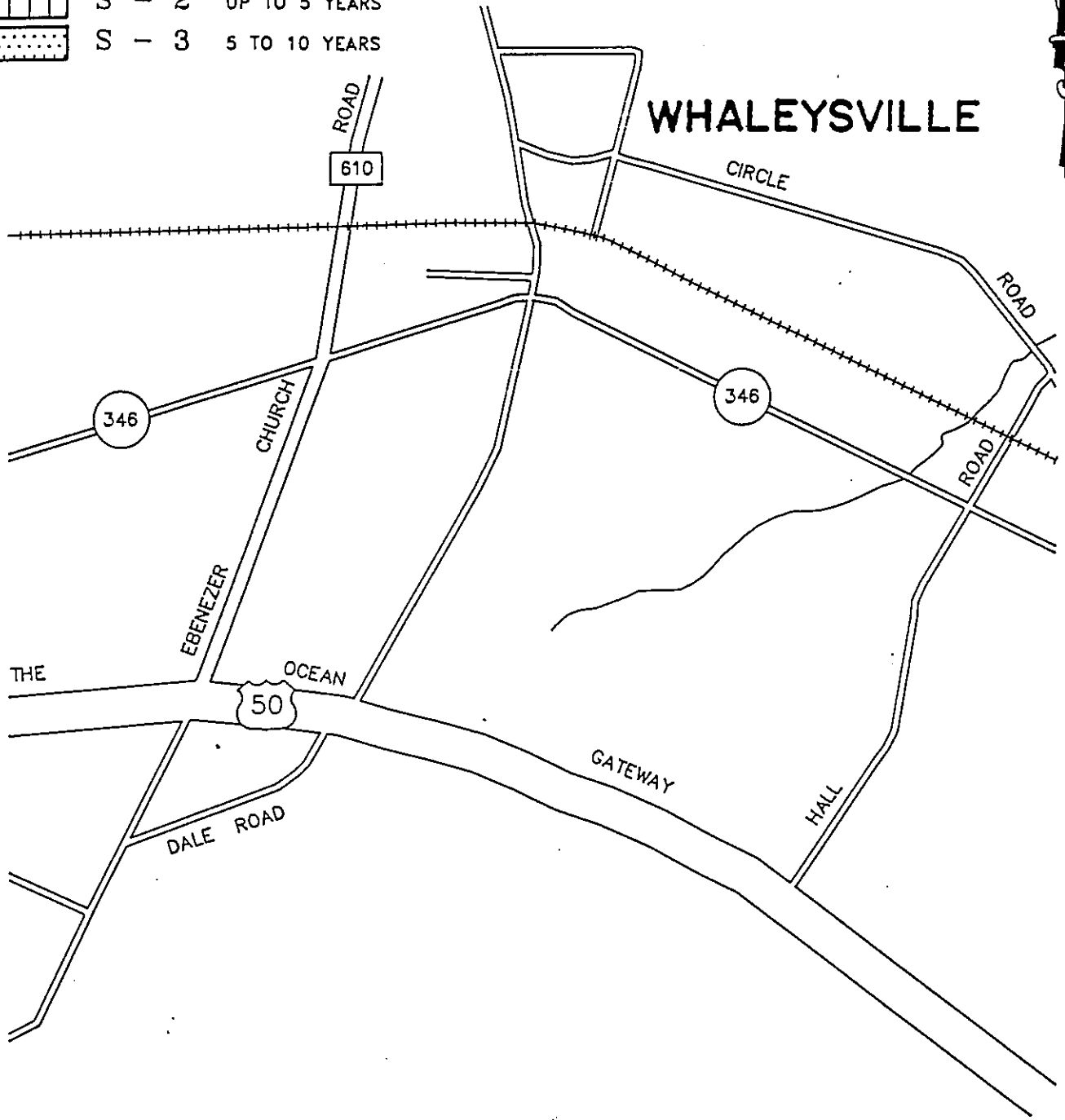


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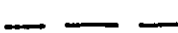
DATE : JULY 1997 | FIGURE NO. : 4-2

CATEGORIES

-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS



LEGEND

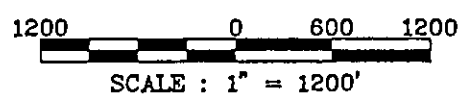
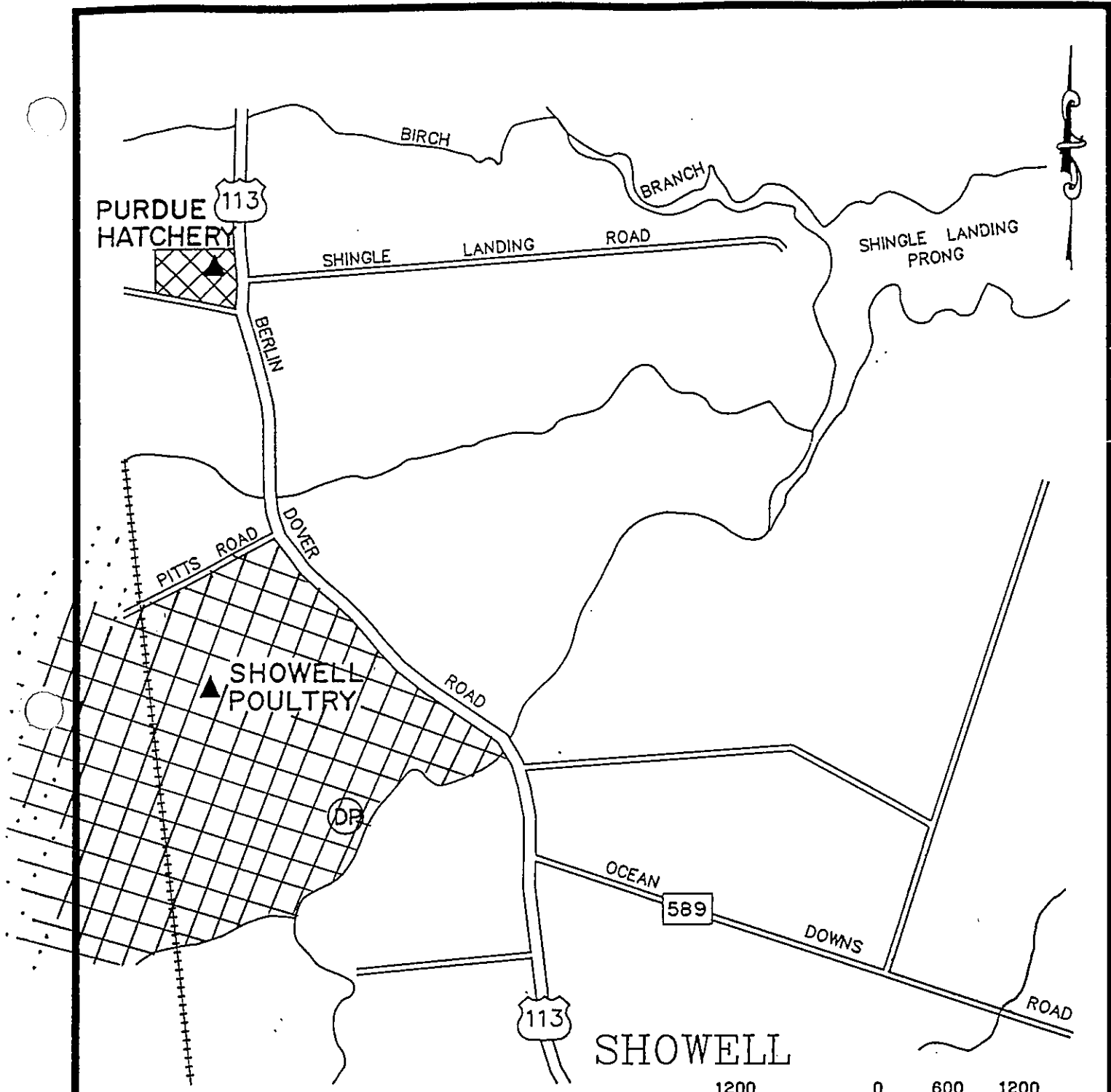
ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT		
SEWAGE PUMPING STATION		
FORCE MAIN		
INTERCEPTOR & OUTFALL		

**WHALEYSVILLE & ENVIRONS
SEWERAGE SERVICE AREA**




**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**











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CATEGORIES

-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS

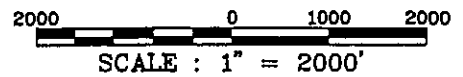
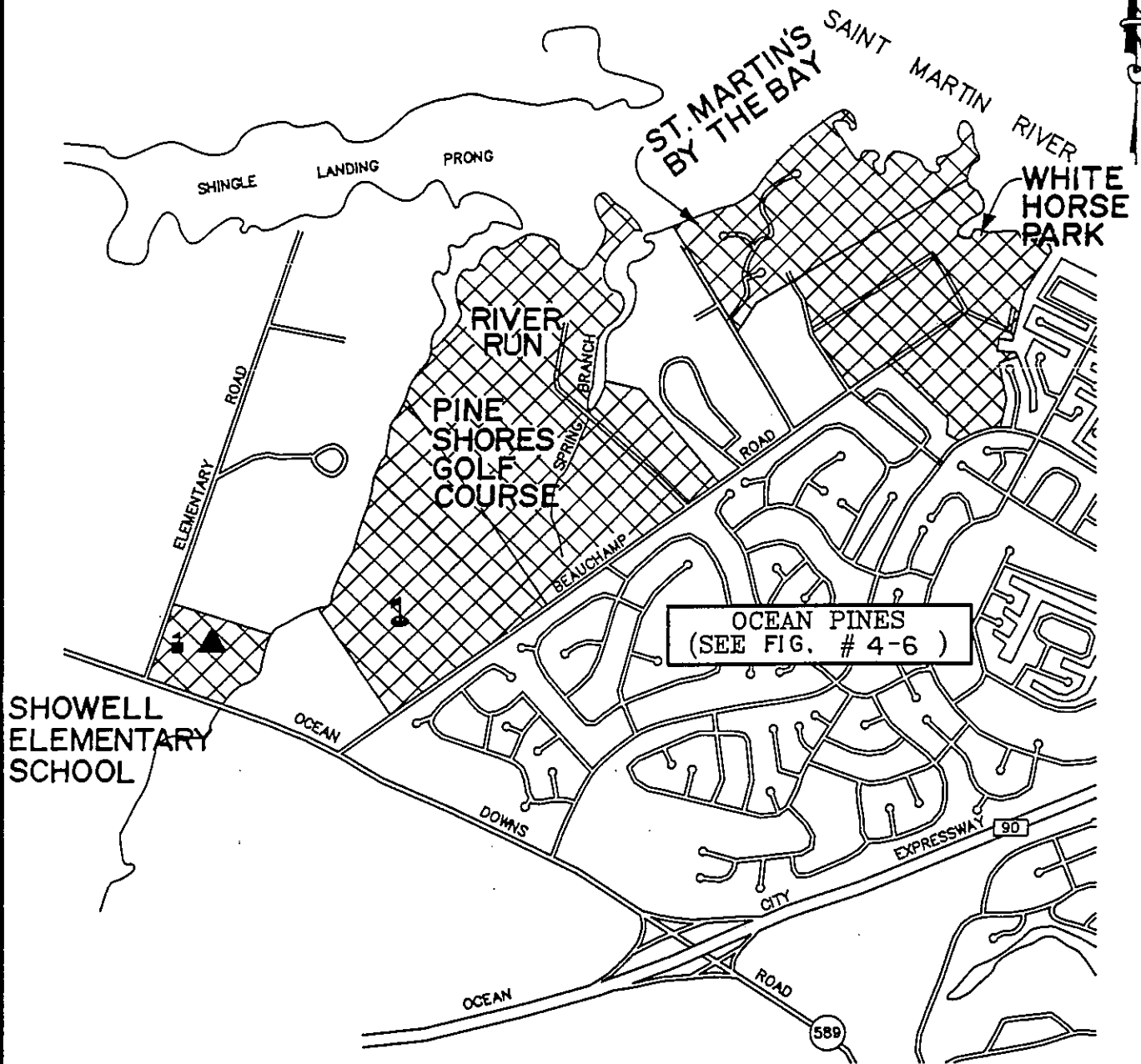
LEGEND

ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT		
SEWAGE PUMPING STATION		
FORCE MAIN		
INTERCEPTOR & OUTFALL		

**SHOWELL & ENVIRONS
SEWERAGE SERVICE AREA**

**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**

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CATEGORIES

	S - 1	EXISTING & PLANNED SYSTEM
	S - 2	UP TO 5 YEARS
	S - 3	5 TO 10 YEARS

LEGEND

ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT		
SEWAGE PUMPING STATION		
FORCE MAIN		
INTERCEPTOR & OUTFALL		

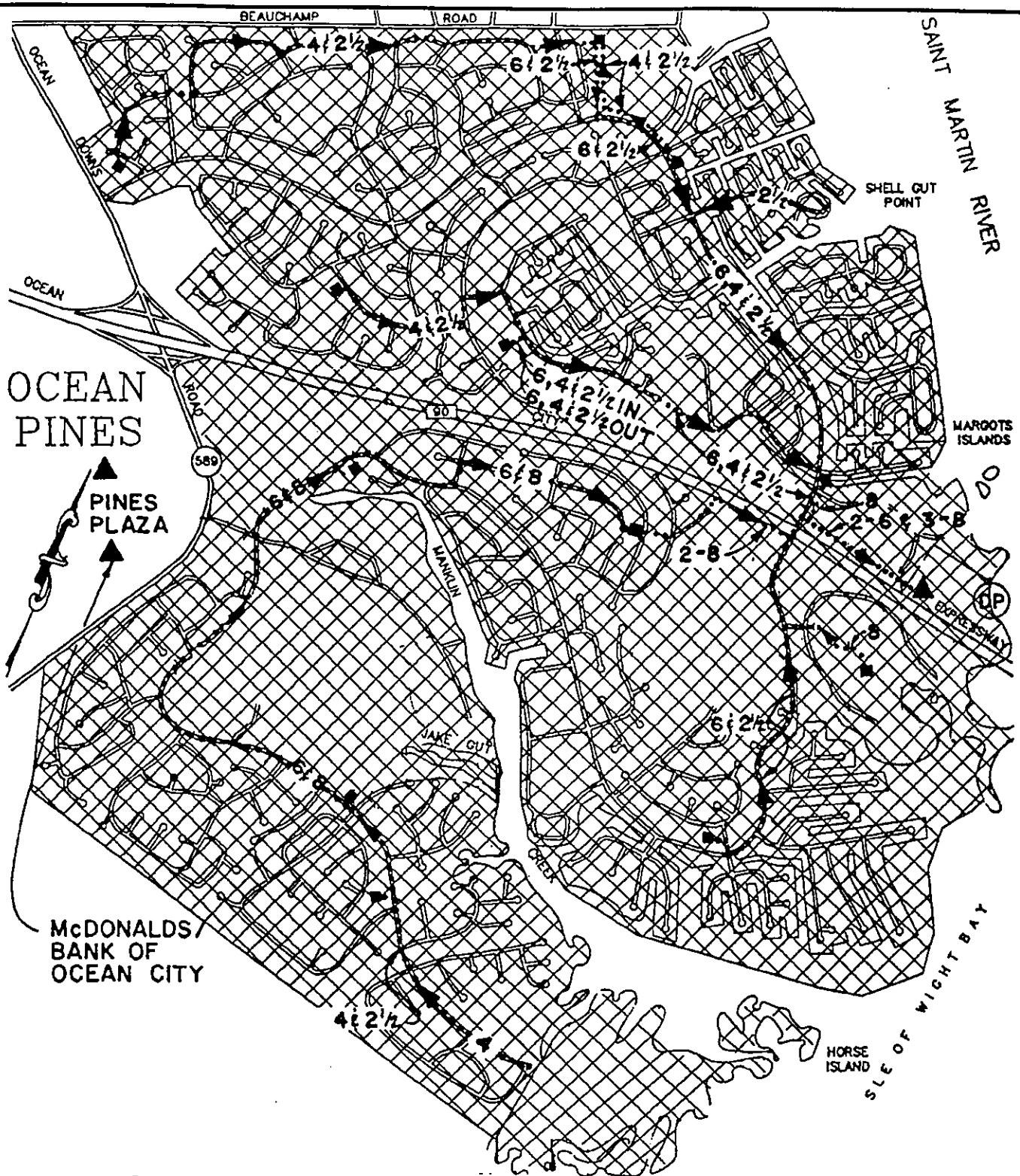
**BEAUCHAMP ROAD & ENVIRONS
SEWERAGE SERVICE AREA**

**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**



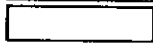


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DATE : JUNE, 1990 | FIGURE NO. : 4-5

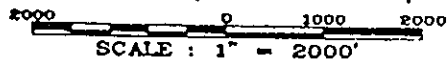


CATEGORIES

-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS

LEGEND

ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT		
WATER STORAGE TANK		
WELL & PUMP		
TRANSMISSION MAIN		



**OCEAN PINES
SEWERAGE SERVICE AREA**

**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**

WORCESTER COUNTY
DEPARTMENT OF PLANNING, PERMITS
AND INSPECTIONS
SNOW HILL, MARYLAND

DATE: October 1995 FIGURE NO.

BEACH CLUB GOLF COURSE

113

BERLIN

BERLIN SHOP. CTR.

50

STEPHEN DECATUR HIGH SCHOOL

BRIDDELLTOWN

PUMP STATION

CHESAPEAKE FOODS

SAUSBURY BLVD

818

GATEWAY

130

346

STREET

FLOWER

WILSON

WILSON

WILSON

WILSON

WILSON

WILSON

WILSON

WILSON

WILSON

WILSON

WILSON

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WILSON

WILSON

WILSON

WILSON

WILSON

WILSON

WILSON

WILSON

WILSON

THE BAY CLUB GOLF COURSE AREA S-1

113

PERMANTOWN ROAD




BERLIN WWTP

BERLIN LEWIS STORE ROAD

2000 0 1000 2000

SCALE : 1" = 2000'

CATEGORIES

-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS

LEGEND

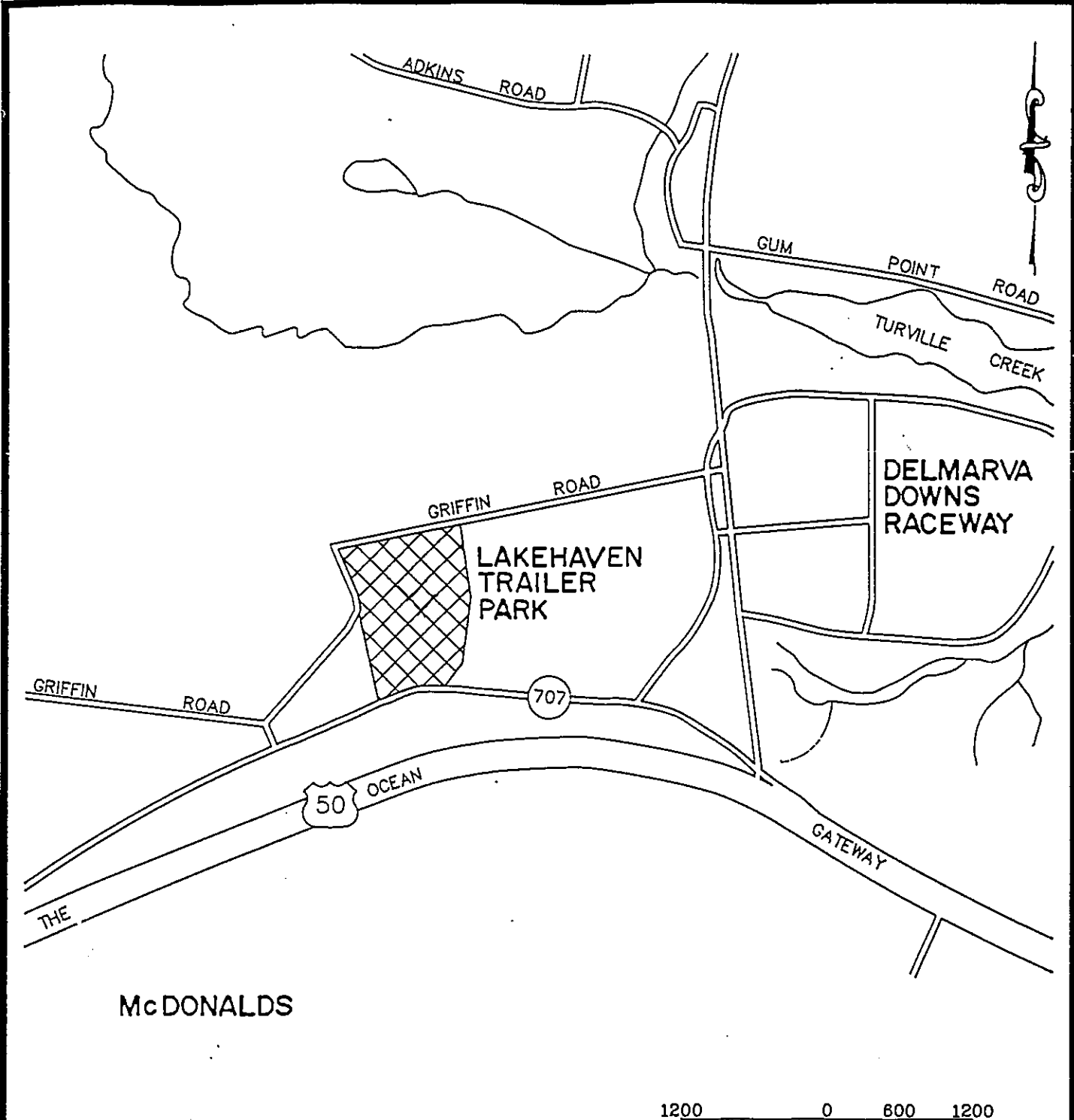
ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT	▲	△
SEWAGE PUMPING STATION	■	□
FORCE MAIN	-----
INTERCEPTOR & OUTFALL	-----	-----

BERLIN & ENVIRONS SEWERAGE SERVICE AREA




WORCESTER COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN

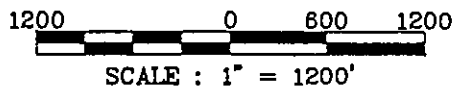


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 PHONE (301) 228 - 7117











CATEGORIES

-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS




LEGEND

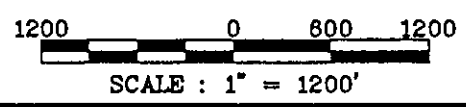
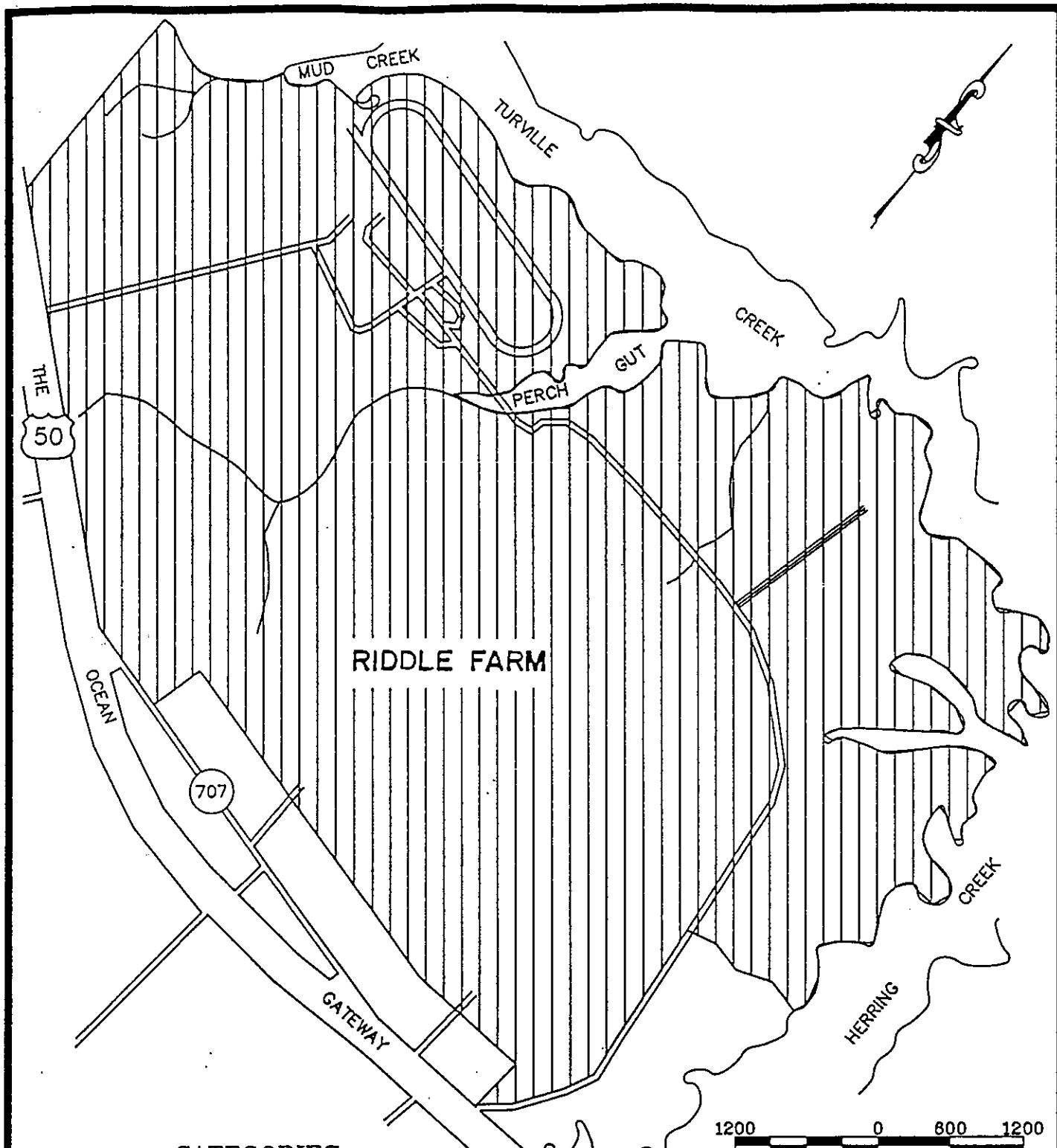
ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT		
SEWAGE PUMPING STATION		
FORCE MAIN		
INTERCEPTOR & OUTFALL		

**GRAY'S CORNER & ENVIRONS
SEWERAGE SERVICE AREA**




**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**

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DATE: JUNE 1990 FIGURE NO. 4-2



CATEGORIES


-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS

LEGEND

ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT		
SEWAGE PUMPING STATION		
FORCE MAIN		
INTERCEPTOR & OUTFALL		

**RIDDLE FARM
SEWERAGE SERVICE AREA**

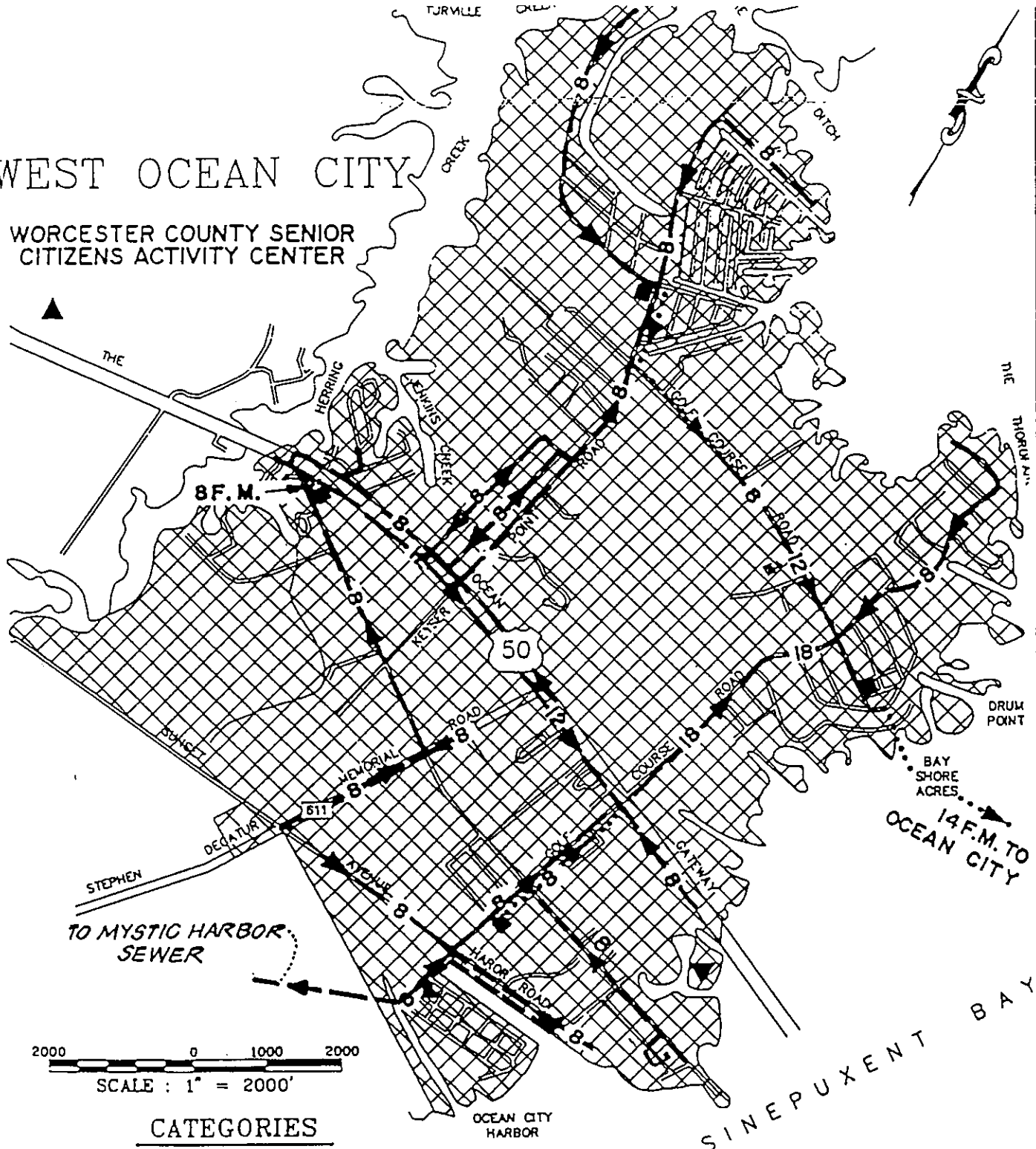
**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**

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DATE : JUNE, 1990 FIGURE NO. : 4 - 9

WEST OCEAN CITY

WORCESTER COUNTY SENIOR
CITIZENS ACTIVITY CENTER



CATEGORIES

	S - 1	EXISTING & PLANNED SYSTEM
	S - 2	UP TO 5 YEARS
	S - 3	5 TO 10 YEARS

LEGEND

ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT		
SEWAGE PUMPING STATION		
FORCE MAIN		
INTERCEPTOR & OUTFALL		

WEST OCEAN CITY & ENVIRONS
SEWERAGE SERVICE AREA

WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN



CONSULTING ENGINEERS AND SURVEYORS
Andrews, Miller & Assoc., Inc.
508 MARYLAND AVENUE • CAMBRIDGE, MARYLAND • 21613
PHONE (301) 228 - 7117

DATE : JUNE, 1990

FIGURE NO. : 4-10

SEWER

TO WEST OCEAN CITY
SEWER

SLIP HAS INDIVIDUAL
WATER, AND ELECTRIC
CONNECTIONS.

BASIS OF E.D.U.'S (EQUIVALENT DWELLING UNIT) FLOW ALLOCATION / HOMEPORT AS ILLUSTRATED

**82 EDU'S ARE ALLOWED TO THE WEST OCEAN CITY SYSTEM
81.3 EDU'S ARE TO BE CONNECTED TO MYSTIC HARBOR**

Connections Schematically @:

- A. Existing Collection Main @ Old Bridge Rd. (W.O.C.S.D.) @ 48 EDU's**
- a. 32.0 EDU's / 32 Single Family Residential Lots @ 1 EDU / Lot @ 280 gpd / EDU
 - b. 16.0 EDU's / Yacht Club @ 150 seats x 30 gal / seat = 4500 gpd ÷ 280 gpd = EDU
- B. Proposed Collection Main @ Driveway of Parking Parallel to Sunset Ave. with Flows to go to Mystic Harbor @ 81.3 EDU's**
- a. 17.6 EDU's / Marina / 204 Wet slips + 16 "staging" slips = $220 \times 20 \text{ gpd} = 4400 \text{ gpd} \div 250 = \text{EDU's}$
 - b. 0.90 EDU's / Boat Sales @ 8250 sq. ft. / Boat Service @ 8250 sq. ft. / Boat Storage @ 62,400 sq. ft. all, with 15 total employees @ 15 gpd / employees = 225 gpd
 - c. 0.60 EDU's / Bait - Tackle @ 3600 sq. ft.
 - 1800 sq. ft. (50% patron) @ .05 = 90 gpd 144 gpd ÷ 250 gpd
 - 1800 sq. ft. (50% storage) @ .03 = 54 gpd
 - d. 0.20 EDU's / Dockmaster @ 3 employees x 15 gpd = 45 gpd ÷ 250 gpd
 - e. 16.0 EDU's / Bar / Restaurant @ 3000 sq. ft. ÷ 15 sq. ft. / per person = 133 seats x 30 gal / seat = 3990 gpd ÷ 250 gpd
 - f. 46.0 EDU's Hotel / 115 rms. @ 400 sq. ft./rm = 46,000 sq. ft. x 0.25 gpd = 11,500 gpd ÷ 250 = EDU's
- C. Existing Collection Main @ Sunset Avenue (W.O.C.S.D.) @ 34 EDU's**
- a. 11.8 EDU's / Marina / 204 wet slips + 16 "staging" slips = $220 \times 15 \text{ gpd} = 3300 \text{ gpd} \div 280 = \text{EDU's}$
 - b. 22.3 EDU's / Hotel / 50 rms x 400 sq. ft. / rm = 20,000 sq. ft. plus 5000 sq. ft. Bar / Restaurant / Office = 25,000 sq. ft. x .25 = 6250 gpd ÷ 280 gpd = EDU's

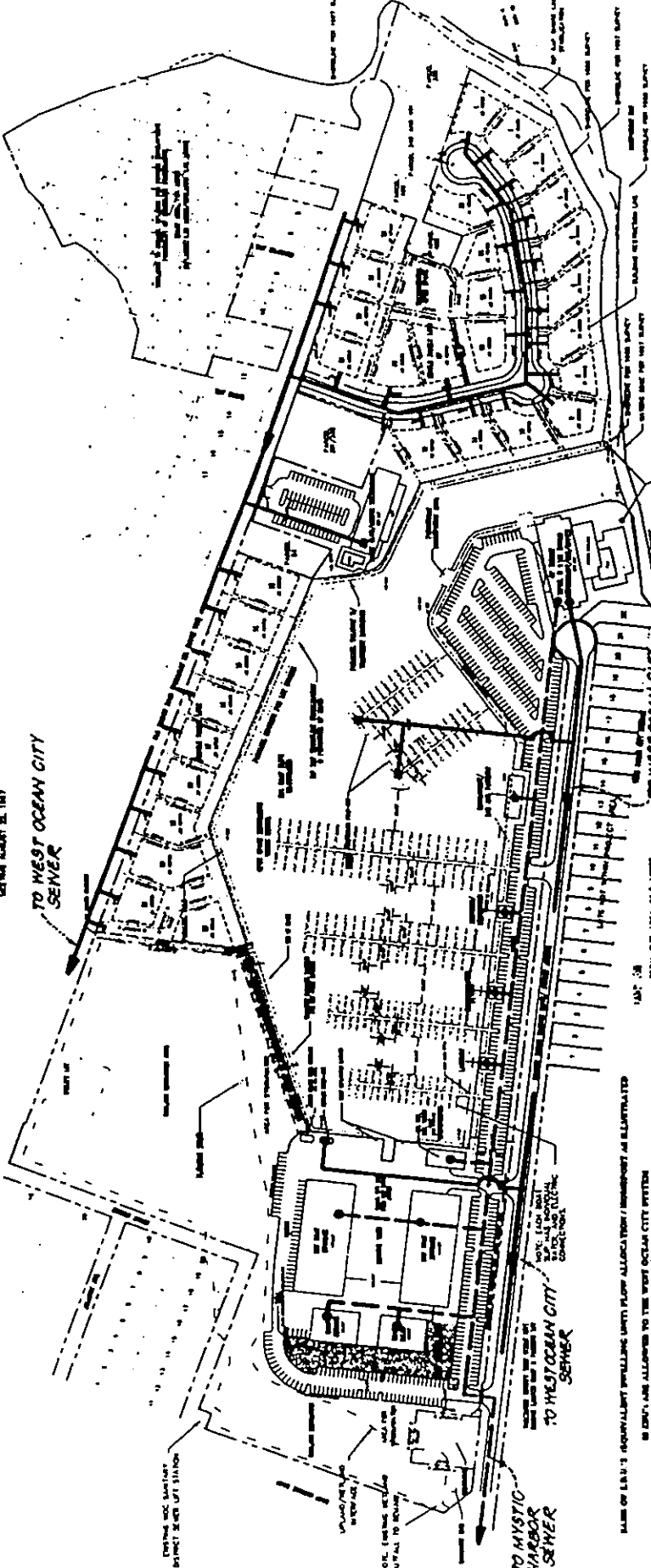
* Wet slips calculated @ 35 gpd / slip for total flow but are split for purpose of splitting out boat pump out waste
This Allocation May Be Changed If All Parties Agree In Writing

H O M E P O R T
 EDU ALLOCATION - STEP II PUD

COMMERCIAL / RESIDENTIAL / RECREATIONAL PLANNED COMMUNITY NOTES

- THIS PLAN HAS BEEN REVIEWED BY THE CITY ENGINEER AND APPROVED BY THE BOARD OF PUBLIC WORKS.
- ALL PAVED SURFACES TO BE CURBED.
- THE DISTRICT IS TO BE A MIXED USE DEVELOPMENT WITH COMMERCIAL, RESIDENTIAL AND RECREATIONAL USES.
- THE DISTRICT IS TO BE A MIXED USE DEVELOPMENT WITH COMMERCIAL, RESIDENTIAL AND RECREATIONAL USES.
- THE DISTRICT IS TO BE A MIXED USE DEVELOPMENT WITH COMMERCIAL, RESIDENTIAL AND RECREATIONAL USES.

NOTE: THIS PLAN HAS BEEN REVIEWED BY THE CITY ENGINEER AND APPROVED BY THE BOARD OF PUBLIC WORKS.



PARAMETER	REQUIRED	PROVIDED
TOTAL PARKING SPACES	250	250
RESIDENTIAL PARKING SPACES	150	150
COMMERCIAL PARKING SPACES	100	100
TOTAL PARKING SPACES	250	250

PARAMETER	REQUIRED	PROVIDED
TOTAL UNIT DEVELOPMENT	150	150
RESIDENTIAL UNITS	100	100
COMMERCIAL UNITS	50	50
TOTAL UNIT DEVELOPMENT	150	150

PARAMETER	REQUIRED	PROVIDED
TOTAL UNIT DEVELOPMENT	150	150
RESIDENTIAL UNITS	100	100
COMMERCIAL UNITS	50	50
TOTAL UNIT DEVELOPMENT	150	150

NOTE: THIS PLAN HAS BEEN REVIEWED BY THE CITY ENGINEER AND APPROVED BY THE BOARD OF PUBLIC WORKS.

NOTE: THIS PLAN HAS BEEN REVIEWED BY THE CITY ENGINEER AND APPROVED BY THE BOARD OF PUBLIC WORKS.

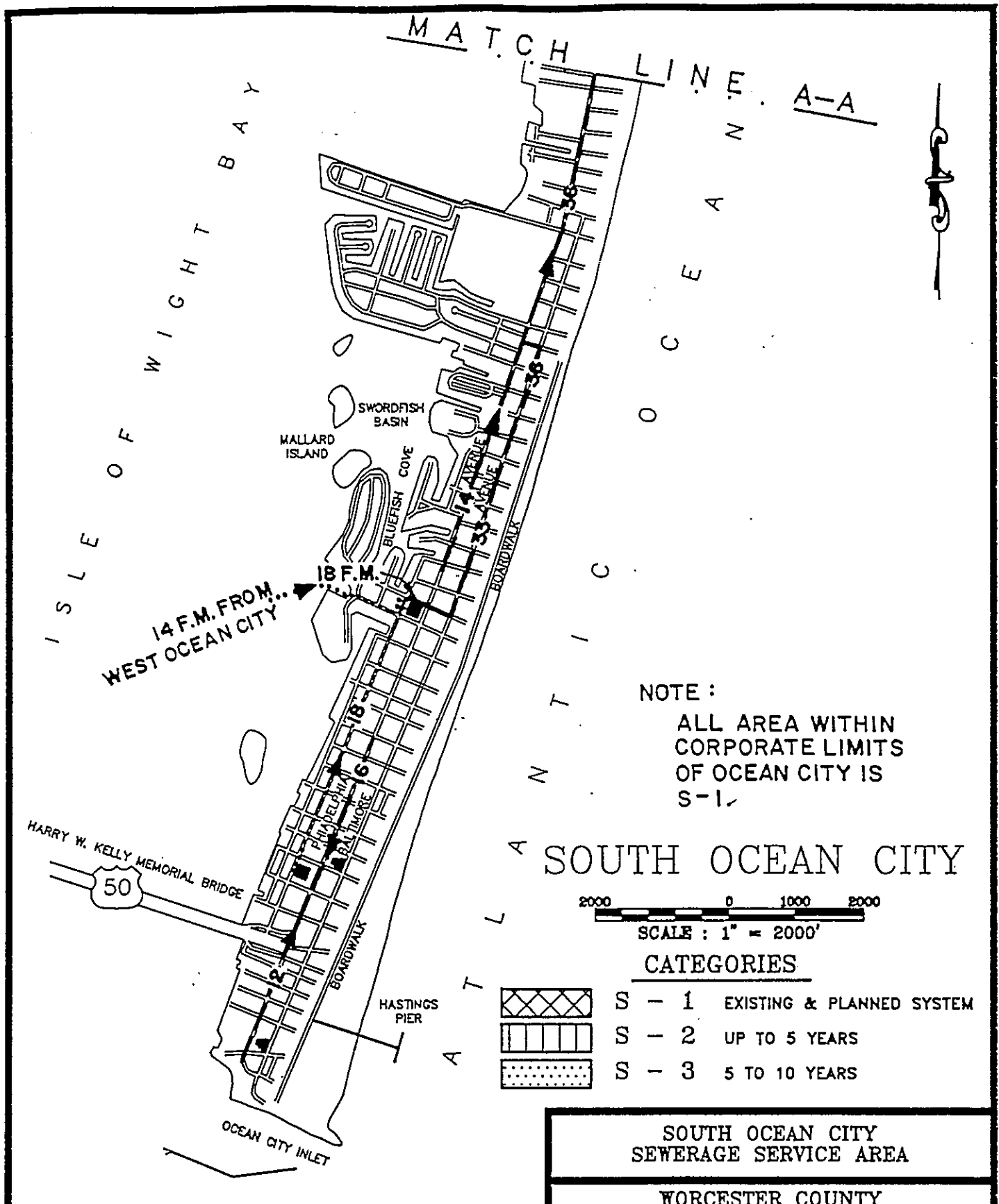
NOTE: THIS PLAN HAS BEEN REVIEWED BY THE CITY ENGINEER AND APPROVED BY THE BOARD OF PUBLIC WORKS.

SCHMATIC ILLUSTRATIVE SEWER MAINS
 TO WEST OCEAN CITY SEWER
 TO MYSTIC HARBOR SEWER

THIS PLAN HAS BEEN REVIEWED BY THE CITY ENGINEER AND APPROVED BY THE BOARD OF PUBLIC WORKS.

DATE: 11/18/84

1. The sewer main shown on this plan is to be installed in accordance with the provisions of the Maryland Public Works Code, Title 29, Subtitle 2, Section 29-201.1.


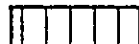



NOTE:
 ALL AREA WITHIN
 CORPORATE LIMITS
 OF OCEAN CITY IS
 S-1.

SOUTH OCEAN CITY

2000 0 1000 2000
 SCALE: 1" = 2000'


CATEGORIES

-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS

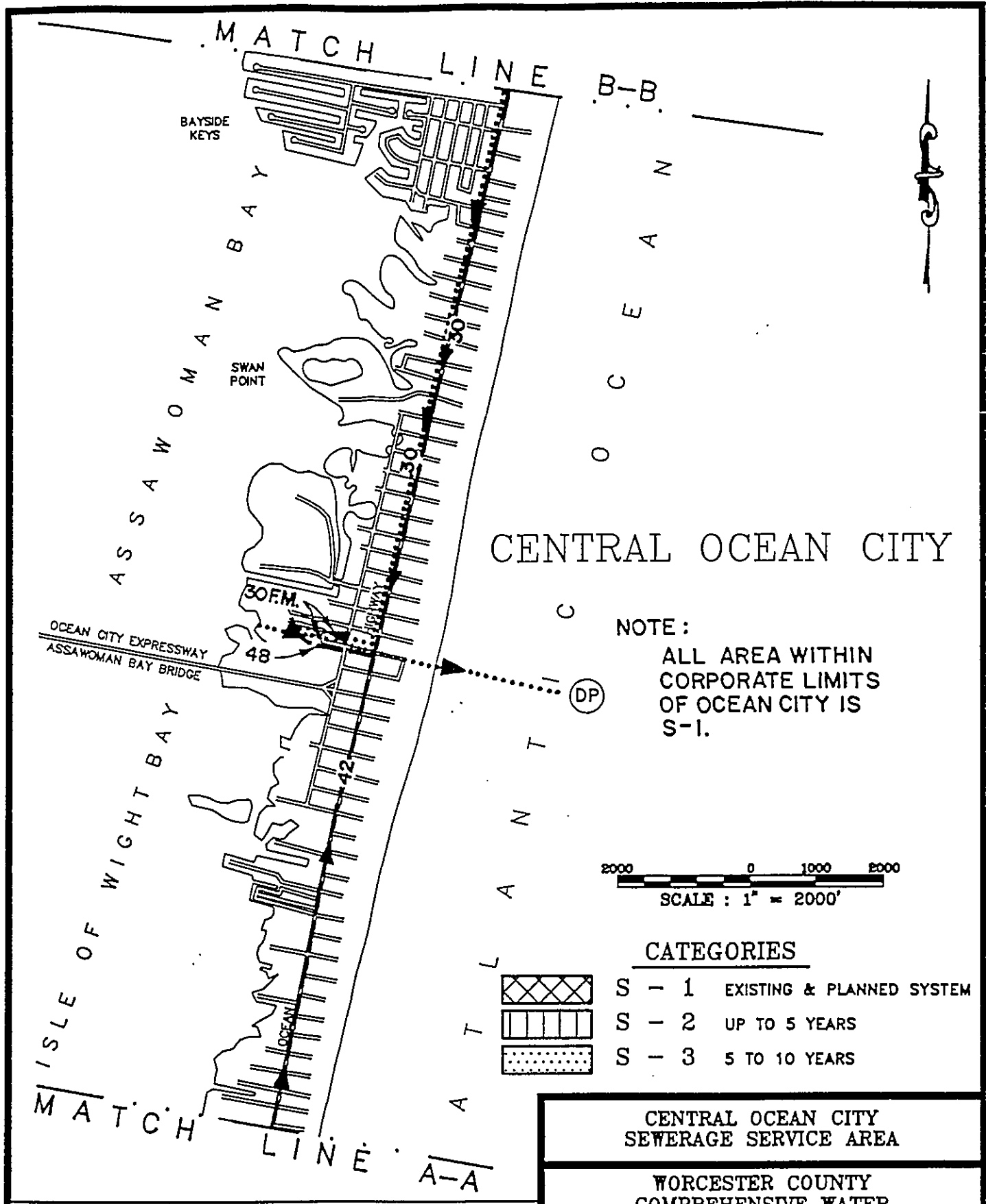
**SOUTH OCEAN CITY
 SEWERAGE SERVICE AREA**

**WORCESTER COUNTY
 COMPREHENSIVE WATER
 AND SEWERAGE PLAN**

LEGEND		
ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT	▲	△
SEWAGE PUMPING STATION	■	□
FORCE MAIN	●●●●●●●●
INTERCEPTOR & OUTFALL	- - - - -	- - - - -


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DATE: JUNE 1960 FIGURE NO. 4-11




LEGEND

ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT	▲	△
SEWAGE PUMPING STATION	■	□
FORCE MAIN
INTERCEPTOR & OUTFALL	- - - - -	- - - - -

**CENTRAL OCEAN CITY
SEWERAGE SERVICE AREA**

**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**


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SUSSEX COUNTY, DELAWARE

EDGEWATER ACRES

MONTEGO BAY MHP

MONTEGO BAY

ASSAWOMAN BAY

CAINE HARBOR MILE

CAINE KEYS

DEVIL ISLAND

MATCH LINE B-B

0 1000 2000

SCALE : 1" = 2000'

LEGEND

ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT	▲	△
SEWAGE PUMPING STATION	■	□
FORCE MAIN
INTERCEPTOR & OUTFALL	---	---

OCEAN




NORTH OCEAN CITY

ATLANTIC

NOTE :

ALL AREA WITHIN CORPORATE LIMITS OF OCEAN CITY IS S-1.

CATEGORIES

-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS

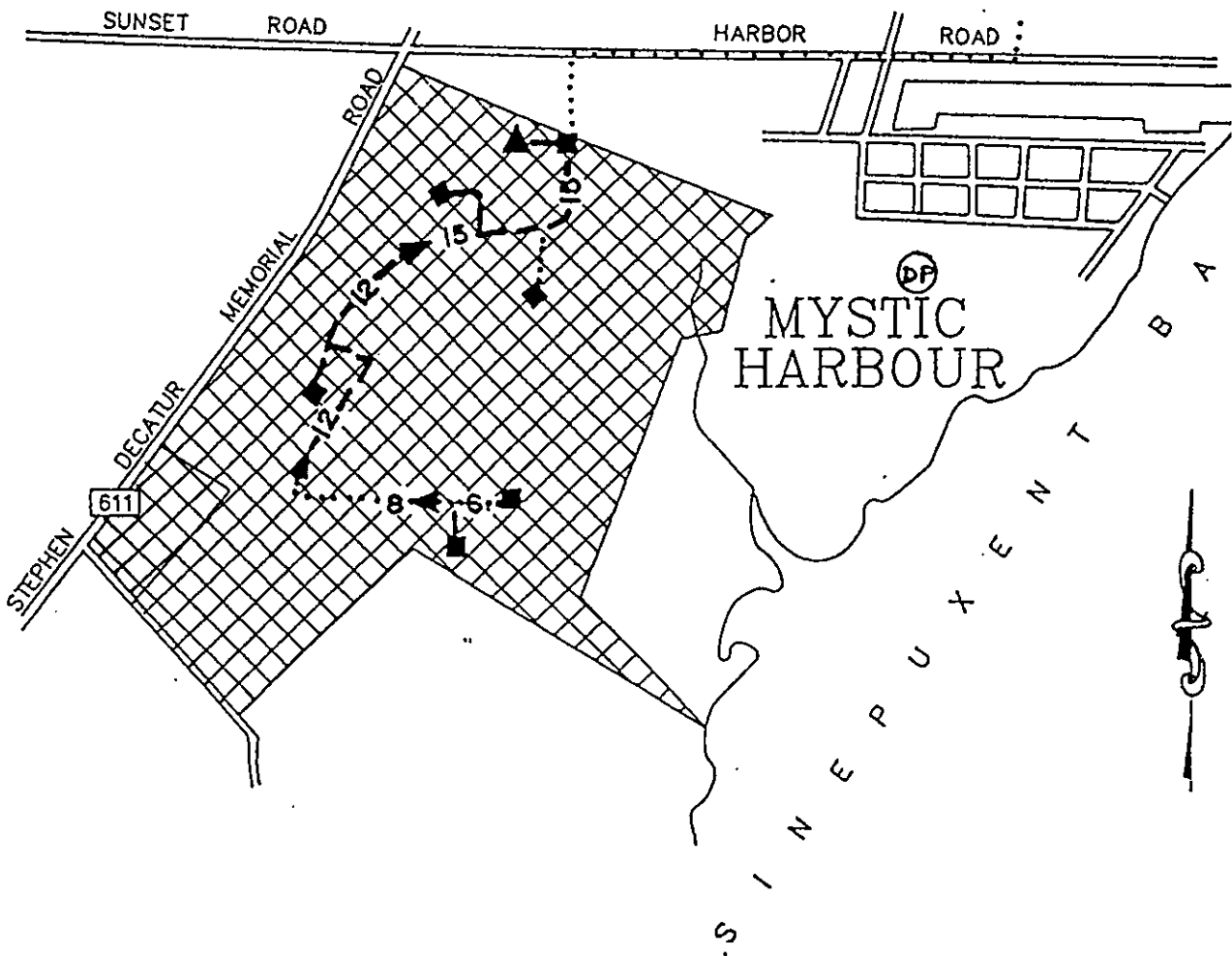
NORTH OCEAN CITY SEWERAGE SERVICE AREA

WORCESTER COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN






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WEST OCEAN CITY
SEE FIG. #4-10

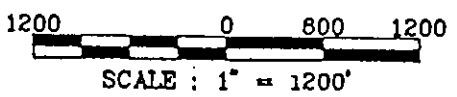


CATEGORIES

-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS

LEGEND

ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT	▲	△
WATER STORAGE TANK	●	○
WELL & PUMP	●	○
TRANSMISSION MAIN	---	---

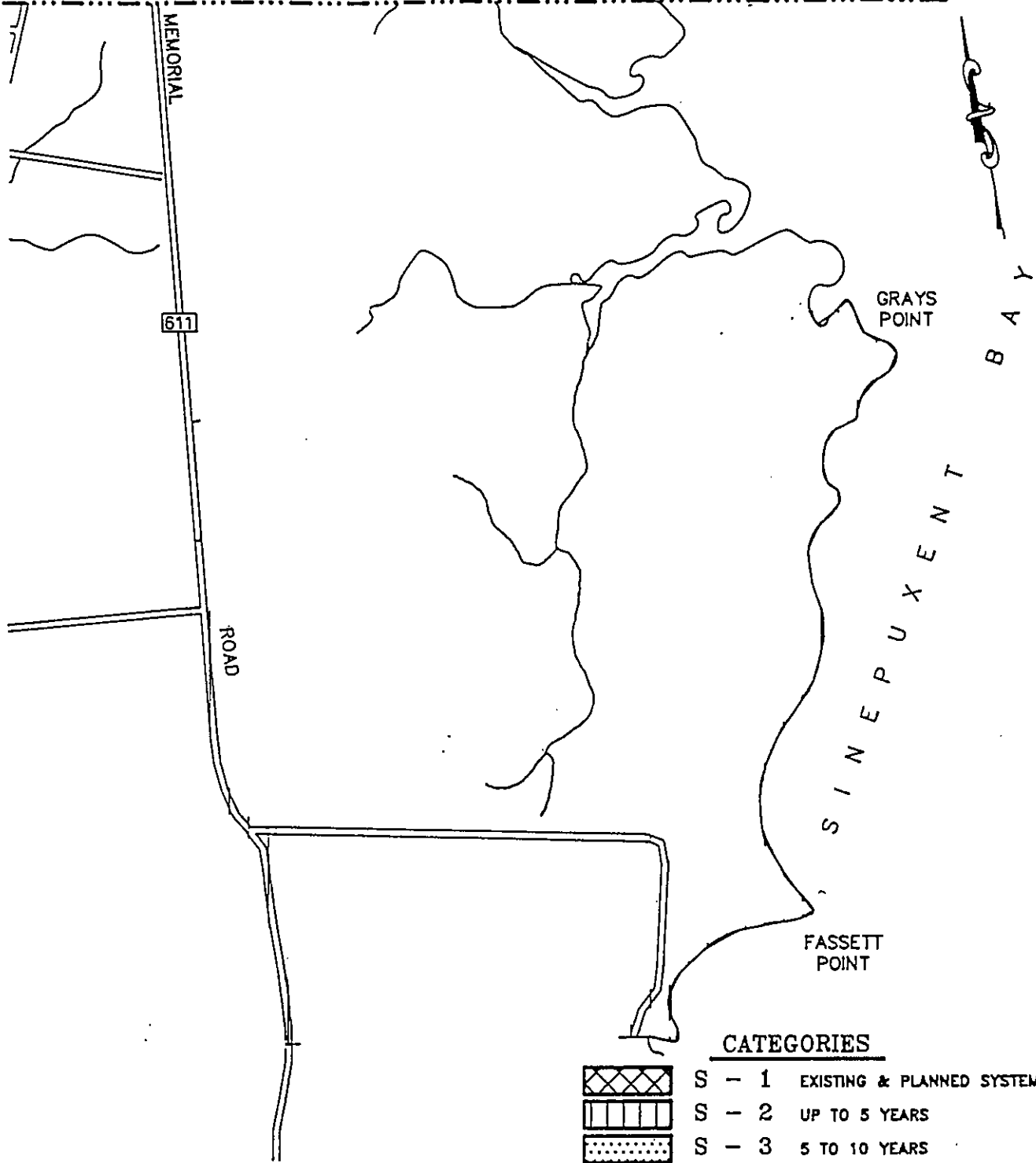


**MYSTIC HARBOUR
SEWERAGE SERVICE AREA**




**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**

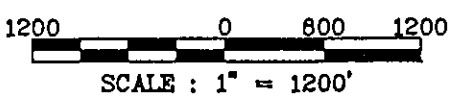
WORCESTER COUNTY
DEPARTMENT OF PLANNING, PERMITS
AND INSPECTIONS
SNOW HILL, MARYLAND

DATE: October 1995 FIGURE NO. 4-14



CATEGORIES

-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS




UPPER SINEPUXENT NECK
SEWERAGE SERVICE AREA

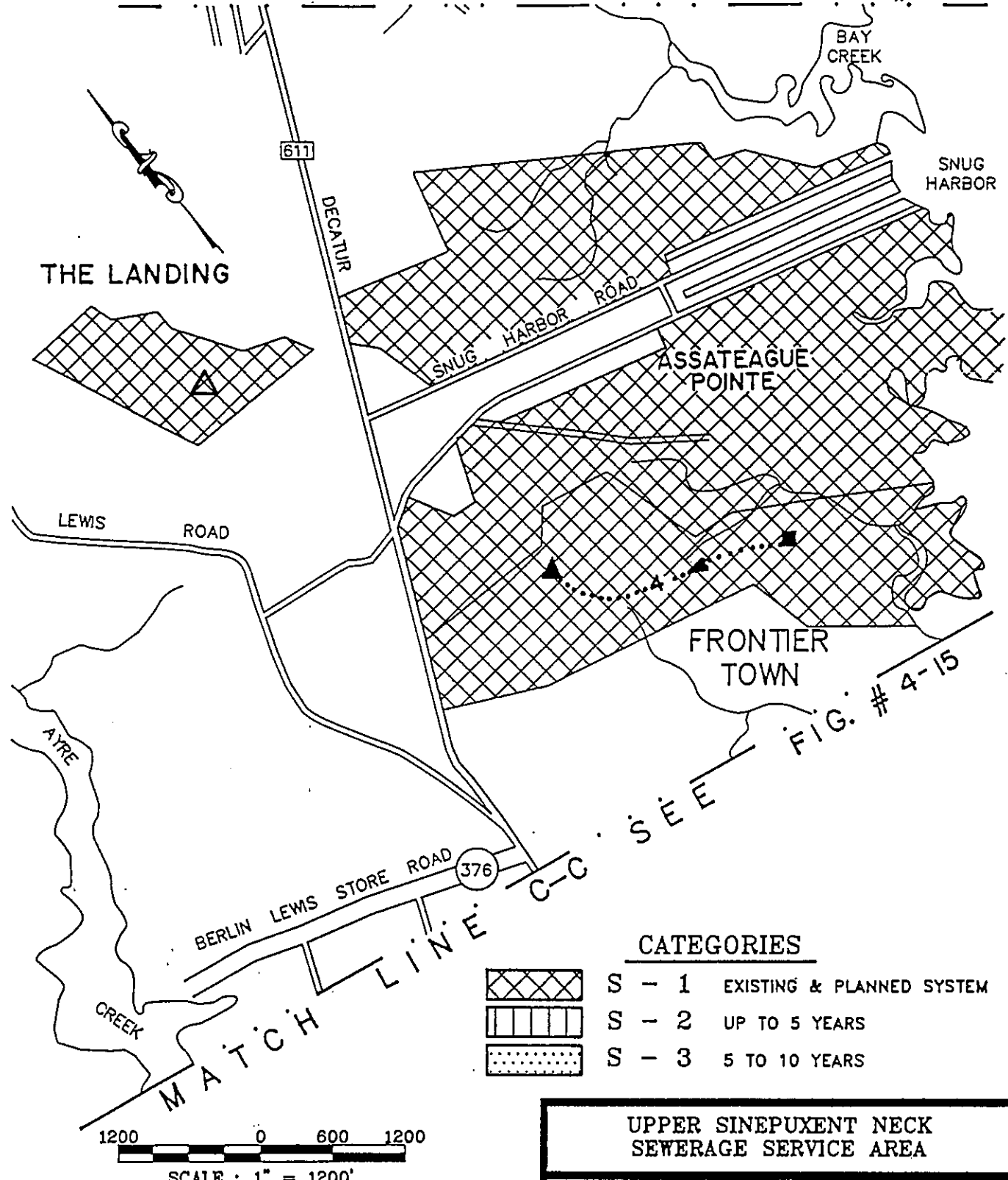
WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN

LEGEND

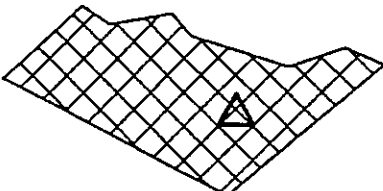
ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT	▲	△
SEWAGE PUMPING STATION	■	□
FORCE MAIN	-----
INTERCEPTOR & OUTFALL	-----	-----

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PHONE (301) 228 - 7117

MATCH LINE D-D SEE FIG. # 4-17



THE LANDING



BAY CREEK

SNUG HARBOR

611

DECATUR

SNUG HARBOR ROAD

ASSATEAGUE POINT

LEWIS ROAD




FRONTIER TOWN

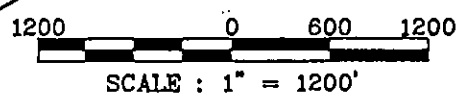
AYRE CREEK

BERLIN LEWIS STORE ROAD 376

FIG. # 4-15

CATEGORIES









-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS




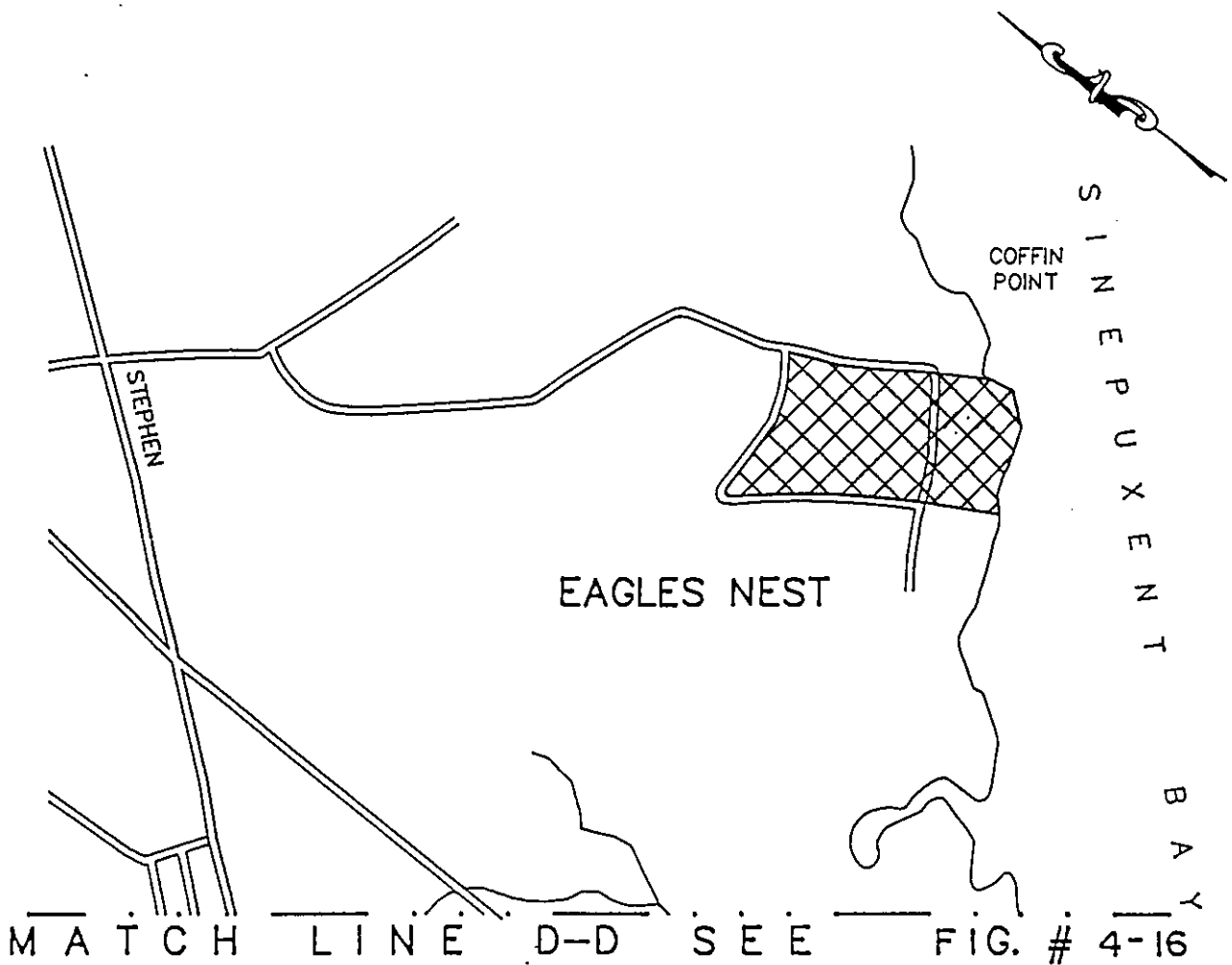
UPPER SINEPUXENT NECK SEWERAGE SERVICE AREA

WORCESTER COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN




LEGEND

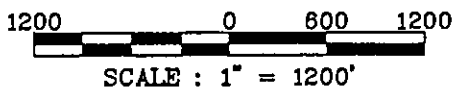
ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT		
SEWAGE PUMPING STATION		
FORCE MAIN		
INTERCEPTOR & OUTFALL		

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CATEGORIES

-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS




LEGEND

ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT	▲	△
SEWAGE PUMPING STATION	■	□
FORCE MAIN
INTERCEPTOR & OUTFALL	---	---

UPPER SINEPUXENT NECK
SEWERAGE SERVICE AREA


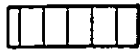

WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN

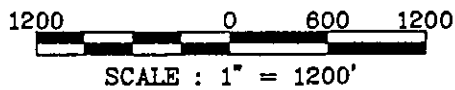
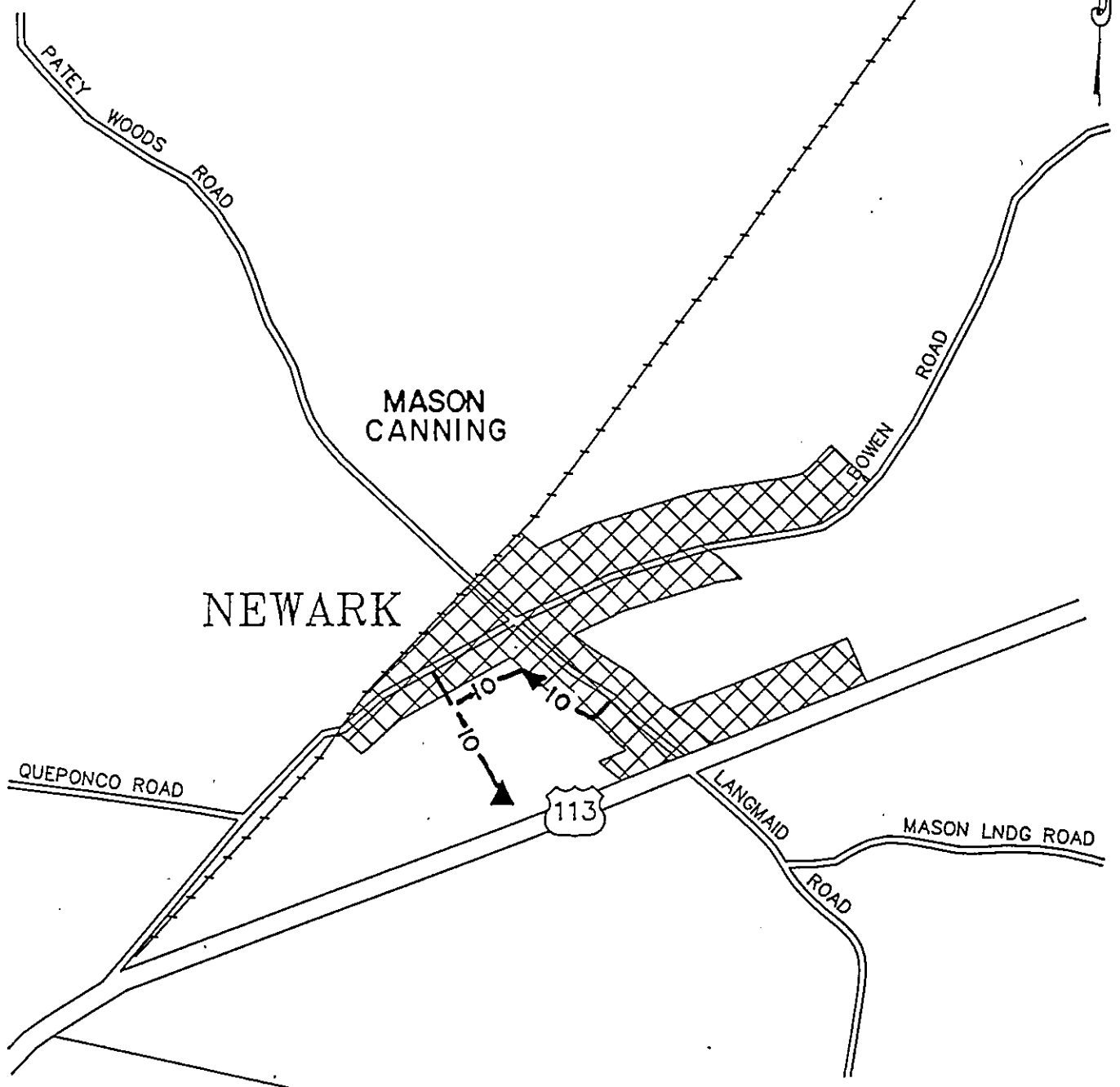
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PHONE (301) 228 - 7117

DATE : JUNE, 1990









FIGURE NO. : 4-17

CATEGORIES

-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS



LEGEND

ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT		
SEWAGE PUMPING STATION		
FORCE MAIN		
INTERCEPTOR & OUTFALL		

**NEWARK & ENVIRONS
SEWERAGE SERVICE AREA**

**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**



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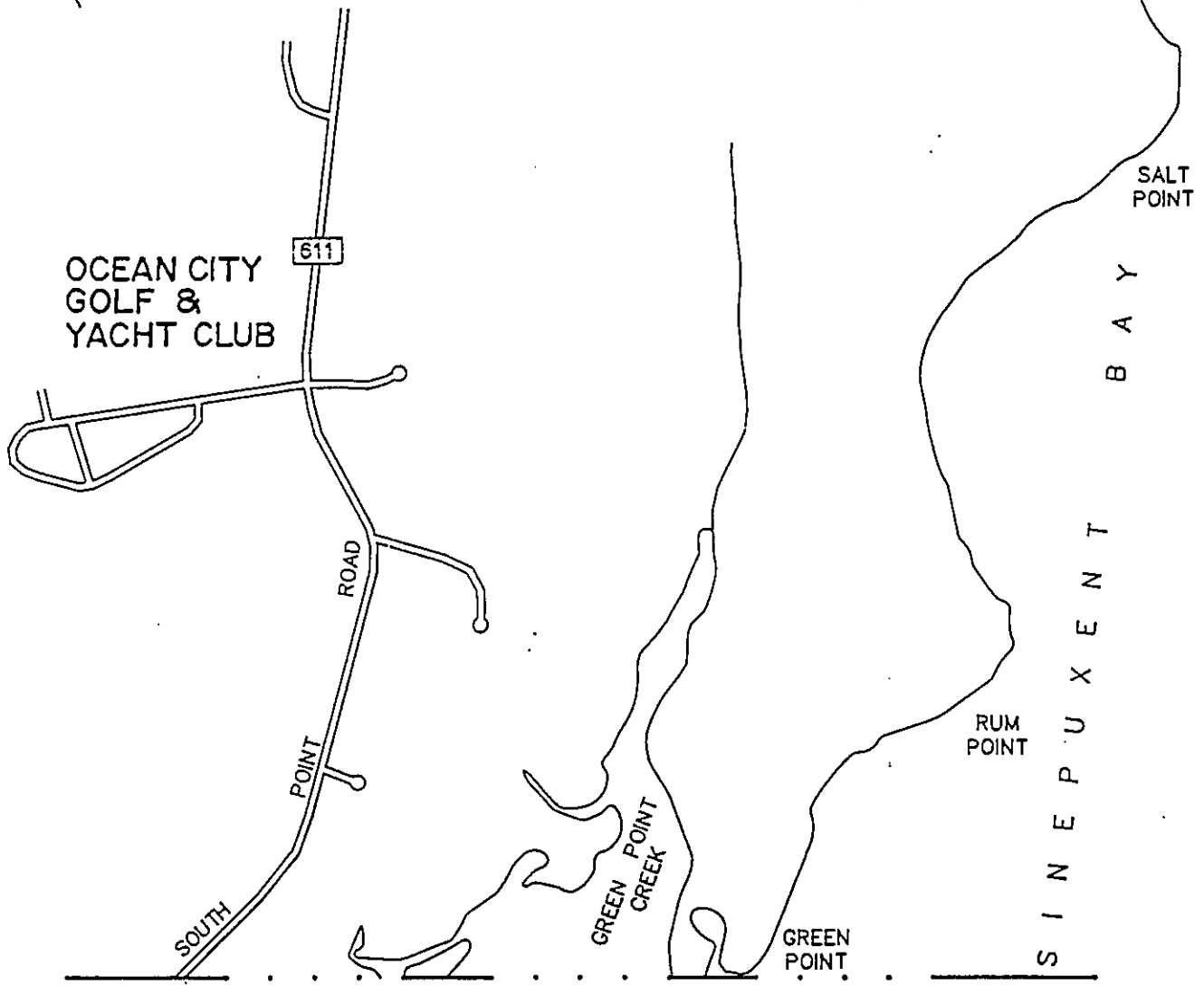
PHONE (301) 228 - 7117

DATE : JUNE, 1990

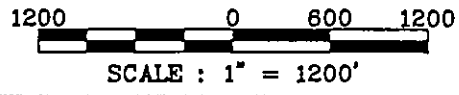
FIGURE NO. : 4-18






▲.....4.....▶
 ASSATEAGUE ISLAND
 NATIONAL SEASHORE
 HEADQUARTERS



MATCH LINE E-E SEE FIG. # 4-20



CATEGORIES


-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS

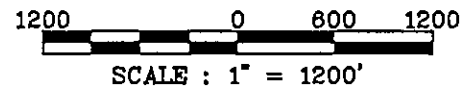
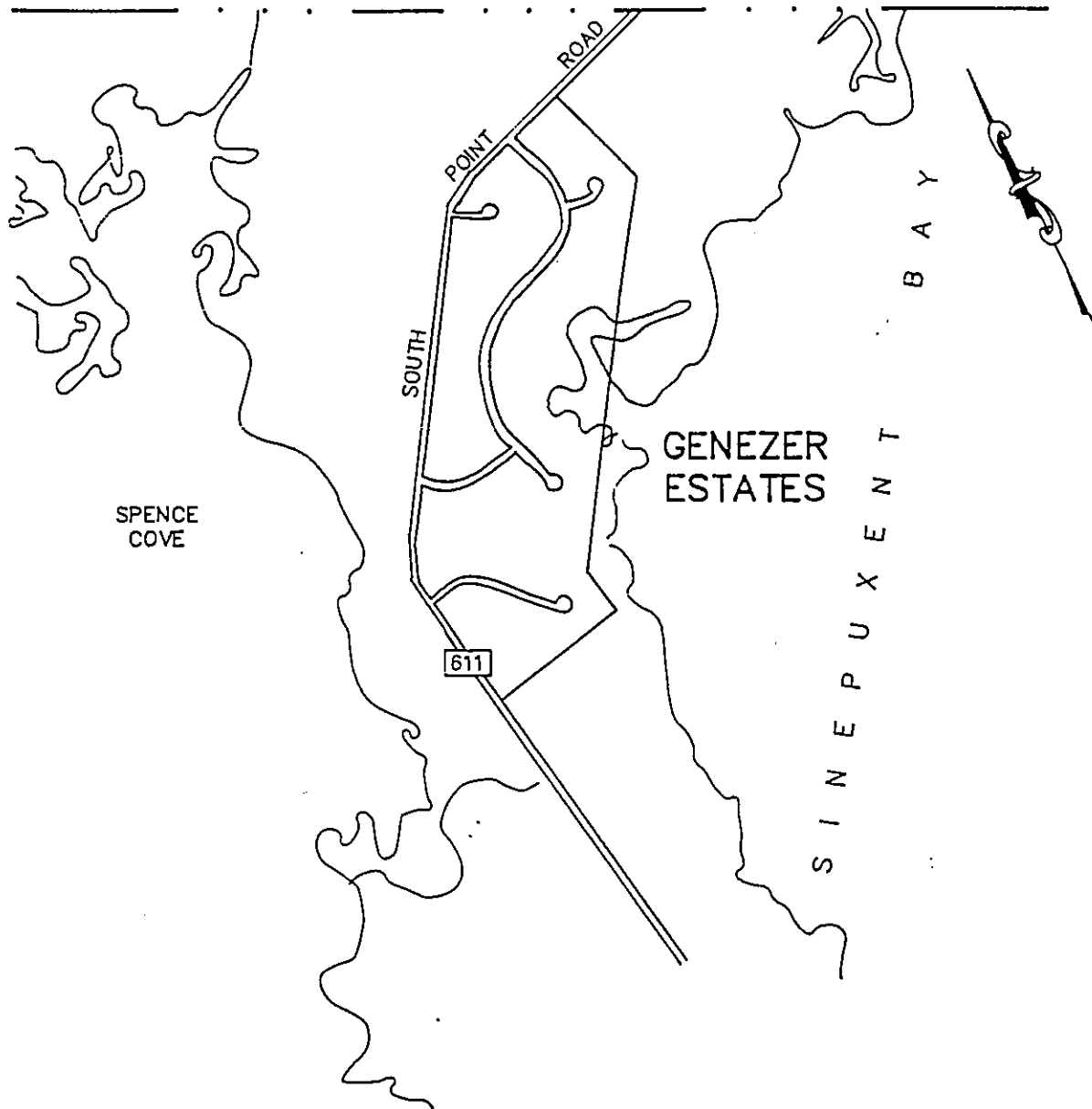
LEGEND

ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT	▲	△
SEWAGE PUMPING STATION	■	□
FORCE MAIN
INTERCEPTOR & OUTFALL	----	----




**LOWER SINEPUXENT NECK
SEWERAGE SERVICE AREA**

**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**










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CATEGORIES

-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS

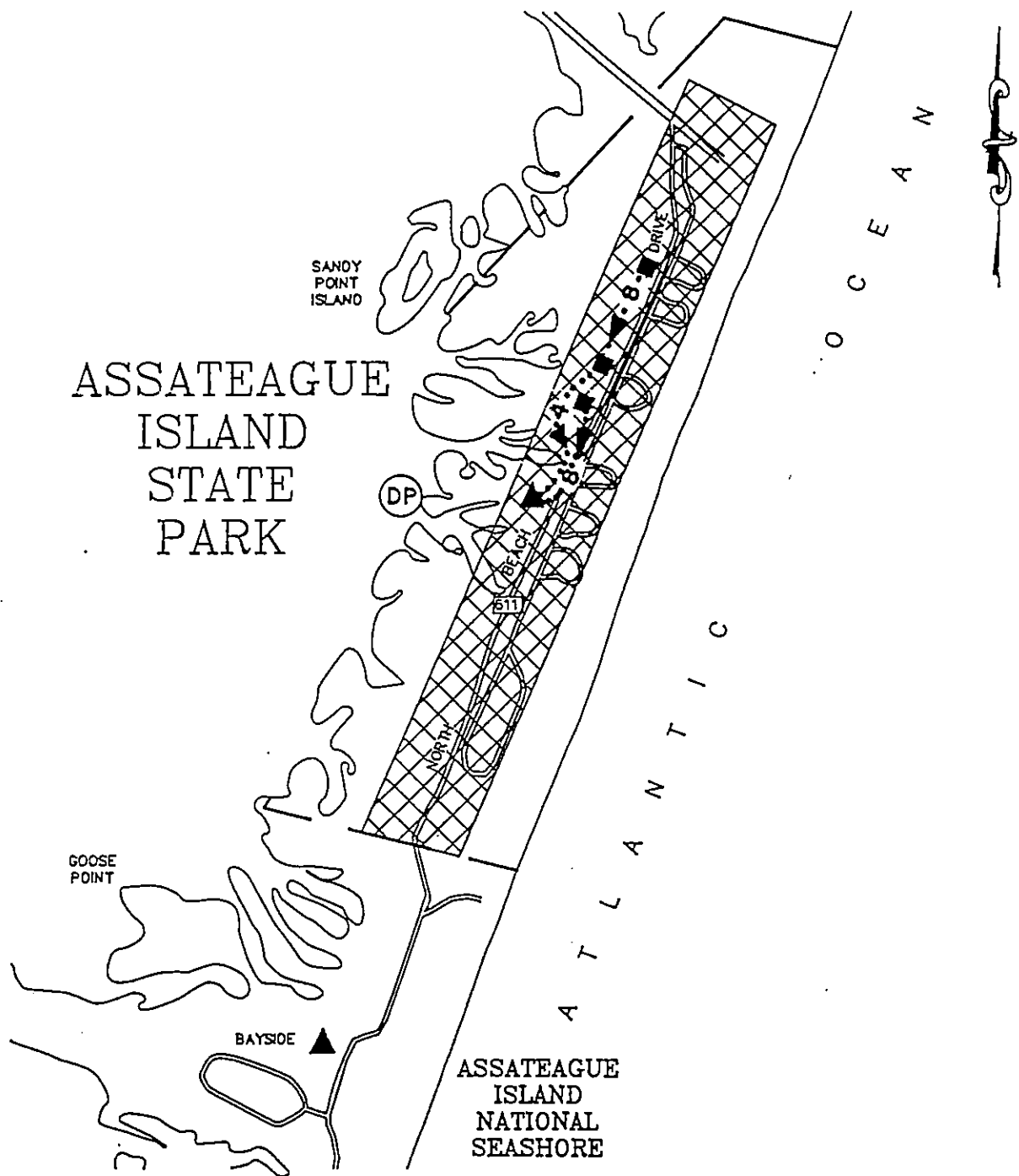
LEGEND

ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT		
SEWAGE PUMPING STATION		
FORCE MAIN		
INTERCEPTOR & OUTFALL		

LOWER SINEPUXENT NECK
SEWERAGE SERVICE AREA

WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN

 CONSULTING ENGINEERS AND SURVEYORS
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ASSATEAGUE
ISLAND
STATE
PARK

SANDY
POINT
ISLAND




GOOSE
POINT

BAYSIDE

ASSATEAGUE
ISLAND
NATIONAL
SEASHORE

A T L A N T I C
O C E A N

CATEGORIES

-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS

2000 0 1000 2000
SCALE : 1" = 2000'

LEGEND

ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT	▲	△
SEWAGE PUMPING STATION	■	□
FORCE MAIN
INTERCEPTOR & OUTFALL	----	----

ASSATEAGUE ISLAND
SEWERAGE SERVICE AREA

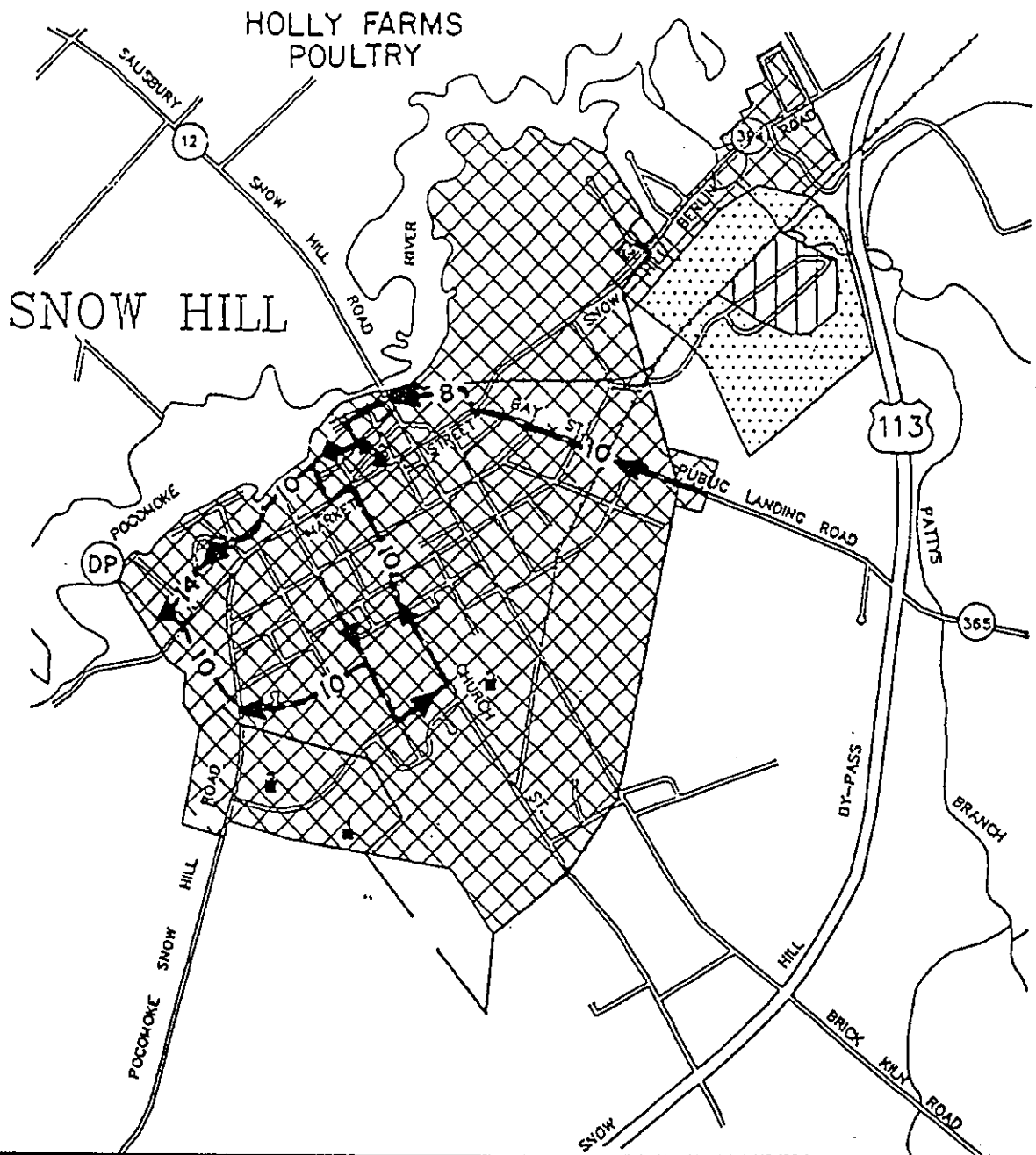
WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN



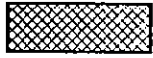


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DATE : JUNE 1990









FIGURE NO. : 4-21



CATEGORIES

-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS

LEGEND

ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT		
WATER STORAGE TANK		
WELL & PUMP		
TRANSMISSION MAIN		

2000 0 1000 2000

SCALE : 1" = 2000'




SNOW HILL & ENVIRONS SEWERAGE SERVICE AREA

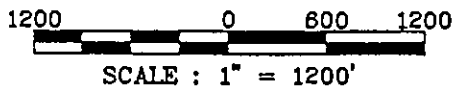
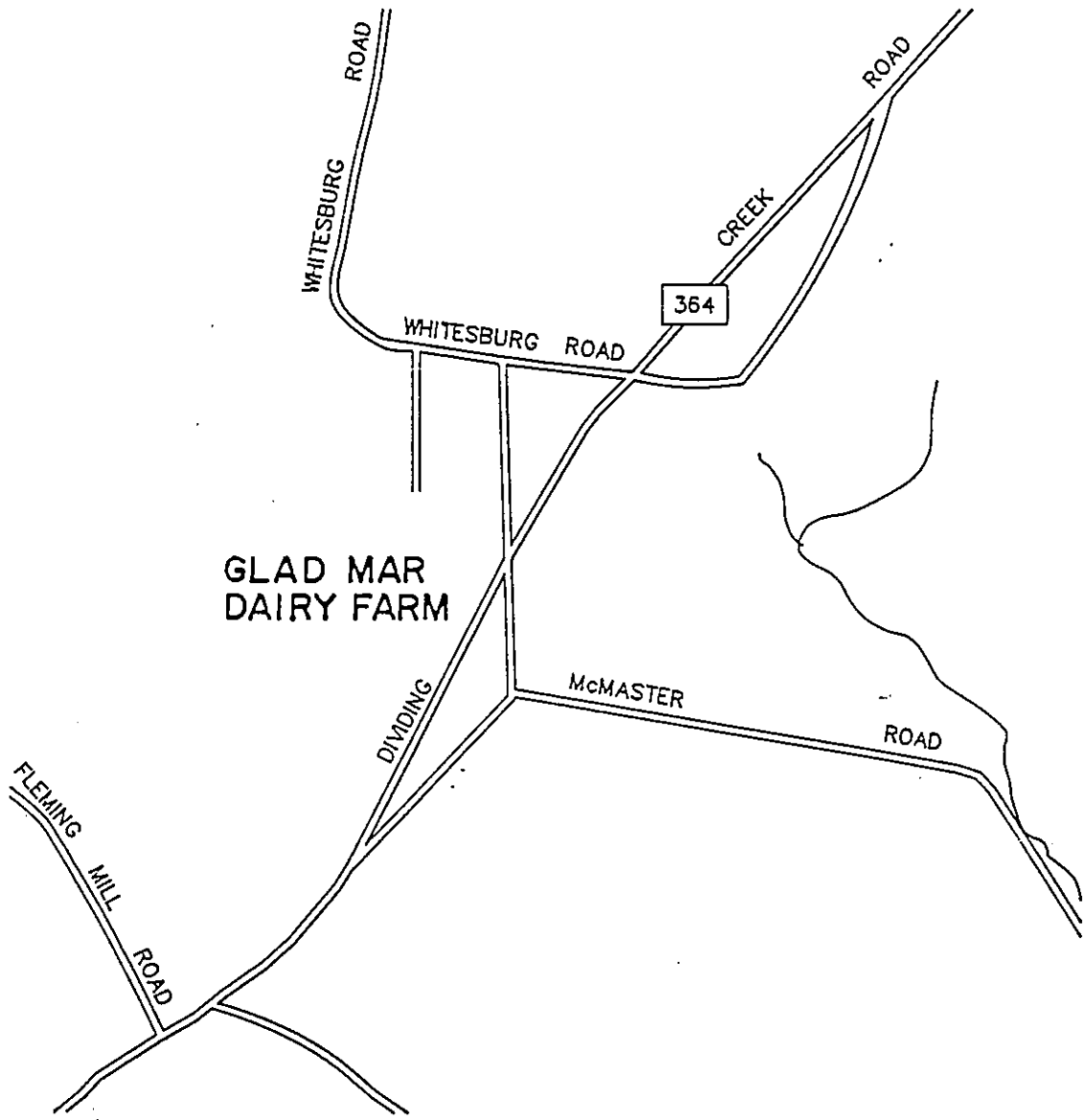
WORCESTER COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN

WORCESTER COUNTY
DEPARTMENT OF PLANNING, PERMITS
AND INSPECTIONS
SNOW HILL, MARYLAND

DATE: October 1995 FIGURE NO. 4-22









CATEGORIES


-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS

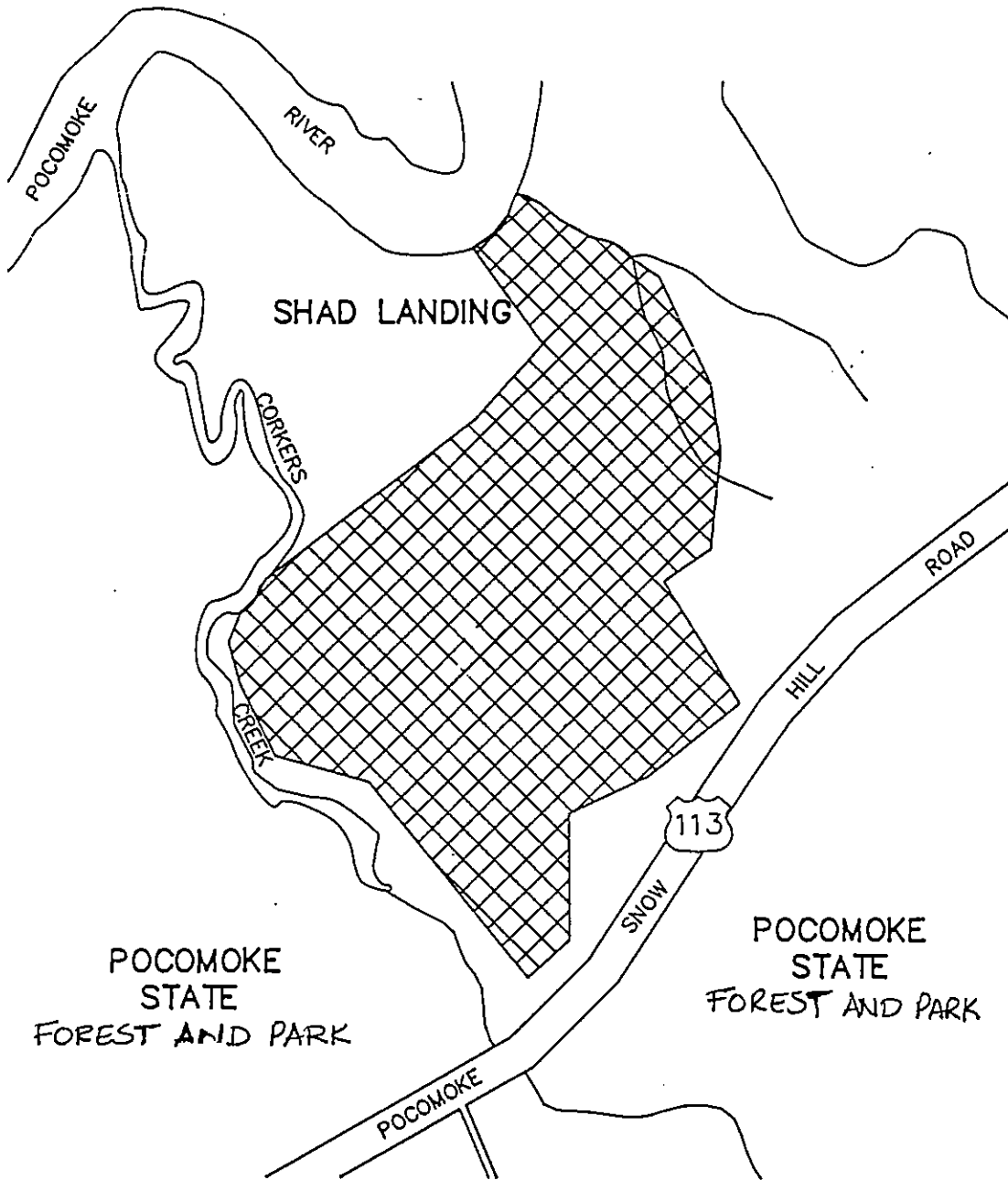


**DIVIDING CREEK & ENVIRONS
SEWERAGE SERVICE AREA**


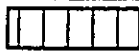

**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**

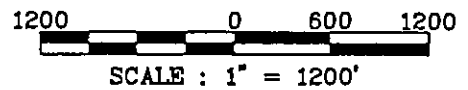
LEGEND		
ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT		
SEWAGE PUMPING STATION		
FORCE MAIN		
INTERCEPTOR & OUTFALL		

 CONSULTING ENGINEERS AND SURVEYORS
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CATEGORIES









-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS




**SHAD LANDING
SEWERAGE SERVICE AREA**

**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**

LEGEND

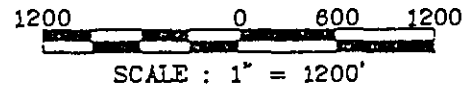
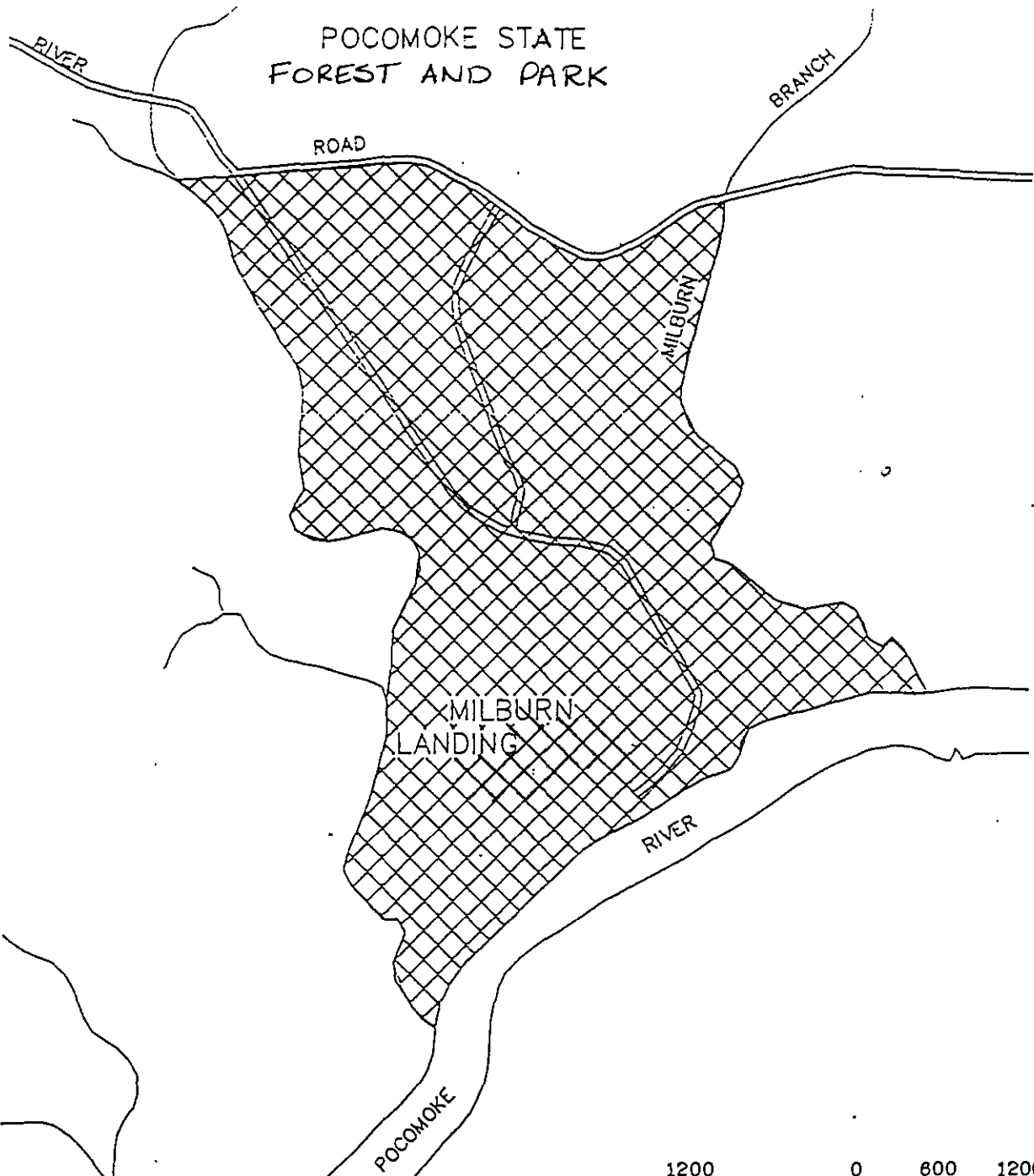
ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT		
SEWAGE PUMPING STATION		
FORCE MAIN		
INTERCEPTOR & OUTFALL		

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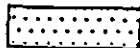
DATE : JUNE, 1990

FIGURE NO. : 4-25









POCOMOKE STATE
FOREST AND PARK



CATEGORIES


-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS

LEGEND

ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT		
SEWAGE PUMPING STATION		
FORCE MAIN		
INTERCEPTOR & OUTFALL		

**MILBURN LANDING
SEWERAGE SERVICE AREA**




**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**

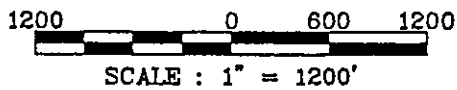


CONSULTING ENGINEERS AND SURVEYORS
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DATE : JUNE, 1990 FIGURE NO. : 4-24

CATEGORIES

-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS



LEGEND

ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT		
SEWAGE PUMPING STATION		
FORCE MAIN		
INTERCEPTOR & OUTFALL		

**GIRDLETREE & ENVIRONS
SEWERAGE SERVICE AREA**

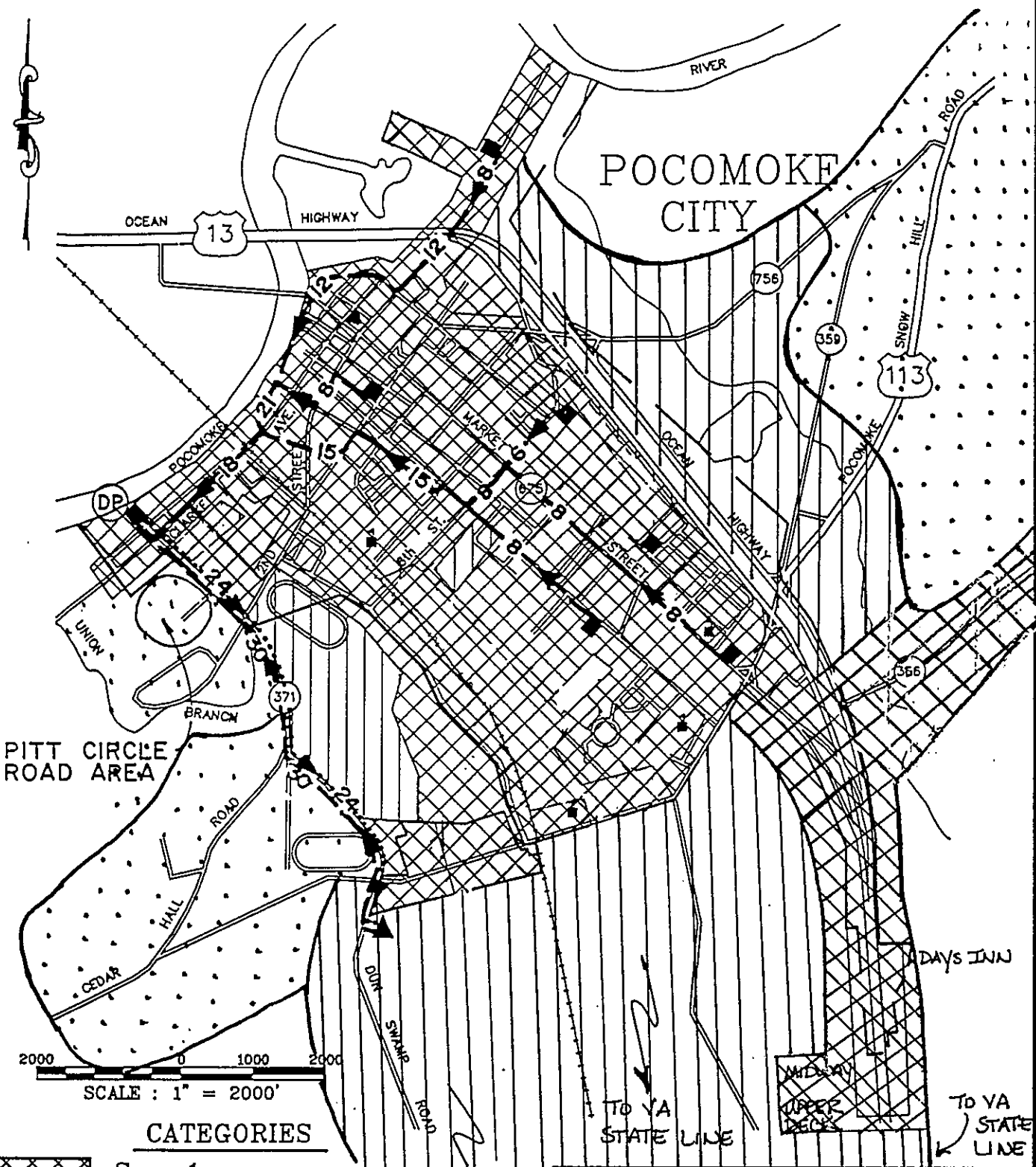
**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**



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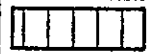

DATE : JUNE, 1990

FIGURE NO. : 4-26



2000 0 1000 2000
 SCALE : 1" = 2000'

CATEGORIES

-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS

LEGEND

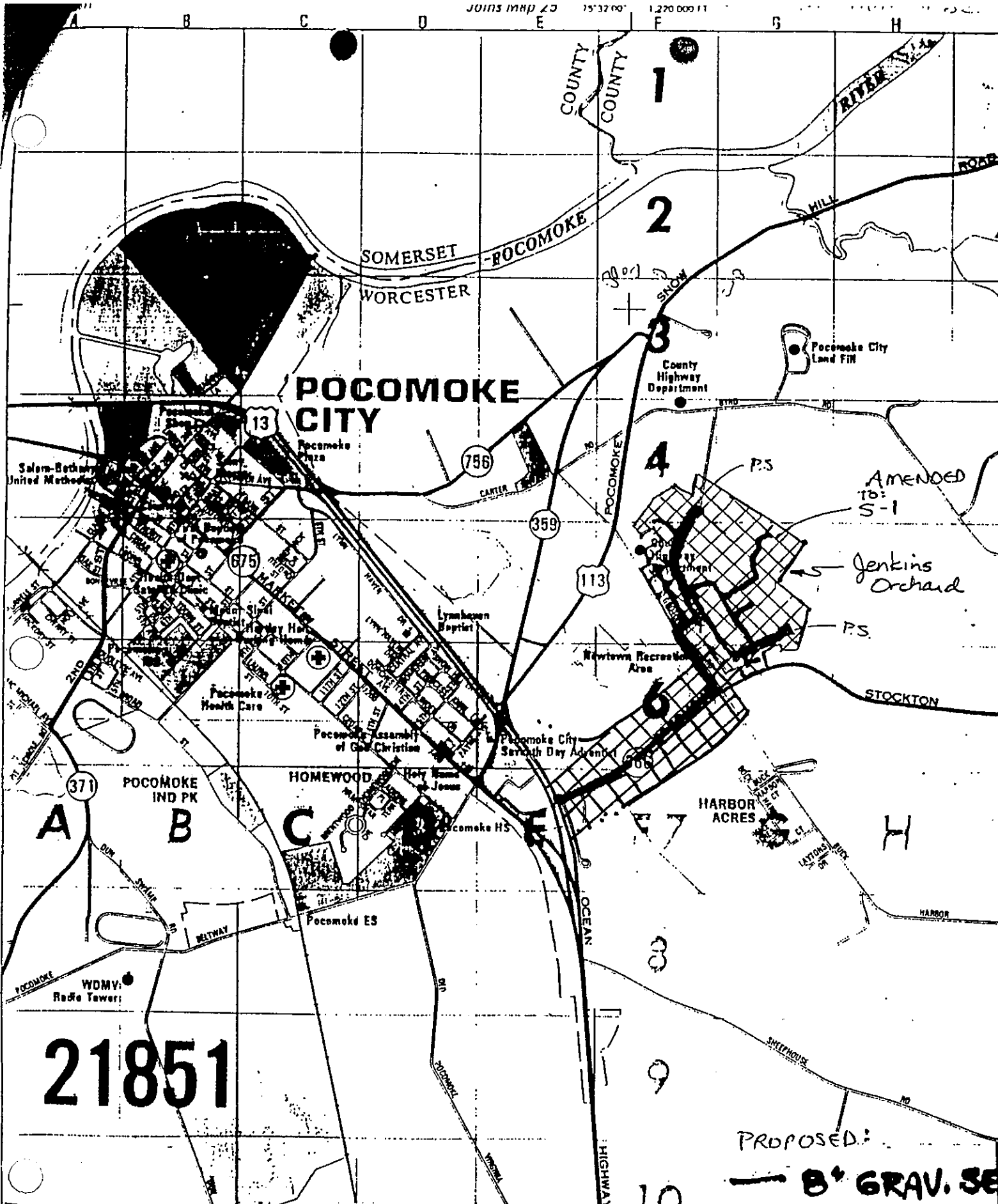
ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT	▲	△
SEWAGE PUMPING STATION	■	□
FORCE MAIN
INTERCEPTOR & OUTFALL	----	----

**POCOMOKE CITY & ENVIRONS
 SEWERAGE SERVICE AREA**

**WORCESTER COUNTY
 COMPREHENSIVE WATER
 AND SEWERAGE PLAN**

 CONSULTING ENGINEERS AND SURVEYORS
Andrews, Miller & Assoc., Inc.
 308 VERNON AVENUE & CAMBRIDGE WILMINGTON, DE 19813
 PHONE (301) 228 - 7117

DATE : JUNE, 1990 FIGURE NO. : 4-27



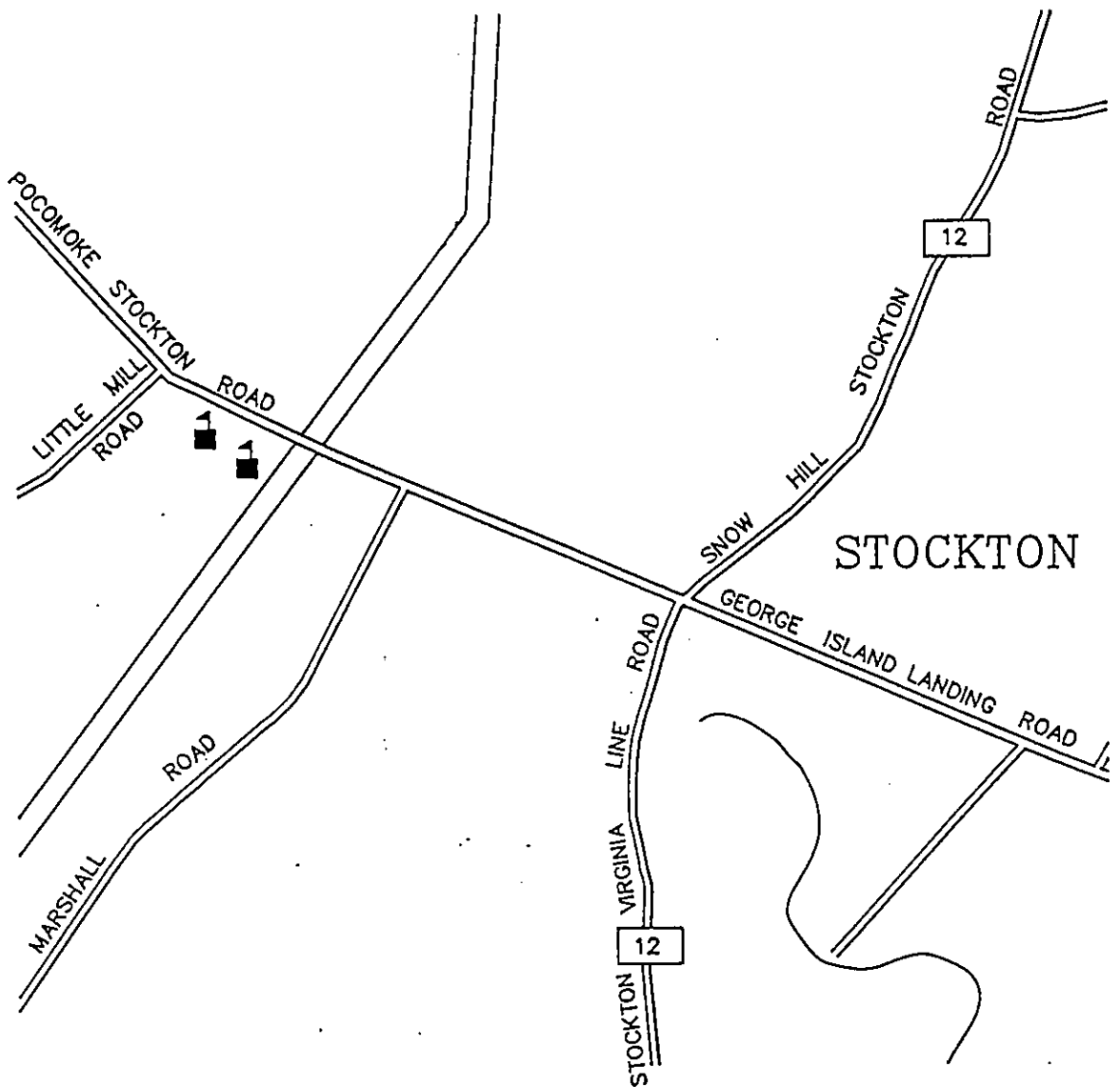
21851

FIGURE NO. 4-27 A




JENKINS ORI

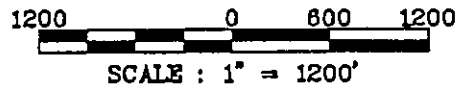
- PROPOSED:
- 8" GRAV. SE
 - 4" F.M.
 - 6" F.M.

SEE PLANS FOR DETAILED INFORMATION











CATEGORIES

-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS



LEGEND

ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT		
SEWAGE PUMPING STATION		
FORCE MAIN		
INTERCEPTOR & OUTFALL		

**STOCKTON & ENVIRONS
SEWERAGE SERVICE AREA**

**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**

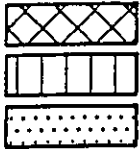


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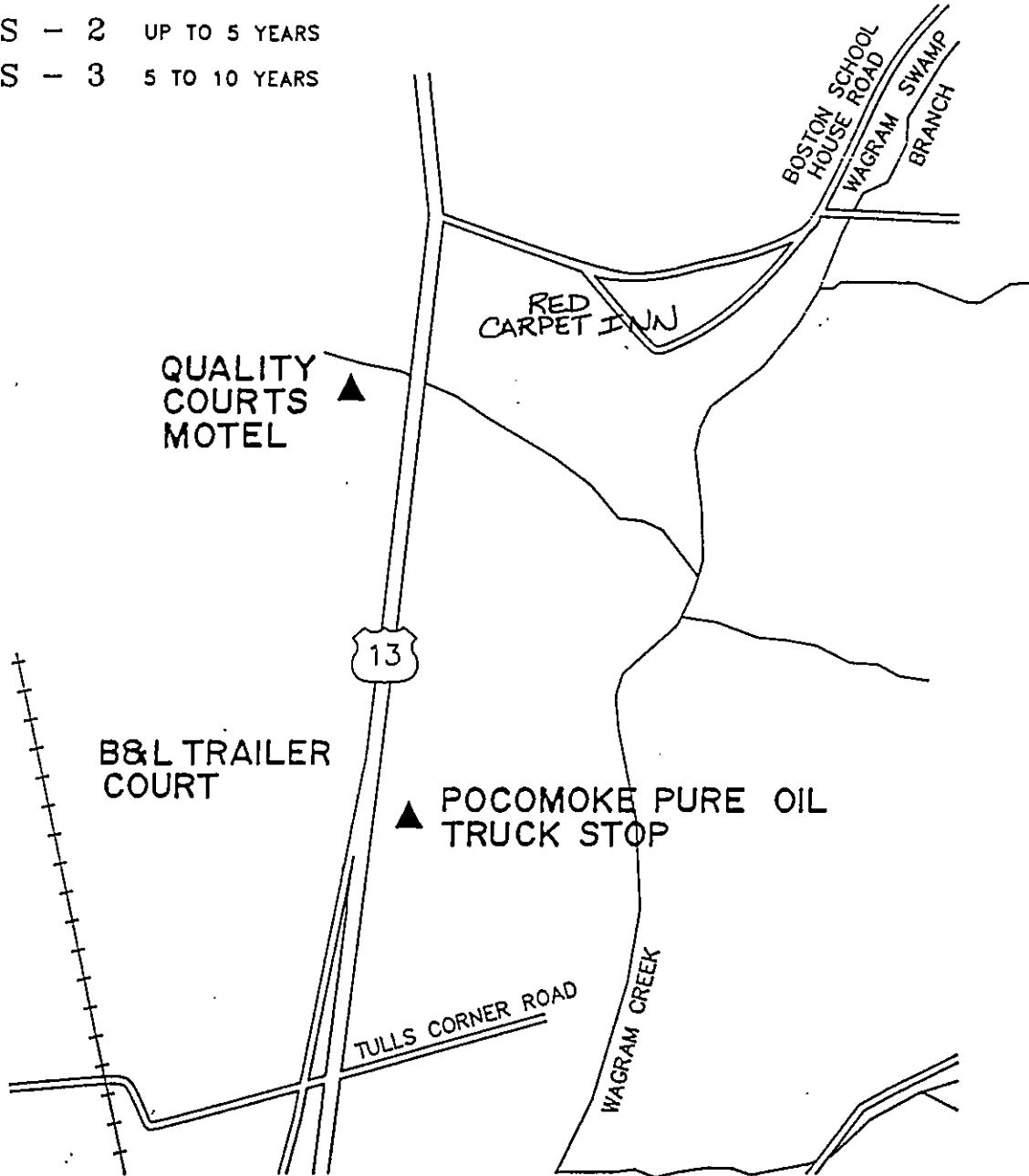
DATE : JUNE, 1990

FIGURE NO. : 4-28

CATEGORIES



- S - 1 EXISTING & PLANNED SYSTEM
- S - 2 UP TO 5 YEARS
- S - 3 5 TO 10 YEARS



1200 0 600 1200

SCALE : 1" = 1200'

LEGEND

ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT	▲	△
SEWAGE PUMPING STATION	■	□
FORCE MAIN
INTERCEPTOR & OUTFALL	---	---

**WAGRAM CREEK & ENVIRONS
SEWERAGE SERVICE AREA**

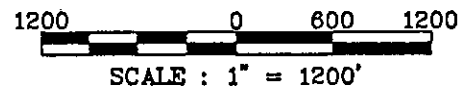
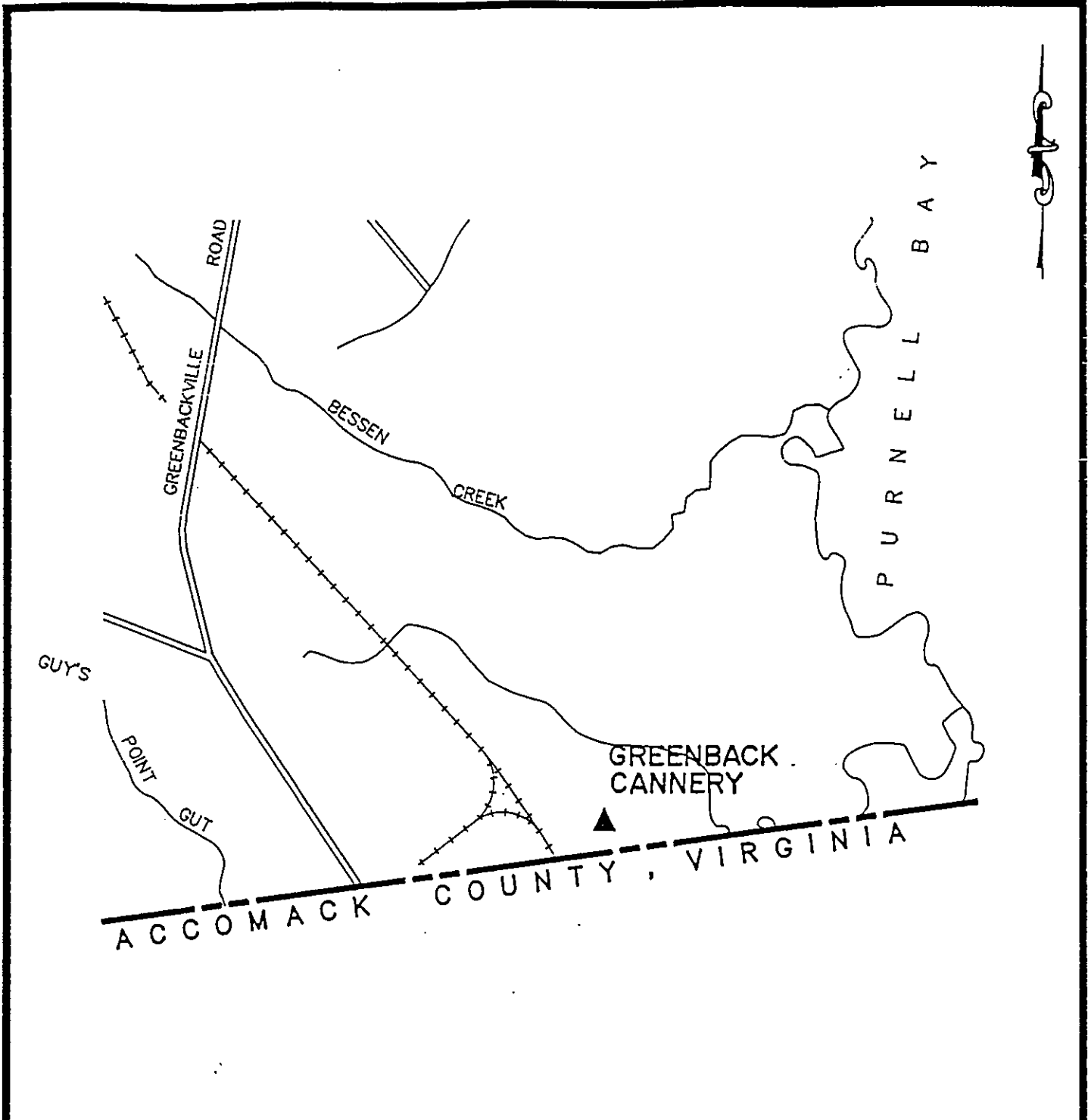
**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**






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DATE : JUNE, 1990









FIGURE NO. : 4-29



CATEGORIES


-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS

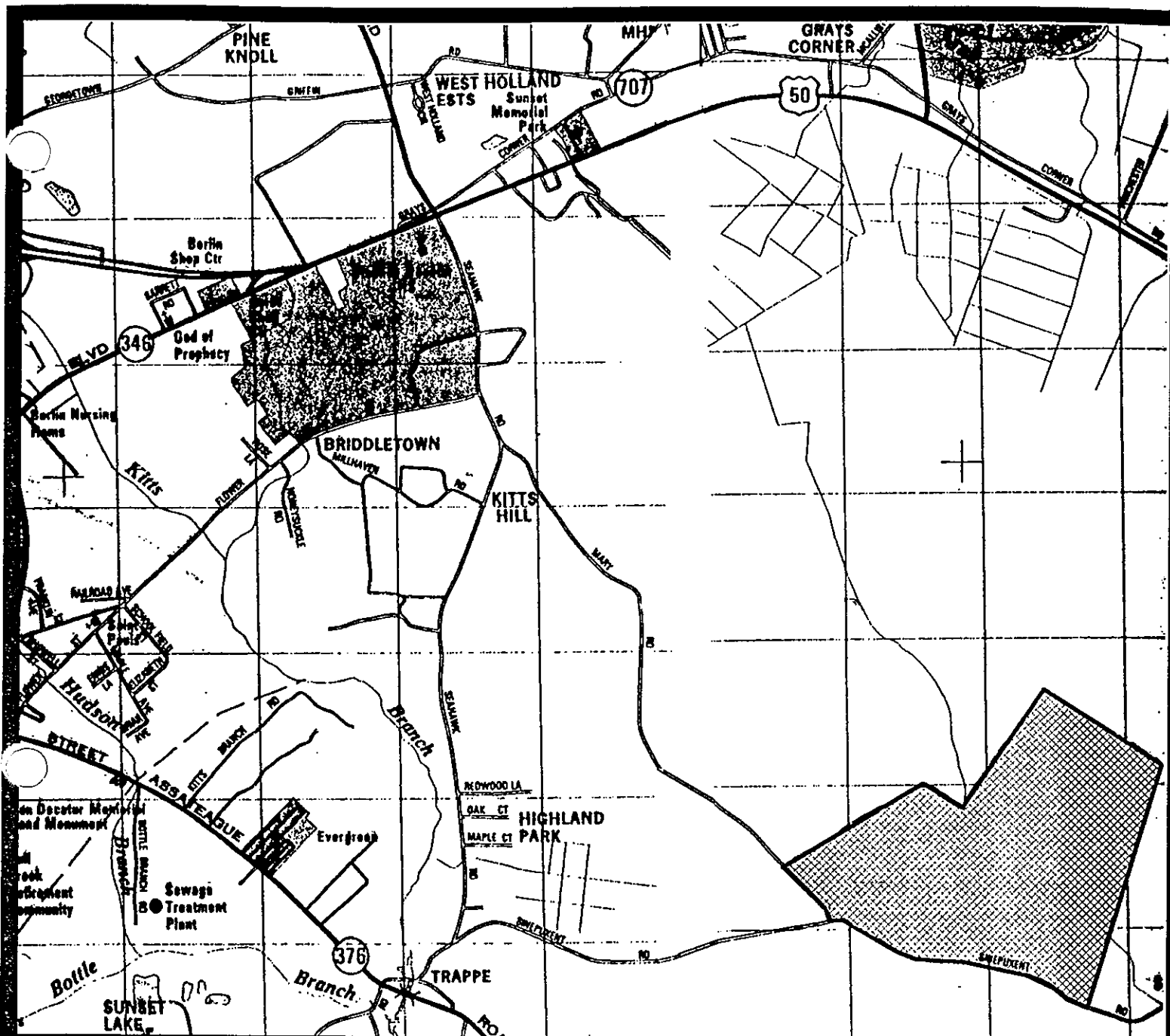
LEGEND

ITEM	EXISTING	PROPOSED
SEWAGE TREATMENT PLANT		
SEWAGE PUMPING STATION		
FORCE MAIN		
INTERCEPTOR & OUTFALL		




**GREENBACKVILLE & ENVIRONS
SEWERAGE SERVICE AREA**

**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**

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PHONE (301) 228 - 7117



CATEGORIES

-  S - 1 EXISTING & PLANNED SYSTEM
-  S - 2 UP TO 5 YEARS
-  S - 3 5 TO 10 YEARS

LEGEND

ITEM	EXISTING	PROPOSED
WATER TREATMENT PLANT	▲	△
WATER STORAGE TANK	◆	◇
WELL & PUMP	●	○
TRANSMISSION MAIN	— — — — —	— — — — —

2000 0 1000 2000

SCALE : 1" = 2000'

**MARINERS'S COUNTRY DOWN
SEWER SERVICE AREA**

**WORCESTER COUNTY
COMPREHENSIVE WATER
AND SEWERAGE PLAN**

WORCESTER COUNTY
DEPARTMENT OF PLANNING, PERMITS
AND INSPECTIONS
SNOW HILL, MARYLAND

DATE: October 1995 FIGURE NO. 4-31

APPENDIX A

12

- 8 -

SECTION A

WORCESTER COUNTY



Groundwater Protection Report

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INTRODUCTION

Background

On November 18, 1985, the State of Maryland adopted new regulations governing the installation of private sewage disposal systems (COMAR 26.04.02). These regulations have incorporated the concept of maintaining a minimum four-foot unsaturated treatment zones below the bottom of on-site sewage disposal systems for treatment of effluent. Available data and research indicate that a two to a four foot depth of suitable, unsaturated soil material will provide a high degree of treatment of septic tank effluent. The depth of unsaturated soil material needed below the bottom of On-site systems for adequate treatment is primarily dependent on the soil properties. Generally more permeable soils may require greater unsaturated depths than less permeable soils having higher clay content.

Many areas within the Maryland Coastal Plain province, especially on the Lower Eastern Shore, have seasonally high water table at depths that cannot provide the four foot treatment zone. Previous regulations have allowed Talbot, Dorchester, Wicomico, Somerset and Worcester Counties to discharge septic tank effluent directly into shallow aquifers under the following conditions:

1. Areas of utilization should be confined to those portions of each county where surface soil formations consist of a thick layer of impermeable clay underlain with extensive deposits of water - bearing sand.
2. A minimum separation distance of 150 feet should be maintained between any individual water supply and sewage disposal facilities.
3. Maximum density of housing in these areas should not exceed 160 residences per square mile.

4. Systems are to be empirically sized based on county experience.
5. Wells for potable water supply utilizing shallow aquifers may not be permitted if on-site systems discharge directly to groundwater. This practice has been referred to as groundwater penetration and is used routinely in these counties on necks, peninsulas and islands.

Other coastal plain counties, while prohibited by regulation from using groundwater penetration, have utilized treatment zones that vary from less than four feet. Several of these counties have been granted variances to allow groundwater penetration. In addition, many counties have had to resort to groundwater penetration occasionally to remodel failing on-site systems when no other conventional alternative was available.

Local county health departments that routinely use groundwater penetration have not associated any major public health problems with these systems. Extensive monitoring and well documented studies of the impacts of these systems on ground water or surface waters, however, have not been conducted.

Data Used in Preparing Report

This report was prepared using published groundwater reports and maps by Maryland Geological Survey, U.S. Geological Survey, Soil Conservation Service, and selected consultant's hydrogeologic and soil evaluation reports. Records of hundreds of water wells were available from files of well permits and completion reports; these records were carefully reviewed and selected records were used. Worcester County Environmental Programs files contain records of soil descriptions and percolation tests which were useful in preparing this report. Test boring records were used from State Highway Administration, Division of Waste Management, and Worcester County Central Landfill Facility.

Types of Septic Systems in County

On-site septic systems in Worcester County normally consist of a septic tank, a distribution box and a drain files laid out in tow or more shallow trenches that have been partially filled with sand. The tile field distribution line, normally composed of four inch diameter perforated PVC pipe, is laid in the trench containing about six inches of gravel or crushed stone and covered with about two inches of the same material. The depth of the trench depends on the permeability of the soil and the amount of effluent generated. Normally, septic systems are sized according to the number of bedrooms and the results of the perc test.

In most cases, the effluent flows from the septic tank, through the distribution box to the tile field by gravity, but in some cased the effluent must be pumped to the tile field when it is at a higher elevation than the septic tank outlet. Normally this occurs because the tile field had be installed at a shallow depth because of ground water.

Current County Policy Regarding Treatment Zone

Worcester County has, for several years, if at all possible, required at least a two foot treatment zone measured during the wet season (February thru April). For the most part, however, sewage disposal systems were installed that discharged sewage effluent directly into the zone of saturation (below the water table). The practice usually consisted of excavating deep trenches through the surface silts and clays to a shallow saturated sand and backfilling with coarse sand. In the majority of the cased, at least a one foot treatment zone in the sand fill is maintained to provide some degree of treatment under wet season conditions realizing that a much greater treatment zone exists during the major portion of the year. The one foot treatment zone also provides for a greater operating head and a margin of safety realizing that even though the water table readings were during wet season conditions, it is possible for higher groundwater elevation to exist.

AQUIFER SYSTEM IN WORCESTER COUNTY

General Hydrogeologic Framework

Worcester County has a abundance of sand and gravel aquifers that yield substantial quantities of groundwater of generally good quality. In most areas of the County, adequate quantities of good quality groundwater can be obtained within the upper 100 feet from the land surface. A few areas have some problems of high nitrate concentration, but these areas are not extensive, Fairly high iron concentration in groundwater is the most common water quality problem in the County, but this presents no health hazard. In some cases wells have been drilled to 250 feet to avoid iron problems at the shallow depths; some of these deep wells in the southern portion of the County have somewhat high concentrations of sodium. The town of Ocean City has experienced some saltwater intrusion in the municipal supply and a study is presently underway to determine what measures can be taken to prevent further degradation. Figure 2 shows the areas of the county where the principal aquifers are used.

By far the most commonly used aquifer in the County is the (Beaverdam Sands) Salisbury Aquifer. It is generally considered to be an unconfined aquifer, although in many areas it is partially confined by a shallow, somewhat leaky silt and silty clay layer. Water is recharged to this aquifer by local precipitation. Groundwater in the Salisbury aquifer generally moves laterally fairly short distances to nearby perennial streams or marshes. In contrast, groundwater in the deeper confined (artesian) aquifers such as the Manokin, or Pocomoke aquifers flows laterally for miles. Figure 3 is a cross section showing the principal aquifers and confining layers in Worcester County.

PRINCIPAL AQUIFERS

Salisbury Aquifer

Aquifer Description

The Salisbury aquifer is composed of shallow sand and gravel deposits with a few discontinuous clay and silt layers. The Salisbury aquifer has been referred to by several other names in various groundwater reports including the Following: Beaverdam sand, red-gravelly sand, Quaternary aquifer, Pleistocene aquifer, Pensauken Formation, and Columbia aquifer. The Beaverdam sand and the red-gravelly sand are mapped as separate geologic units, but they function as a single hydrogeologic unit. The Columbia Group, as defined by Jordan (1962) and later used by Backman (1984), also includes the Walston Silt which is a confining layer (0-20 feet thick) and the Parsonsburg Sand (0-30 feet thick). Table 4 shows a simplified outline of the nomenclature used in various groundwater reports and geologic studies. This table is provided to help the reader sort out the sometimes confusing different nomenclature used in various groundwater reports.

For the purpose of this report, it is important to emphasize the separation of the Parsonsburg Sand at the surface from the (Beaverdam Sand) Salisbury aquifer by the Walston Silt confining layer which overlies the (Beaverdam Sand) Salisbury Aquifer over extensive areas in the County. In the central part of the County, the Salisbury aquifer is overlain by the Omar Formation which is also a confining layer. In some areas of the County along the Pocomoke River, the Salisbury aquifer is overlain by the Kent Island Formation which contains varied lithologies, but is mostly composed of confining material. These shallow confining layers afford the Salisbury Aquifer and deeper confined aquifers considerable protection from shallow groundwater contamination. However, in the southern portion of the County, the (Beaverdam Sand) Salisbury aquifer is nonexistent, therefore, the Kent Island Formation is thicker providing additional protection to the Pocomoke and Manokin aquifers.

Water Quality

The quality of water in the Salisbury aquifer is good in most of Worcester County. There are areas where nitrate concentrations exceed EPA mandated. These limits are required by EPA as part of the Federal Primary Drinking Water Standards; the limit for nitrate nitrogen is 10 mg/l. Nitrate concentrations in the Salisbury aquifer range from 0.0 to 135.90 mg/l No₃ as N, based on 196 water samples. The high nitrate concentrations are generally due to contamination from fertilizer, manure stockpiling, or sewage effluent. High nitrate concentration in groundwater is more common in formally tilled areas than in woodland areas. Nitrate problems tend to be more common in areas where there are no clay or silt layers in the upper 15 to 20 feet or where confining layers are thin or discontinuous. Figure 4 shows locations of wells in the County in relation to the geological formations. From this it can be seen that the majority of the wells above 10 mg/l are in the Ironshire Formation, where for the most part confining layers do not exist. It also shows that in the Synepuxent Formation, which also does not contain sufficient continuous confining units, that no wells with high nitrates above 10 mg/l exists. In this area, the contamination from farming and sewage disposal affects the surface waters more than the drinking water supplies.

Confining layers limit the downward movement of groundwater within the zone of saturation. Even "leaky" confining layers tend to concentrate much of the groundwater flow in the overlying saturated sands. Confining layers also limit downward movement of contaminants dissolved in the groundwater. In addition to concentrating the flow above the confining bed, clays in the confining beds absorb many contaminants in the groundwater that leaks through the confining material.

The iron content in groundwater in the Salisbury aquifer ranges from 0.0 to 33.56 mg/l, based on 269 samples.

Manokin Aquifer

Aquifer Description

The Manokin aquifer is part of the Yorktown/Chohansey formations of the Miocene age. The Manokin outcrops beneath the Salisbury aquifer and the Kent Island Formation in western Wicomico County in a band about five miles wide, east of the Nanticoke River. The Manokin dips gently to the southeast -- at the Wicomico/Worcester County line, the top of the Manokin is about 200 feet deep. (See Figure 6) The Manokin consists of about 100 feet of gray, medium to fine grained sand. The yield of wells in the Manokin is adequate for domestic, commercial and most industrial uses.

Water Quality

Water from the Manokin is generally soft, calcium-magnesium bicarbonate water with low chloride and total dissolved solids concentrations. The chief limitation to use of the water from the Manokin has been drilling costs and the limited information on iron content. The iron concentrations in the Manokin range from 0.0 to 7.07 based on 49 samples.

MINOR AQUIFERS

Parsonsburg Sands

Aquifer description

The Parsonsburg Sand is a thin surficial deposit ranging in thickness from 0 to 30 feet. The Parsonsburg is mostly sand that is light colored, mostly medium grained but with some coarse sand and some silty and clayey deposits. It is most widespread in the Central and Western part of the County where it occurs in long linear ridges that are clearly defined on topographic maps.

The Parsonsburg Sand is used as an aquifer in a few isolated localities but is for the most part too thin and shallow to be considered a major aquifer. The county does not currently issue permits for shallow well points for domestic supply because of the danger of contamination with sewage effluent which is likely to be disposed of in the same shallow deposit. Over fairly extensive areas thin deposits of Parsonsburg Sand afford a convenient receiving stratum for disposing of sewage effluent. Clay and silt deposits (Walston Silt and Omar Formation) beneath the Parsonsburg will generally not pass percolation tests.

Water Quality

The water from the Parsonsburg Sand is generally low in iron but subject to contamination by nitrate and other contaminants because of its shallow depth and thin nature. In fact, few data are really available on its water quality because few new wells producing from the Parsonsburg have not been sampled for water quality or have been replaced with deeper Semi-confined wells in the (Beaverdam Sand) Salisbury aquifer.

Pocomoke Aquifer

Aquifer Description

The Pocomoke is a laterally extensive confined aquifer that outcrops beneath younger sediments in eastern Wicomico County. The intake belt of the Pocomoke is about 3 miles wide and runs between Pittsville / Willards area and the Wango / Nassawango Church area. These sands are buried beneath sands and gravel of the Salisbury aquifer from which the Pocomoke receives much of its recharge. The Pocomoke dips gently to the southeast and is more than 200 feet deep at Ocean City. (See Figure 5)

The Pocomoke is composed of gray medium to fine grained sand with some lenses of coarse sand and brown and blue clay. It is about 45 feet thick.

Water Quality

Water in the Pocomoke aquifer contains high concentrations of iron and for this reason is seldom used for water supplies. The few data available indicate the iron concentration in the Pocomoke in the eastern part of the county is generally more than 5 mg/l. The iron concentrations of four water samples range from 0.0 to 43-90 mg/l based on 193 samples.

MANAGEMENT AREAS

Introduction / Background

The intent of the groundwater protection reporting is to systematically assess groundwater resources available, including both physical and quality characteristics, in order to develop management strategies for near surface groundwater appropriate to their current and potential use as water supplies. Such assessments are necessary to examine the effects of past sewage disposal and well construction practices on available water supplies and developing alternative practices, if necessary to safeguard existing and best potential sources of future ground water supplies. Further, the effort seeks to provide a management tool for the development community and Environmental Programs Office which outlines options for on-site sewage disposal in different areas of the County which are both sensitive to hydrogeologic conditions and protective of valuable ground and surface water resources and the public health. Both the broad strategy and the management tool are imperative for effective management of the groundwater resource. The document will serve as a basis for controlling all sources of groundwater pollution. Since minimum lot sizes and treatment zones are used as a basis for management within this report, it is realized that minimum lot sizes do not apply to all forms of development. In those cases lot sizes will be determined by application rates. Therefore, where reduced treatment zones or direct penetration are used the application rate shall not exceed 450 gallons per day for every two acres of property developed.

This section outlines on-site sewage disposal and well construction practices which are commensurate with the groundwater management areas delineated in the report as supported by the foregoing discussion at aquifer systems. As pressure to convert agricultural and forested lands to residential and commercial uses increases in the County, management of on-site sewage disposal to protect only those groundwater resources of value as water supplies becomes increasingly important. Increased residential development not only increases the volume of pollution from on-site sewage disposal systems and well construction practices be developed which are both consistent among similar hydrogeologic settings and technically supportable.

Rational for Selecting Management Areas

The management areas outlined in this report represent an attempt to generalize those areas: (1) with little or no shallow confining material which therefore require maximum protection of on-site water supply sands (Management Area A); and (2) those areas where more than 5 feet of shallow confining material (Management Area B) separates shallow permeable layers used for disposal of sewage effluent from deeper water bearing sands. Management Area B is divided into two sub-areas: Management Area B2 has thick surficial confining beds where deep septic systems may penetrate groundwater and Management Area B1 with thinner surficial confining beds where systems may have a reduced treatment zone but must be shallow to avoid contaminating the underlying aquifer. It should be stressed that areas outlined on the map in figure 1 are generalized and based on limited data in some places. Within each management area, there may be localized areas which require reclassification when additional data become available. The distribution of the management areas will be discussed in greater detail subsequently.

Management Area "A"

Description

Management Area "A" is outlined in figure 1. It is comprised largely of the eastern portion of the County surrounding Bishopville and extends southward along the Berlin Scarp just east of Berlin along the bay front to the Maryland - Virginia line encompassing the entire eastern part of the County. One smaller area is located in the western portion of the County along the border of Nassawango Creek, north of MD Route 12. These are areas where confining beds of at least five feet in thickness are not consistently present within 20 feet of the ground surface to protect near surface aquifers from contamination and where these aquifers have value as existing and potential water supplies. Figure 2 presents a map showing areas where principal aquifers are used. It can be seen that Management Area "A" includes areas where groundwater supplies are derived from the portion of the Salisbury Aquifer where confining layers are non-existent or very thin.

Management Strategies

To protect the existing and potential water supplies available from shallow aquifers in Management Area "A", sewage disposal practices which maximize effluent treatment should be employed. Table 1 represents on-site sewage disposal and water supply options which are appropriate to provide the required protection. The most applicable technology must be determined through on-site evaluations of each site (including soil, topography, and drainage characteristics). A reduction of the minimum four foot treatment zone can be allowed where finer soil textures or fill materials along with in-situ soils can provide adequate sewage effluent renovation for most wastewater constituents of concern (e.g., microorganisms, organic matter, solids, and phosphorus). Protection of valuable surficial aquifers from nitrogen pollution is provided by controlling on-site systems density with minimum lot sizes. Minimum lot sizes of two acres provides a mechanism for nitrogen dilution which should ensure

groundwater levels of No_3 will remain at or below 10 mg/l where this level is not already exceeded (see appendices B & C for nitrogen dilution calculations).

Sewage disposal trenches should always be installed to maximize the soil treatment zone (i.e., as shallow as possible) utilizing above grade fill, if necessary. The thicker the treatment zone utilized, the better the sewage effluent renovation derived.

The recommended minimum well depth of 50 has for the most part provided protection against nitrate pollution from surface sources. The exception to this has been in Management Area "A" (see figure 4) where no confining units exist to protect the Salisbury aquifer. In this area the nitrate levels range up to 135 mg/l to depths as great as 100 feet. It is believed, in most cases, that elevated nitrate levels in the remainder of the county are due to poor well construction and siting practices. Previous permitting practices allowed wells to be located close to chicken houses when the well was only for agricultural purposes. In a lot of cases, this practice allowed a direct route for nitrate contamination from the chicken houses. This practice is no longer permitted and through enforcement of proper well construction and grouting practices, should alleviate further problems to a large extent. Additionally, further protection should be afforded to wells in Management Area "A" by requiring well construction to include grouting to the top of the screen. In areas such as Management Area "A" in which there is a heavy dependence on surficial groundwater supplies, care should be taken to eliminate introduction of household chemicals (e.g., solvents, degreasers, pesticides, etc.) into the ground through septic systems. Homeowners should be informed of the risks to sewage disposal systems and to water supplies, in particular their own, from such activities and appropriate alternative disposal options.

Management Area "B1"

Description

Management Area "B1" is shown on figure 1. It largely comprises the western portion of the County bordered on the north by Wicomico County, on the west by Somerset and the south and east by the Pocomoke River. This area has surficial confining beds which protect the underlying Beaverdam Sands, but in which the confining beds may be thin and could be breached with deep sewage disposal system trenches.

In this portion of the County, the Walston silt and the Omar Formation (see figure 3) underlay the Parsonsburg Sand and provide confining material to protect the underlying Beaverdam Sands from the downward movement of surface or near surface contaminants.

Management Strategies

To protect the existing and potential water supplies available from the Beaverdam Sands, sewage disposal trenches in Management Area "B1" employ a reduced unsaturated soil treatment zone, but must be shallow to avoid breaching surficial confining beds and contaminating the underlying Salisbury Aquifer. Table 2 presents on-site sewage disposal and water supply options which are appropriate to protect the Salisbury Aquifer while allowing use of overlying sand for sewage disposal. As in Management Area "A", soil treatment zone thickness should be maximized to reduce pollutant impacts on surface waters from shallow groundwater discharged and to optimize system hydraulic performance. Minimum lot sizes of one to two acres are provided for contamination dilution where less than 4 feet of unsaturated soil treatment zone is employed (see Appendices B & C for nitrogen dilution calculations). Again, the most applicable disposal technology within the options given must be determined from site specific characteristics assessed in a field evaluation.

Well construction practices in Management Area "B1" shall preclude any new users of the Parsonsburg sand for water supply. Figure 2 illustrates the principal aquifers used in Management Area "B-1" are the Beaverdam sands and the Manokin, and figure 3 illustrates that these aquifers are confined or semi-confined in Management Area B-1. Wells constructed in Management Area B-1 shall be drilled to minimum depth of 50' and grouted to the top of the screen. The well driller shall inform the Environmental Programs Office prior to the grouting of wells constructed in Management Area B-1 so that an inspection of the grouting operation can be performed. A minimum of 10% of all wells constructed in Management Area B-1 shall be inspected by the Environmental Programs Office and so noted in the file records. A minimum separation distance of 100' shall be maintained between any sewage disposal system and reserve areas and any water supply well.

MANAGEMENT AREA B-2

Description:

Management Area B-2 is outlined in figure 1. It comprised most of the central portion of the County extending northward to the Delaware Line, south to the Virginia line, west to the Pocomoke River and east to the Berlin Scarp. It is characterized by the presence of thick surficial confining beds of the Kent Island and Omar formations which protect the underlying aquifers from the downward movement of surface and near-surface contaminants. Water supplies in Management Area B-2 are derived principally from well drilled into the semi-confined Salisbury Aquifer and the confined Pocomoke and Manokin aquifers.

MANAGEMENT STRATEGIES

Table 3 outlines on-site sewage disposal systems and water supply options which are appropriate for the hydrogeologic conditions prevalent in Management Area B-2. These options allow for direct penetration of shallow ground water which, given proper well construction requirements, should protect existing and potential water supply resources available in the underlying confined aquifers. Large areas of poorly drained and slowly permeable soils, such as Othello series, predominate in Management Area

B-2 and indicate the most likely option to be employed, as it has in the past, will be direct ground water penetration. However, where surface soils are better drained and more permeable, sewage disposal systems employing an unsaturated soil treatment zone should be utilized as the favored alternative given reasonable indication of satisfactory hydraulic performance. Minimum pit sizes are required to provide contamination dilution and filtration to minimize degradation of ground and surface water resources (see Appendices B and C for nitrogen dilution calculations).

As in Management B-1, Wells constructed in Management Area B-2 shall be drilled to minimum depth of 50' and grouted to the top of the screen. Well drillers shall inform the Environmental Programs Office prior to grouting and the County shall inspect a minimum of 10% of all wells constructed in Management Area B-2, retaining a record of inspection for their files. A Minimum separation distance of 100' will be required between water supply wells and sewage disposal systems and reserve areas employing an unsaturated soil treatment zone or direct ground water penetration. However, when a Bermed Infiltration Pond is used as the method of disposal the well separation shall be 150'. Any existing unconfined wells (less than 50' in depth) located in Management Area B-2 shall be located a minimum of 200' from any sewage disposal systems or replacement areas.

Innovative & Experimental On-site Sewage Disposal Systems

The State Department of the Environment has a effective program to develop innovative / alternative on-site sewage disposal systems. Although the experimental systems are not listed in Tables 1, 2, and 3, their use where site conditions and monitoring is encouraged. Systems which are considered experimental will change with time as the successful systems become conventional and the unsuccessful systems are no longer used. This is one reason they are not listed or described in the main text or tables of this report. Appendix E, Status Report to the Governor and General Assembly on the State of Maryland Innovative and Alternative On-Site Sewage Disposal Program dated February 1987 will provide an overview of the State's program and descriptions of the innovative and alternative systems with which the State is working. This should prove

useful in describing the alternative systems available as well as providing an understanding of the experimental systems being developed.

VARIANCES

One goal of adopting a countywide groundwater protection strategy is to employ a comprehensive rather than a piecemeal approach to groundwater resource management. Therefore, it is prudent to minimize small scale variance to the broad management areas mapped. However, as previously noted, management area boundaries are necessarily imprecise and should be subject to revision as additional data warrant. Decisions on management area placement for properties located along area boundaries will be made at the discretion of the Environmental Programs Office and supported by site specific field data. Applicants who disagree with this determination in management fringe areas have the opportunity to provide site specific hydrogeologic information to support a more appropriate determination.

Inclusion of one management area within the confines of another will be restricted to areas in which the total groundwater flow pattern can be adequately characterized and supports the altered area designation. Appendix D provided guidance for conducting hydrogeologic evaluation to support management area determination and subdivisions requests requiring detailed hydrogeologic information.

On-Site Sewage Disposal and Water Supply Alternatives: Management Area (A)

Unsaturated Natural Soil Thickness Beneath Bottom of Sewage Disposal Trenches	Soil Texture	Minimum Lot Size Residential Development	Minimum Lot size for all development other than Residential	DISPOSAL OPTIONS & REQUIREMENTS			WATER SUPPLY REQUIREMENTS		
				Conventional	Alternative	Aquifer Type	Minimum Separation Distance: Wells & SDS/SRA	Minimum Depth	Minimum Grouting Depth
>4'	All	Based on Zoning & COMAR 26.04.02 and COMAR 26.04.03 Requirements	Based on Zoning & COMAR 26.04.02 and COMAR 26.04.03 Requirements	Gravity Trench	Shallow Pressure Dosing Trench	Confined or Semi-confined Salisbury Aquifer	100'	50'	Top of Screen
2' - 4'	All	Based on Zoning & COMAR 26.04.02 and COMAR 26.04.03 Requirements	Based on Zoning & COMAR 26.04.02 and COMAR 26.04.03 Requirements		Sand Mound	Confined or Semi-confined Salisbury Aquifer	100'	50'	Top of Screen
2' - 4'	Sandy loam of finer	1 acre with 2 acre overall density	1 acre for every 450 gallons per day wastewater flow	Gravity Trench	Shallow Pressure Dosing Trench	Confined or Semi-confined Salisbury Aquifer	100'	50'	Top of Screen

Table 1

**On-Site Sewage Disposal and Water Supply Alternatives:
Management Area (B - 1)**

Unsaturated Natural Soil Thickness Beneath Bottom of Sewage Disposal Trenches	Soil Texture	Minimum Lot Size Residential Development	Minimum Lot size for all development other than Residential	DISPOSAL OPTIONS & REQUIREMENTS			WATER SUPPLY REQUIREMENTS		
				Conventional	Alternative	Aquifer Type	Minimum Separation Distance: Wells & SDS/SRA	Minimum Depth	Minimum Grouting Depth
>4'	All	Based on Zoning & COMAR 26.04.02 and COMAR 26.04.03 Requirements	Based on Zoning & COMAR 26.04.02 and COMAR 26.04.03 Requirements	Gravity Trench	Shallow Pressure Dosing Trench	Confined or Semi-confined Salisbury Aquifer	100'	N/A	Top of Screen
2' - 4'	All	Based on Zoning & COMAR 26.04.02 and COMAR 26.04.03 Requirements	Based on Zoning & COMAR 26.04.02 and COMAR 26.04.03 Requirements		Sand Mound	Confined or Semi-confined Salisbury Aquifer	100'	50'	Top of Screen
2' - 4'	All	1 acre	1 acre for every 450 gallons per day wastewater flow	Gravity Trench	Shallow Pressure Dosing Trench	Confined or Semi-confined Salisbury Aquifer	100'	50'	Top of Screen
1' - 2' (a)	All	2 acres	2 acres for every 450 gallons per day wastewater flow	Gravity Trench	Shallow pressure dosing trench	Confined or Semi-confined Salisbury Aquifer	100'	50'	Top of Screen

(a) In systems with treatment zones a 18" depth to seasonally high ground water minimum required to ensure adequate hydraulic performance.

On-Site Sewage Disposal and Water Supply Alternatives: Management Area (B - 2)

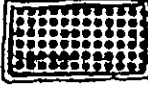
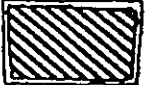

Unsaturated Natural Soil Thickness Beneath Bottom of Sewage Disposal Trenches	Soil Texture	Minimum Lot Size: Residential Development	Minimum Lot size for all development other than Residential	DISPOSAL OPTIONS & REQUIREMENTS			WATER SUPPLY REQUIREMENTS		
				Conventional	Alternative	Aquifer Type	Minimum Separation Distance: Wells & SDS/SRA	Minimum Depth	Minimum Grouting Depth
>4'	All	Based on Zoning & COMAR 26.04.02 and COMAR 26.04.03 Requirements	Based on Zoning & COMAR 26.04.02 and COMAR 26.04.03 Requirements	Gravity Trench	Shallow Pressure Dosing Trench	Confined or Semi-confined Salisbury Aquifer	100'	N/A	Based on COMAR 26.04.04
2' - 4'	All	Based on Zoning & COMAR 26.04.02 and COMAR 26.04.03 Requirements	Based on Zoning & COMAR 26.04.02 and COMAR 26.04.03 Requirements		Sand Mound	Confined or Semi-confined Salisbury Aquifer	100'	50'	Based on COMAR 26.04.04
2' - 4' (a) - (b)	All	1 acre	1 acre for every 450 gallons per day wastewater flow	Gravity Trench	Shallow Pressure Dosing Trench	Confined or Semi-confined Salisbury Aquifer	100'	50'	Grout to Screen
0' - 2' (a)	All	2 acres**	2 acres for every 450 gallons per day wastewater flow	Gravity Trench	Shallow pressure dosing trench and Sand Lined Trench	Confined or Semi-confined Salisbury Aquifer	100'	50'	Grout to Screen
0' (a)	All	4 acres	N/A		Bermed Infiltration Ponds	confined	150'		Grout to Screen

** Clustering of Sewage Disposal Systems changes the lot size to a overall density

(a) Trench not to exceed 10' depth or penetrate the confining bed above the Salisbury Aquifer.

(b) In systems with treatment zones a 18" depth to seasonally high ground water min. required to ensure adequate hydraulic performance.

WORCESTER COUNTY MANAGEMENT AREAS

-  A
-  B-1
-  B-2

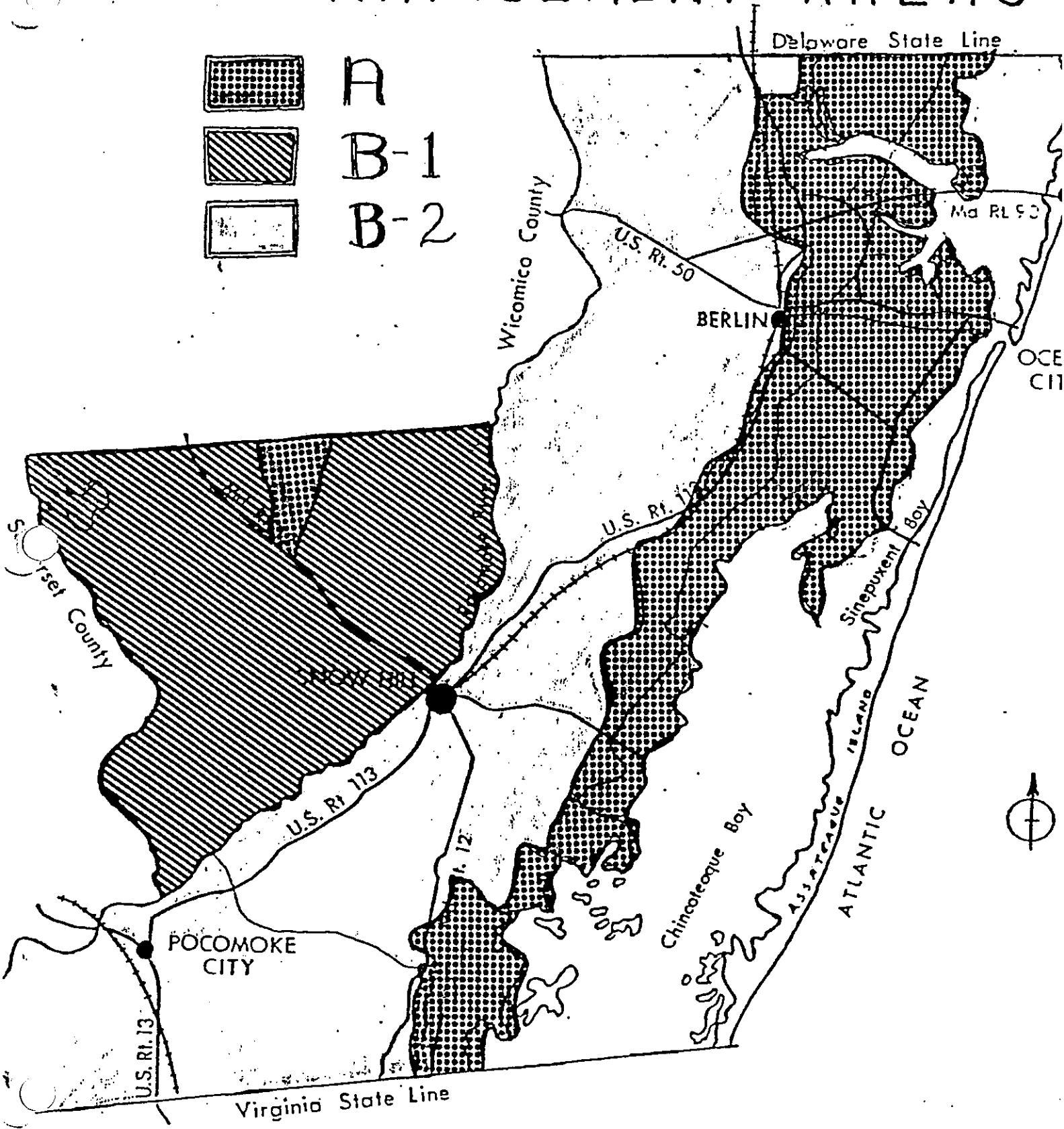


FIGURE I

APPENDIX B

Federal and State Construction
Grant Funding of the West Ocean
City Sewerage Project

*
*
*

OFFICE OF ENVIRONMENTAL
PROGRAMS
201 West Preston Street
Baltimore, Maryland 21201

* * * * *

CONSENT ORDER

WHEREAS, it is the intent of the State of Maryland, Department of Health and Mental Hygiene (The Department), to comply with the provisions of presidential Executive Orders #11988, Floodplain Management, and #11990, Protection of Wetlands; and

WHEREAS, it has previously been agreed upon by the State of Maryland, Office of Environmental Programs, and the Environmental Protection Agency, Water Management Division and Environmental Impact Branch, that compliance with said Orders in the matter of West Ocean City sewerage system will be accomplished if sewer service in said area is consistent with the following policy:

- A. Sewer service will not be permitted for the undeveloped lots in the 100-year floodplain as defined by the Federal Emergency Management Administration (FEMA), unless the lots were platted as building lots prior to June 1, 1977. Development on a lot for which sewer service will be permitted will be limited to one equivalent dwelling unit (EDU). For the purpose of this Order, an EDU is defined as any non-single family dwelling unit having a sewage flow associated with a residential dwelling unit (200 gallons per day).

- B. No sewer service will be provided for any structure in a wetland as defined by the U.S. Fish and Wildlife Service (USF & WS).
- C. No sewer service or connections will be provided for any structure in the floodplain area not included in the West Ocean City service area as defined in the March, 1982, edition of Amendment #1 to the North Central Ocean Basin (NCOB) Wastewater Facilities Plan.
- D. No interceptor will be permitted to extend along Golf Course Road in an east/west direction, except for the sewer line shown on Map B of the March, 1982, edition of Amendment #1 to the NCOB Wastewater Facilities Plan.
- E. Industrially zoned lots south of Route 50 and east of the north/south portion of Golf Course Road, which are composed of wetlands and/or floodplain areas and which were not platted prior to June 1, 1977, are not eligible for sewer service.
- F. No sewer service will be provided for any structure located outside the currently defined boundaries of the West Ocean City Sanitary District unless it is mutually agreed upon by the parties to this Consent Order following further environmental study by the Environmental Protection Agency.

WHEREAS, it is the intent of the State of Maryland, Department of Health and Mental Hygiene, to ensure that the Worcester County Sanitary Commission (WCSC) complies with the abovementioned policy in the event an EPA Construction Grant (grant) is awarded for constructing sewerage facilities in the West Ocean City area; and

WHEREAS, this Consent Order is not intended to create or abrogate any third party rights;

It is therefore this 28th day of June, 1983 agreed by and between the Assistant Secretary for Environmental Programs, and the Commissioners of the Worcester County Sanitary Commission that:

- 1a. The Worcester County Sanitary Commission will develop a map showing the boundaries of the wetlands as currently identified by the USF & WS and the boundary of the 100-year floodplain as currently defined by the FEMA. The WCSC will delineate all parcels of land located wholly or partially within said boundaries and will show which parcels were platted prior to June 1, 1977. A copy of this map along with the underlying data provided by the USF & WS and FEMA shall be provided to the Department for approval and shall be available for public inspection.
- 1b. The WCSC shall perform its obligation under item 1a of this Consent Order prior to the payment of the allowance at 50% design completion.
- 2a. Through delegation of authority, the Health Officer of Worcester County will be the responsible party in deciding, based on the sewer service policy presented heretofore and on the information contained in the approved map and its accompanying underlying data, whether a structure or a parcel of platted land is allowed sewer service.
- 2b. Should any aggrieved applicant challenge the decision of the Health Officer, the matter will be referred to the Director of Maryland's Water Management Administration (WAT) for review. Any appeal beyond the level of

the Director of WAT will be administered in accordance with the provisions of the Administrative Procedures Act.

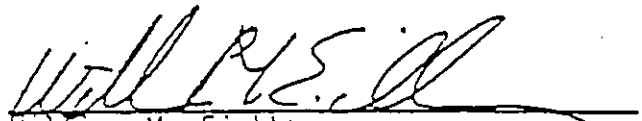
- 3a. The WCSC will develop a permitting process by which owners of undeveloped lots would be required to obtain a decision of the Health Officer which would allow subsequent connection to the sewer system, concurrent with their application for permits to construct residential, commercial, or industrial structures. Owners of existing developed lots would be required to obtain a decision of the Health Officer which would allow subsequent connection to the sewer system, concurrent with their application for a plumbing permit for the actual sewer connection.
- 3b. The WCSC shall develop the permitting process prior to award of the grant and shall have the process legally established and in force prior to the award of any contract for constructing any EPA grant-assisted sewerage facilities in West Ocean City. The permitting process will be in effect for a period of not less than 20 years from the date of this agreement.
4. The WCSC will utilize the flow projection tables found in Maryland's Design Guidelines for Sewerage Facilities, Technical Bulletin M-DHMH-EHA-S-001, in determining a daily flow from a non-residential dwelling unit to be constructed in the floodplain. Should satisfactory justification be provided for using an alternate flow projection method, the alternate method can be used.

5a. The WSSC will institute procedures to get the approved map and the sewer service policy provisions incorporated into the Worcester County Comprehensive Water and Sewer Plan prior to the sewer system being put in service.

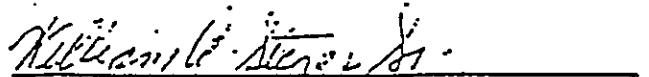
5b. The Department will not approve any amendment or biennial update to the County Plan unless the map prepared pursuant to item 1a of this Order and sewer service policy provisions A through F are a part thereof.

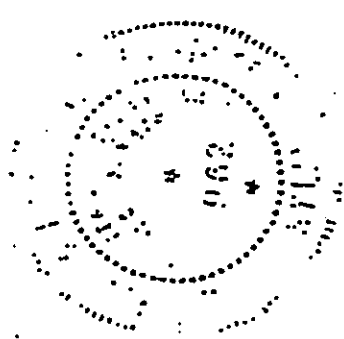
Date: June 28, 1983

Assistant Secretary for
Environmental Programs


William M. Eichbaum

Worcester County Sanitary Commission


William A. Steger, Sr., Chairman



APPENDIX C

SCHEDULE FS
 FINANCIAL MANAGEMENT STATISTICS
 COUNTY WATER & SEWER PLANS

County Name Worcester
 *Worcester County
 System Name Sanitary District

Fiscal Year #1 June 30, 1991
 Fiscal Year #2 June 30, 1992

FISCAL YEAR #1	COLUMN 1	FISCAL YEAR #2	COLUMN 2
Sewer charge revenue	7,696	Sewer charge revenue	9,829
Connection charge revenue	653,126	Connection charge revenue	805,447
Front ft assessment revenue	see "U"	Front ft assessment revenue	see "U"
Other revenue (complete schedule on page 2)	7,458,555	Other revenue (complete schedule on page 2)	7,590,562
Total revenue	8,119,377	Total revenue	8,405,838
Operation expense		Operation expense	
Maintenance expense	6,411,777	Maintenance expense	7,066,691
Replacement costs	-	Replacement costs	-
Fees paid to other jurisdictions	-	Fees paid to other jurisdictions	-
Total OM & R	6,411,777	Total OM & R	7,066,691
Interest expense	1,159,756	Interest expense	943,977
Depreciation expense	1,431,915	Bond defeasance	600,002
Total expense	9,003,448	Depreciation expense	1,465,874
Increase (Decrease) Fund Balance	(884,071)	Total expense	10,076,544
Debt principal	20,124,000	Increase (Decrease) Fund Balance	(1,670,706)
Total flow volume	1,984 MG	Debt principal	26,916,000
		Total flow volume	2,179 MG

Extraordinary repairs and maintenance are those which are of such a nature as to be beyond those repairs anticipated in the annual budget. Examples of "extraordinary" breakdowns might include a blower breakdown in the aeration system, large pump system motor and control, clarifier sludge scraper arm and bearings, or a floating aerator. Please identify the most costly potential repair and maintenance problem for this sewerage system.

oxygen explosion would destroy oxygen system

Estimated cost of this potential repair \$6,000,000

(over)

* Schedule includes financial information on Newark, Ocean City, Ocean Pines and West Ocean Cit

Describe the source of funds to cover this extraordinary item (a bond, line of credit, escrow account, working capital, etc.)

District funds; emergency loan from Worcester County;

bank loan; bond issue

Funds received and credited to contributed capital or
Additional comments against receivables Year 1 Year 2

Front foot	807,885	393,783
Hook - ups	106,562	121,108
Other governments	1,201,138	330,000
Developers	(926)	(295)

Detail of other revenue on Line E (if applicable):

Description	Year 1 Amount	Year 2 Amount
Domestic fixture charge	\$4,873,940	\$4,558,685
Commercial fixture charge	396,410	390,868
Swimming pool charge	23,973	27,809
Penalties and interest	76,617	84,690
Permits	82,759	60,447
Labor and material charge	5,385	29,356
Other revenue	91,356	219,079
Investment interest	729,707	581,422
Front foot revenue	1,135,042	1,607,545
Operating grants	43,366	30,661
	<u>\$7,458,555</u>	<u>\$7,590,562</u>

Contact Person:

M. Charles M. Maize - Administrator

NAME Worcester County Sanitary Commission

ADDRESS 303 N. Washington Street
Snow Hill, Maryland 21863

(410) 632-1630

TELEPHONE #

	<u>Year 1</u>	<u>Year 2</u>
Additions to capital assets	1,768,295	4,188,572

Capacity: 16.07 MGD

Users: residential 29,479

commercial 658

SCHEDULE FS
 FINANCIAL MANAGEMENT STATISTICS
 COUNTY WATER & SEWER PLANS

8/13/92

County Name Worcester

Fiscal Year #1 1990

System Name Town of Berlin

Fiscal Year #2 1991

FISCAL YEAR #1	COLUMN 1	FISCAL YEAR #2	COLUMN 2
Sewer charge revenue	288,165	Sewer charge revenue	366,356
Connection charge revenue	19,475	Connection charge revenue	4,528
Front ft assessment revenue	-0-	Front ft assessment revenue	-0-
Other revenue (complete schedule on page 2)	43,791	Other revenue (complete schedule on page 2)	16,392
Total revenue	351,431	Total revenue	387,276
Operation expense	90,618	Operation expense	136,637
Maintenance expense	12,175	Maintenance expense	9,682
Replacement costs	6,697	Replacement costs	10,053
Fees paid to other jurisdictions	-0-	Fees paid to other jurisdictions	-0-
CM & R	109,490	Total CM & R	156,372
Interest expense	-0-	Interest expense	-0-
Depreciation expense	48,131	Depreciation expense	58,035
Total expense	157,621	Total expense	214,407
Increase (Decrease) Fund Balance	193,810	Increase (Decrease) Fund Balance	172,869
Debt principal	-0-	Debt principal	-0-
Total flow volume	127,662,000	Total flow volume	100,274,000

Extraordinary repairs and maintenance are those which are of such a nature as to be beyond those repairs anticipated in the annual budget. Examples of "extraordinary" breakdowns might include a blower breakdown in the aeration system, large pump system motor and control, clarifier sludge scraper arm and bearings, or a floating aerator. Please identify the most costly potential repair and maintenance problem for this sewerage system.

Clarifier Failure

imate cost of this potential repair 500,000 - 1,000,000

(over)

Describe the source of funds to cover this extraordinary item (a bond, line of credit, escrow account, working capital, etc.)

Maintenance Reserve.

Additional comments

Detail of other revenue on Line E (if applicable):

<u>Description</u>	<u>Year 1 Amount</u>	<u>Year 2 Amount</u>
Interest on Capital Reserve fund	39,461	4,567
Miscellaneous Income (sales & service call fees)	<u>4,330</u> \$43,791	<u>11,825</u> \$16,392

Contact Person:

Capacity: 600,000 MGD

Users: residential 983

commercial 117

Jean S. Holloway, Administrative Director
NAME

Town of Berlin, 10 William Street
ADDRESS

Berlin, Maryland 21811

(410) 641-2770
TELEPHONE #

APPENDIX D

REQUEST FOR AMENDMENT
TO
THE WORCESTER COUNTY WATER AND SEWERAGE PLAN

Mail or Present to: Department of Planning, Permits and Inspections
Court House Room 116
Snow Hill, Maryland 21863

All appropriate forms and profiles describing the request must be completed and attached hereto (Existing Sewerage System; Existing Water System; Planned Sewerage System; Planned Water System; profiles regarding same, etc.). Pertinent changes to tables currently contained in the Worcester County Water and Sewerage Plan and a copy of the proposed revised map must be submitted in conjunction with this request as well.

Type of Amendment: _____ Water _____ Sewerage _____ Other

Character of Amendment: _____ Addition _____ Deletion _____ Change

Applicant's Name, Mailing Address, Phone Number and Appropriate Contact Person:

Owner's Name, Mailing Address, Phone Number and Appropriate Contact Person (if different from applicant):

Property Identification:

Tax Map(s) _____ Parcel(s) _____ Election District _____
Nearby Roads: _____
Community: _____

Signatures:

Owner Date Applicant Date

EXISTING WATER SYSTEMS

System Name: _____

Area Served: _____

Owned By: _____

Operated By: _____

	1994	2000	2010
Population (EDUs, if App.):			
Served:	_____	_____	_____
Unserved:	_____	_____	_____
GPCD (EDUs, if App.):	_____	_____	_____
Capacity (MGD):			
Demand:	_____	_____	_____
Planned:	_____	_____	_____

Production Well(s):		
Well Number:	_____	_____
Aquifer:	_____	_____
Location:	_____	_____
Depth:	_____	_____
Diameter:	_____	_____
Maximum Safe Yield:	_____	_____
Pumping Capacity:	_____	_____
Water Quality:	_____	_____

Treatment Plant(s):		
Type:	_____	_____
Location:	_____	_____
Rated Capacity:	_____	_____
Average Production:	_____	_____
Maximum Peak Flow:	_____	_____
Storage Capacity:	_____	_____
Sludge Disposal:	_____	_____

Expansion Plans, Problems, Planned Improvements, Agreements,
Policies, Allocation, Etc.: _____

PLANNED WATER SYSTEMS

System Name: _____

Priority Category: _____

Area To Be Served: _____

Population To Be Served (EDUs, if App.): _____

To Be Constructed By: _____

To Be Owned By: _____

To Be Operated By: _____

Planned Distribution System: _____

System Description:

Well Location: _____

Well Depth/Aquifer: _____

Treatment Facilities: _____

Storage Facilities: _____

Distribution System: _____

Estimated Cost and Source of Funding: _____

Estimated Begin Construction: _____

Estimated Complete Construction: _____

EXISTING SEWERAGE SYSTEM

System Name: _____

Area Served: _____

Owned By: _____

Operated By: _____

	1994	2000	2010
Population (EDUs, if App.):			
Served:	_____	_____	_____
Unserved:	_____	_____	_____
GPCD (EDUs, if App.):	_____	_____	_____
Capacity (MGD):			
Demand:	_____	_____	_____
Planned:	_____	_____	_____

Collection System: _____

Treatment Plant:
Location: _____
Type: _____

Site Size (Acres):
Occupied: _____
Vacant: _____

Site Capacity (MGD):
Secondary: _____
Advanced: _____

Existing Capacity (MGD): _____
Existing Flow (MGD):
Average: _____
Peak: _____

Sludge Disposal: _____

Discharge:
Type of Discharge: _____
Location of Discharge: _____
NPDES Permit: _____

Planned Expansion, Alteration, Abandonment or Other Changes,
Allocation, Agreements, Policies, Facility Plan, Etc.:

PLANNED SEWERAGE SYSTEM

System Name: _____

Priority Category: _____

Area To Be Served: _____

Population To Be Served (EDUs, if App.): _____

To Be Constructed By: _____

To Be Owned By: _____

To Be Operated By: _____

Planned Collection System: _____

Planned Treatment Facility:
Type: _____

Capacity (MGD): _____

Discharge:
Type: _____

Location: _____

Estimated Cost and Source of Funding: _____

Estimated Begin Construction: _____

Estimated Complete Construction: _____

EXISTING WATER SYSTEMS

SYSTEM NAME :

AREA SERVED :

OWNED BY :

OPERATED BY :

POPULATION	1990	2000	2010
SERVED (EDU)	:		
UNSERVED (EDU)	:		
GPCD (EDU)	:		

CAPACITY (MGD):

DEMAND :

PLANNED :

PRODUCTION WELL(S)

WELL NUMBER :

AQUIFER :

LOCATION (N/E) :

DEPTH (FEET) :

DIAMETER (INCH) :

MAX YIELD (GPM) :

PUMPING CAP (GPM) :

WATER QLTY :

TREATMENT PLANT(S):

TYPE :

LOCATION (N/E) :

RATED CAPACITY (MGD) :

AVG PRODUCTION (MGD) :

MAX PEAK FLOW (MGD) :

STORAGE CAPACITY (MG) :

SLUDGE DISPOSAL :

COMMENTS:

EXPANSION PLANS :

PROBLEMS :

PLANNED IMPROVEMENTS :

AGREEMENTS, POLICIES

ALLOCATION :

PLANNED WATER SYSTEMS

SYSTEM NAME	:			
PRIORITY CATEGORY	:			
AREA TO BE SERVED	:			
POPULATION SERVED	:	1992	2000	2010
CONSTRUCTED BY	:			
OWNED BY	:			
OPERATED BY	:			
PLANNED DISTR. SYSTEM	:			
SYSTEM DESCRIPTION	:			
WELL LOCATION (N E)	:			
WELL DEPTH/AQUIFER	:			
TREATMENT FACILITIES	:			
STORAGE FACILITIES	:			
DISTRIBUTION SYSTEM	:			
ESTIMATED COST AND SOURCE OF FUNDING:	:			
COST	:			
FUNDING	:			
ESTIMATED CONSTRUCTION TIMES:	:			
BEGIN	:			
COMPLETE	:			
COMMENTS:	:			
AGREEMENTS, POLICIES	:			
ALLOCATION	:			

EXISTING SEWERAGE SYSTEMS

SYSTEM NAME :
 AREA SERVED :
 OWNED BY :
 OPERATED BY :
 POPULATION : 1992 2000 2010
 SERVED (EDU) :
 UNSERVED (EDU) :
 GPCD (EDU) :
 CAPACITY (MGD):
 DEMAND :
 PLANNED :
 PERMITTED (NPDES) :
 COLLECTION SYSTEM :
 TREATMENT PLANT :
 LOCATION (N/E) :
 TYPE :
 SITE SIZE (ACRES) : OCCUPIED: VACANT:
 CAPACITY (MGD):
 SITE CAPACITY : SECONDARY: ADVANCED:
 EXISTING CAPACITY :
 EXISTING FLOW : AVERAGE: PEAK:
 SLUDGE DISPOSAL :
 DISCHARGE:
 TYPE OF :
 LOCATION OF :
 NPDES PERMIT NO. :
 COMMENTS:
 PLANNED EXPANSION :
 ALTERATION, :
 ABANDONMENT, :
 OR OTHER CHANGES :
 ALLOCATION :
 AGREEMENTS :
 POLICIES :
 FACILITY PLAN :

PLANNED SEWERAGE SYSTEMS

SYSTEM NAME	:			
PRIORITY/CAT	:			
AREA SERVED	:			
		1992	2000	2010
POPULATION SERVED	:			
CONSTRUCTED BY	:			
OWNED BY	:			
OPERATED BY	:			
PLANNED COLLECTION SYSTEM	:			
PLANNED TREATMENT FACILITY TYPE	:			
		1995	2000	2010
CAPACITY (MGD)	:			
DEMAND PLANNED	:			
DESIGN	:			
NPDES PERMITTED	:			
DISCHARGE:				
TYPE	:			
LOCATION	:			
ESTIMATED CONSTRUCTION TIMES:				
BEGIN COMPLETION	:			
COMMENTS:				
ALLOCATION AGREEMENTS POLICIES FACILITY PLAN	:			

APPENDIX “E”

Index of Resolutions Amending Water & Sewerage Plan Since 1994

<u>NO.</u>	<u>SUBJECT OF RESOLUTION</u>	<u>DATE</u>
<u>1994</u>		
66	Resolution Adopting Comprehensive Water & Sewerage Plan	8/23/94
<u>1995</u>		
03	Resolution Amending Water & Sewer Plan to 589 Corp	1/10/95
09	Resolution Amending Water & Sewer Plan Provision of Potable Water Herring Landing Subdivision ...	3/21/95
10	Resolution Amending Water & Sewer Plan Provision of Potable Water Lands of Marina Developers, Inc.	3/21/95
11	Resolution Amending Water & Sewer Plan Provision of Wastewater Disposal & Potable Water Supply Reggie A. Mariner, II	3/21/95
24	Resolution Amending Water & Sewer Plan - Mayor & Council of SH	7/11/95
<u>1996</u>		
29	Amending Water & Sewer Plan for Extension of Water & Sewer Service Area for MH Utilities	8/13/96
40	Amending Water & Sewer Expansion Assateague Pointe Sewer Service Area	12/17/96
<u>1997</u>		
02	Amending Water & Sewer Plan: Expansion of Berlin & Environs Water & Sewer Area	1/7/97
06	Amending Water & Sewer Plan to include Ocean Landing Shopping Cntr	1/21/97
49	Amending Water & Sewerage Plan for Homeport Planned Unit Dev	12/9/97
50	Amending Water & Sewerage Plan for Riddle Farm PUD	12/9/97
<u>1998</u>		
01	Amending Water & Sewerage Plan for Sandpiper Village Planned Commercial Dev.	1-20-98
02	Amending Water & Sewerage Plan for Lighthouse Sound	1-20-98
19	Expanding The Mystic Harbor- Amending The Water And Sewage Plan	5-19-98
22	Amending Water And Sewage Plan- The Landings (Pine Point) And Lewis Road Area	5-19-98
<u>1999</u>		
04	Amended Water/Sewer Plan - Lighthouse Sound	1-05-99
<u>2000</u>		
11	Amendment to Water and Sewerage Plan- Merial Select, Inc	4-18-00
24	Amendment to Water & Sewerage Plan- Berlin Technology Park	6-20-00
33	Amendment to Water & Sewerage Plan- Home Depot Project	9-19-00
43	Amendment to Water & Sewerage Plan & Expansion of River Run Service Area	12-5-00
44	Amendment to Water & Sewerage Plan & Expansion of Mystic Harbour Service Area	12-5-00
<u>2002</u>		
05	Amending Water & Sewerage Plan to include Most Blessed Sacrament School	03-05-02
22	Amending the Comprehensive Water & Sewerage Plan for Expansion of Snow Hill Water & Sewer Service Areas	06-18-02
32	Amending County's Water & Sewerage Plan to Add the Ocean Landing II System	09-03-02

<u>NO.</u>	<u>SUBJECT OF RESOLUTION</u>	<u>DATE</u>
<u>2003</u>		
11	Amending the Comprehensive Water and Sewerage Plan to Add the Pennington Commons Community Sewer	4-1-03
12	Amending Comprehensive Water and Sewerage Plan to Add Island Resort Campground Planned Water System and Planned Sewerage System	4-15-03
31	Amending Comprehensive Water and Sewer Plan to Amend the Ocean Landing Commercial Center Water Distribution System	10-7-03
39	Amending the Comprehensive Water and Sewerage Plan for Worcester County Ocean Pines Wastewater Treatment Plant Capacity Expansion Worcester County, Maryland	12-16-03
<u>2004</u>		
03	Comprehensive Water and Sewerage Plan to Add Existing Ratepayers Financial Protection Policy . .	1-20-04
05	Comprehensive Water and Sewerage Plan for Worcester County South of Pocomoke City to the Maryland Tourism and Visitor's Center	2-3-04
15	Amending the Comprehensive Water and Sewerage Plan for Worcester County to add the Baypointe Plantation Planned Sewerage System	5-18-04
16	Amending the Worcester County Comprehensive Water and Sewerage Plan to add a Policy Requiring Pretreatment for Large Septic Systems in the Atlantic Coastal Bays Critical Area in Worcester County, Maryland	5-18-04
28	Amending Comprehensive Water and Sewerage Plan to add the First Shore Federal Savings and Loan Property to previously approved amendment for Pennington Commons	6-15-04
42	Amending Comprehensive Water and Sewerage Plan to add Bay Point Plantation Water System	10-5-04
47	Adding Thee Ginarenee Piazza Private Water Service System to Water & Sewerage Plan	11-3-04
50	Adding the Greater Ocean Pines Sanitary Service Area to Water and Sewerage Plan	12-7-04
51	Adding Snug Harbor and Environs to Assateague Pointe Sanitary Service Area	12-21-04
<u>2005</u>		
01	Amending the Water and Sewerage Plan to add Sunsations Interim Private Multi-Use Water System . . .	1-18-05
09	Adding the Greater Ocean Pines Sanitary Service Area to Comp Plan	4-5-05
17	Water and Sewerage Plan reflects water and sewer to Northern YMCA	5-17-05
22	Expanding Snow Hill Water and Sewer Service Area for Summerfield Dev	6-7-05
<u>2006</u>		
19	Adding Water and Sewerage Designations to Comprehensive Water and Sewerage Plan	8-15-06
23	Reflecting Expansion of Lighthouse Sound Sanitary Service Area within the Amended Water and Sewerage Plan for Worcester County	9-19-06
27	Amending the Water and Sewerage Plan to add Nassawango Estates Shared Facility Sewerage System	11-08-06
28	Amending the Water and Sewerage Plan to add the Worcester Career and Technology Center in Newark	11-08-06
29	Amending the Water and Sewerage Plan to expand the Lewis Road Planning Area	11-08-06
<u>2007</u>		
02	Expanding Riddle Farm Sewer Planning Area	2-20-07
04	Expansion of the Riddle Farm Water Planning Area	3-06-07
25	Interconnection of Ocean Pines and Riddle Farm Water Systems	9-18-07
32	Amending the Water and Sewerage Plan for Land Application Disposal of Treated Wastewater Effluent for the Town of Snow Hill-Summerfield	11-20-07
33	Amending the Water and Sewerage Plan to Expand the Snow Hill Sewer Planning Area and Public Sewer System - Shad Landing	11-20-07
35	Amending Water and Sewerage Plan to Address Zoning Consistency	12-18-07
36	Amending Water and Sewerage Plan to Expand the Town of Berlin Sewer Planning Area and Public Sewer Service System	12-18-07

<u>NO.</u>	<u>SUBJECT OF RESOLUTION</u>	<u>DATE</u>
<u>2008</u>		
01	Amending Water and Sewerage Plan to Include a Fourth Production Well for the Town of Pocomoke ..	1-15-08
02	Amending Water and Sewerage Plan to Expand the Town of Berlin Water Planning Area and Public Water Service System	1-15-08
03	Repealing the Declaration of Limited Sewer Availability and the Imposition of Limits on Building Permits in the Ocean Pines Service Area	1-15-08
21	Amending Comprehensive Plan to Add Ocean Landings II Water and Wastewater Treatment System ...	8-19-08
23	Replacement & Expansion of Mystic Harbour Wastewater Treatment Plant	9-2-08
24	Adding the Deer Run Water and Wastewater Treatment System	9-2-08
36	Amending Water and Sewerage Plan to Add Nutrient Removal Policy	12-16-08
37	Amending Water and Sewerage Plan to Upgrade/Expand Assateague Island National Seashore WWTP	12-16-08
<u>2009</u>		
06	Adding the Fort Whaley Campground to the Water and Sewer Plan	4-21-09
16	Replacement and Expansion of the Mystic Harbour Wastewater Treatment Plant	7-7-09
27	Amending Water and Sewerage Plan for Construction of Elevated Water Storage Tank in the Mystic Harbour Sanitary Service Area	11-17-09
28	Modifying the form of ownership/operation of Ocean Landings II WWWS	12-15-09
<u>2010</u>		
11	Amending Comprehensive Water and Sewerage Plan for VDOT New Church (VA) Rest Area Station and Sewer Main Enlargements in the Pocomoke Service Area	3-16-10
12	Addition of Spray Irrigation Property - Berlin Service Area	3-16-10
15	Expanding the Ocean Pines Service Area for Steen Associates, Inc.	4-20-10
37	Amending Comprehensive Water and Sewerage Plan for Capital Improvements Plan and Revision of Water and Sewerage Planning Areas in Snow Hill	12-21-10
<u>2011</u>		
01	Amending the Comprehensive Water and Sewerage Plan (CWSP) to Expand the Ocean Pines Sanitary Service Area (OPSSA) to Add the Ocean Pines Medical Office Complex Property ...	1-18-11
02	Amending CWSP to Add the Ocean Pines Medical Office Complex to the OPSSA	1-18-11
05	Expanding the Lighthouse Sound Sanitary Service Area	3-15-11
09	Amending the CWSP to Increase the Ocean Landings II Sanitary Service Area Capacity	6-7-11
17	Amending the CWSP to Add Capital Improvements Plan and Revision of Water and Sewer Planning Areas - Snow Hill Service Area - Addendum to the Original Resolution	6-21-11
24	Amending Water and Sewerage Plan for Steen Property in OPSSA	9-6-11
27	Amending Water and Sewerage Plan to Add Ocean Pines Commercial Sub-Area for Water Planning Designation W-1	11-1-11
<u>2012</u>		
21	Amending Comprehensive Water and Sewerage Plan to add Ocean Downs Sanitary Service Area	9-4-12
22	Approving the Establishment of the Ocean Downs Sanitary Service Area	9-4-12
26	Comprehensive Water and Sewerage Plan Addition of Capital Improvement Plan and Refinement of Technical Data for the Ocean City Service Area	11-20-12

<u>NO.</u>	<u>SUBJECT OF RESOLUTION</u>	<u>DATE</u>
<u>2013</u>		
12	Amending Water and Sewerage Plan to Increase Ocean Pines Wastewater Treatment Plant Discharge	5-21-13
26	Amending Water and Sewerage Plan to Expand Riddle Farm Sanitary Service Area - Sewer Planning Area	12-17-13
27	Amending Water and Sewerage Plan to Expand Riddle Farm Sanitary Service Area - Water Planning Area	12-17-13
<u>2014</u>		
07	Amending Comprehensive Water and Sewerage Plan to Expand Island Resort Campground Water and Sewer Planning Areas	3-18-14
23	Amending Comprehensive Water and Sewerage Plan to Add Two Outfalls and Increase Discharge Permit Flow from Mystic Harbour WWTP	10-21-14
24	Amending Comprehensive Water and Sewerage Plan to Add Frontier Town Campground to the Mystic Harbour Sanitary Service Area	11-18-14
25	Amending Comprehensive Water and Sewerage Plan to Add Crabs to Go	12-16-14
<u>2015</u>		
24	Expanding Berlin Water and Sewer Planning Areas	7-7-15
29	Amending Comprehensive Water and Sewerage Plan to Add Two Spray Irrigation Areas in the Newark Sanitary Service Area	10-6-15
32	Correcting Resolution No. 15-24 Amending the Water and Sewerage Plan to Expand the Town of Berlin Water and Sewer Planning Areas	11-3-15
<u>2016</u>		
29	Amending the Water and Sewerage Plan to Expand the Fort Whaley Campground Wastewater Treatment System	12-20-16
<u>2017</u>		
07	Amending Water and Sewerage Plan for Ocean City Sanitary Service Area Miscellaneous Technical Data and Capital Plan Information Updates	4-25-17
14	Withdrawing the Proposed Amendment to the Water and Sewerage Plan to Expand the Fort Whaley Campground Wastewater Treatment System	6-20-17

RESOLUTION ADOPTING COMPREHENSIVE WATER AND SEWERAGE PLAN

WHEREAS, Section 9-503 through 9-509 of the Environment Article of the Annotated Code of Maryland and Section 26.03.01 of the Code of Maryland Regulations require that the County prepare and submit to the Maryland Department of the Environment a Comprehensive Water and Sewerage Plan for the County; and

WHEREAS, the County has prepared the Comprehensive Water and Sewerage Plan dated August 1994 and referred to herein and has conducted a public hearing on August 9, 1994 on said Comprehensive Water and Sewerage Plan.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that the revised Comprehensive Water and Sewerage Plan dated August 1994 is hereby approved and adopted; and

BE IT FURTHER RESOLVED the Comprehensive Water and Sewerage Plan shall be submitted to the Department of the Environment for approval by the Department as required by law and regulation; and

BE IT FURTHER RESOLVED that this Resolution will be effective on the date of its passage.

PASSED THIS 23rd day of August, 1994.

WITNESS:

Deborah G. Byrd Assistant to the Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS

Jeanne Lynch, President

Floyd F. Basset, Jr., Vice-President

George M. Hurley

John E. Bloxom

Reginald T. Hancock

RESOLUTION AMENDING
WATER AND SEWER PLAN FOR WORCESTER COUNTY
PROVISION OF WATER AND SEWER SERVICE TO LANDS OF 589 CORPORATION

WHEREAS, the County Commissioners of Worcester County have adopted a comprehensive Water and Sewer Plan pursuant to Section 9-502 of the Environmental Health Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from 589 Corporation to amend said Plan; and


WHEREAS, the County Commissioners held a public hearing on December 27, 1994 to hear public comment on the requested amendment;

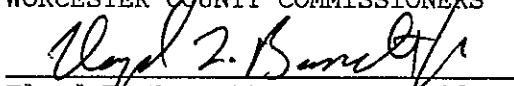
NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County that the Water and Sewer Plan for Worcester County is hereby amended to add the following:


1. An expansion of the existing community water and sewer system and facilities serving Ocean Pines to accommodate the planned 1,750 Equivalent Dwelling Unit (EDUs) development proposed by the 589 Corporation and located within the Ocean Pines Service Area. The proposed system will consist of gravity sewers and water distribution lines connected to the existing Ocean Pines water and wastewater treatment facilities. The pumping stations and force mains will be constructed by Worcester County and the water distribution and gravity sewer lines will be constructed by the Developer and dedicated to the County.

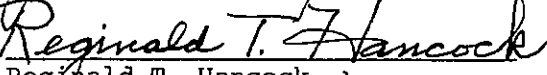
AND BE IT FURTHER RESOLVED that this proposed amendment shall be forwarded to the Department of the Environment for their review and approval in accordance with the provisions of Section 9-502 and that said amendment shall be officially incorporated into the Water and Sewer Plan upon said approval by the Department of the Environment.

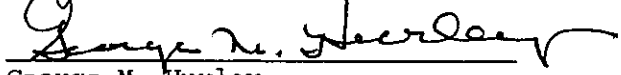
PASSED AND ENACTED THIS 10th day of January, 1995.

ATTEST:

Gerald T. Mason
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS

Floyd W. Bassett, Jr., President


John E. Bloxom


Reginald T. Hancock


George M. Hurley

Jeanne Lynch

RESOLUTION AMENDING
WATER AND SEWER PLAN FOR WORCESTER COUNTY
PROVISION OF POTABLE WATER
HERRING LANDING SUBDIVISION

WHEREAS, the County Commissioners of Worcester County have adopted a comprehensive Water and Sewer Plan pursuant to Section 9-502 of the Environmental Health Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have determined that a certain portion of said Plan should be amended; and

WHEREAS, the County Commissioners held a public hearing on March 21, 1995 to hear public comment on the proposed amendment;

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County that the Water and Sewer Plan for Worcester County is hereby amended to delete the following:

1. The current inclusion regarding the Herring Landing Subdivision which indicates that a public water system including a well, treatment and distribution system will be provided on the site of the proposed subdivision, due to the fact that it is now proposed that potable water be provided by means of individual wells on each lot.

AND BE IT FURTHER RESOLVED that this proposed amendment shall be forwarded to the Department of the Environment for their review and approval in accordance with the provisions of Section 9-502 and that said amendment shall be officially incorporated into the Water and Sewer Plan upon said approval by the Department of the Environment.

PASSED AND ENACTED THIS 21ST day of March, 1995.

ATTEST:

Gerald T. Mason
Gerald T. Mason
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS

Floyd E. Bassett, Jr.
Floyd E. Bassett, Jr., President

John E. Bloxom
John E. Bloxom

Reginald T. Hancock

George M. Hurley
George M. Hurley

Jeanne Lynch
Jeanne Lynch

RESOLUTION AMENDING
WATER AND SEWER PLAN FOR WORCESTER COUNTY
PROVISION OF POTABLE WATER
LANDS OF MARINA DEVELOPERS, INC.

WHEREAS, the County Commissioners of Worcester County have adopted a comprehensive Water and Sewer Plan pursuant to Section 9-502 of the Environmental Health Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Marina Developers, Inc. to amend said Plan; and

WHEREAS, the County Commissioners held a public hearing on March 7, 1995 to hear public comment on the requested amendment;

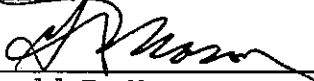
NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County that the Water and Sewer Plan for Worcester County is hereby amended to add the following:

1. The application of Marina Developers, Inc. to amend its current inclusion which indicates that a well and treatment system will be provided on the site of the Captain's Point Service Area to indicate that this Service Area will now be supplied with potable water by the existing water treatment and distribution system serving the Mystic Harbour Service Area.

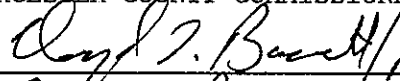
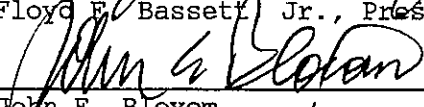
AND BE IT FURTHER RESOLVED that this proposed amendment shall be forwarded to the Department of the Environment for their review and approval in accordance with the provisions of Section 9-502 and that said amendment shall be officially incorporated into the Water and Sewer Plan upon said approval by the Department of the Environment.

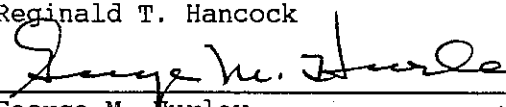
PASSED AND ENACTED THIS 21ST day of March, 1995.

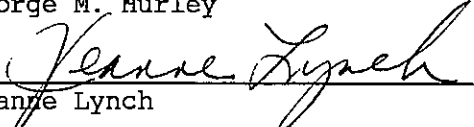
ATTEST:


Gerald T. Mason
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS


Floyd E. Bassett Jr., President

John E. Bloxom

Reginald T. Hancock

George M. Hurley


Jeanne Lynch

RESOLUTION AMENDING
WATER AND SEWER PLAN FOR WORCESTER COUNTY
PROVISION OF WASTEWATER DISPOSAL AND POTABLE WATER SUPPLY
LANDS OF A. REGGIE MARINER, II

WHEREAS, the County Commissioners of Worcester County have adopted a comprehensive Water and Sewer Plan pursuant to Section 9-502 of the Environmental Health Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from A. Reggie Mariner, II to amend said Plan; and

WHEREAS, the County Commissioners held a public hearing on January 10, 1995 and March 7, 1995 to hear public comment on the requested amendment;


NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County that the Water and Sewer Plan for Worcester County is hereby amended to add the following:

1. The application of A. Reggie Mariner, II to include a spray irrigation system, pump station and holding pond and a community water supply system for Mariner's Country Down on Sinepuxent Road.

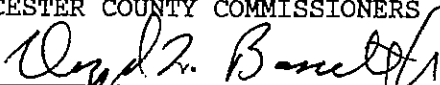
AND BE IT FURTHER RESOLVED that this proposed amendment shall be forwarded to the Department of the Environment for their review and approval in accordance with the provisions of Section 9-502 and that said amendment shall be officially incorporated into the Water and Sewer Plan upon said approval by the Department of the Environment.

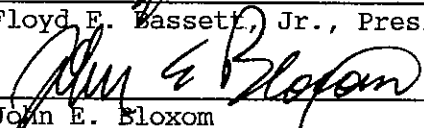
PASSED AND ENACTED THIS 21ST day of March, 1995.

ATTEST:

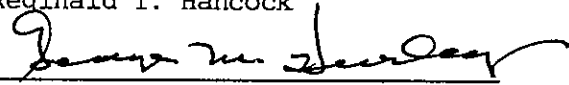


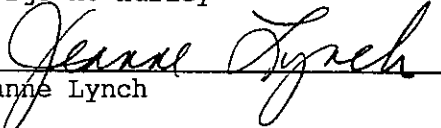
Gerald T. Mason
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS


Floyd E. Bassett, Jr., President


John E. Bloxom

Reginald T. Hancock


George M. Hurley


Jeanne Lynch

RESOLUTION AMENDING
WATER AND SEWER PLAN FOR WORCESTER COUNTY
PROVISION OF PUBLIC WATER AND SEWER SERVICE
MAYOR AND COUNCIL OF SNOW HILL

WHEREAS, the County Commissioners of Worcester County have adopted a comprehensive Water and Sewer Plan pursuant to Section 9-502 of the Environmental Health Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from the Mayor and Council of Snow Hill to amend said Plan; and

WHEREAS, the County Commissioners held a public hearing on July 11, 1995 to hear public comment on the requested amendments;

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County that the Water and Sewer Plan for Worcester County is hereby amended to add the following:

- 1. The application of the Mayor and Council of Snow Hill to extend public water and sewer service along MD Rt. 394 (Market Street) to US Rt. 113.

AND BE IT FURTHER RESOLVED that these proposed amendments shall be forwarded to the Department of the Environment for their review and approval in accordance with the provisions of Section 9-502 and that said amendments shall be officially incorporated into the Water and Sewer Plan upon said approval by the Department of the Environment.

PASSED AND ENACTED THIS 11th day of July, 1995.

ATTEST:

Gerald T. Mason
Gerald T. Mason
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS

Floyd F. Bassett, Jr.
Floyd F. Bassett, Jr., President

John E. Bloxom
John E. Bloxom

Reginald T. Hancock
Reginald T. Hancock

George M. Hurley
George M. Hurley

Jeanne Lynch
Jeanne Lynch

RESOLUTION NO. 96-29
RESOLUTION AMENDING
WATER AND SEWER PLAN FOR WORCESTER COUNTY
EXTENSION OF WATER AND SEWER SERVICE AREA
M H UTILITIES CORPORATION

WHEREAS, the County Commissioners of Worcester County have adopted a comprehensive Water and Sewer Plan pursuant to Section 9-502 of the Environmental Health Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from M H Utilities Corporation to amend said Plan; and

WHEREAS, the County Commissioners held a public hearing on April 23, 1996 to hear public comment on the requested amendments; and

WHEREAS, the County Commissioners have agreed to approve the requested amendment in part and reserve a decision on the balance of the requested amendment;

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County that the request for amendment is approved in part and the Water and Sewer Plan for Worcester County is hereby amended to add the following:

1. The application of M H Utilities Corporation to expand its water service area to include those properties shown on Tax Map 27 as Parcels 361, 420, 421, 422, 427, 428, 429, 430, 431, 432, 434, 436, 437, 438, 618, and 630, located within West Ocean City, for 17 EDUs provided no person with an existing water system shall be required to connect to the M H Utilities System; and
2. The application of M H Utilities Corporation to expand its water and sewer service area to include the property shown on Tax Map 27 as Parcel 442, located on Airport Road adjacent to Mystic Harbour, for no more than 124 EDUs.
3. The remainder of the request for amendment shall be acted upon at a later date but not before a new agreement is reached between the County Commissioners and M H Utilities for the transfer of the water and sewer systems owned by M H Utilities to the County Commissioners (without a lease back provision).

AND BE IT FURTHER RESOLVED that these proposed amendments shall be forwarded to the Department of the Environment for their review and approval in accordance with the provisions of Section 9-502 and that said amendments shall be officially incorporated into the Water and Sewer Plan upon said approval by the Department of the Environment.

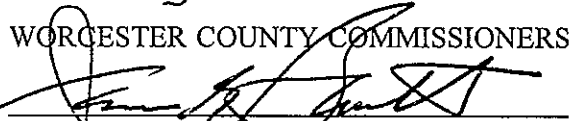
PASSED AND ENACTED THIS 13th day of August, 1996.

ATTEST:




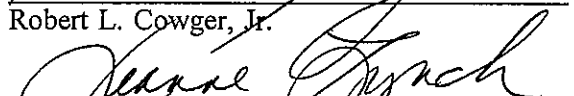
Gerald T. Mason
Chief Administrative Officer

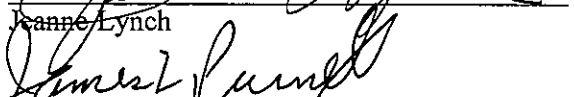
WORCESTER COUNTY COMMISSIONERS


James G. Barrett, President


Granville D. Trimper


Robert L. Cowger, Jr.


Jeanne Lynch


James L. Purnell

RESOLUTION NO. 96- 40

RESOLUTION AMENDING
WATER AND SEWER PLAN FOR WORCESTER COUNTY
EXPANSION OF ASSATEAGUE POINTE SEWER SERVICE AREA
ASSATEAGUE JOINT VENTURE NO. II

WHEREAS, the County Commissioners of Worcester County, Maryland have adopted a comprehensive Water and Sewer Plan pursuant to Section 9-502 of the Environmental Health Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Assateague Joint Venture No. II to amend said plan; and

WHEREAS, the County Commissioners held a public hearing on November 19, 1996 to hear public comment on the requested amendments;

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that the Water and Sewer Plan for Worcester County is hereby amended to add the following:

1. The application of Assateague Joint Venture No. II to extend public sewer service to two properties consisting of approximately 14.9 acres of land, more or less, and bound by Snug Harbor Road to the north, Stephen Decatur Highway (Maryland Route 611) to the west, and the Assateague Pointe development to the south and shown on Worcester County Tax Map 33 as Parcels 136 and 303.

AND BE IT FURTHER RESOLVED that these proposed amendments shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-502 and that said amendments shall be officially incorporated into the Water and Sewer Plan upon said approval by MDE.

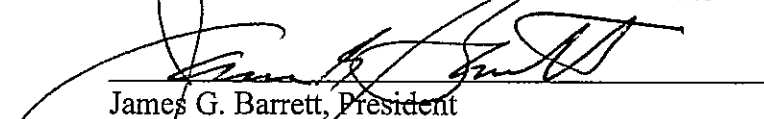
PASSED AND ENACTED this 17th day of December, 1996.

ATTEST:



Gerald T. Mason
Chief Administrative Officer

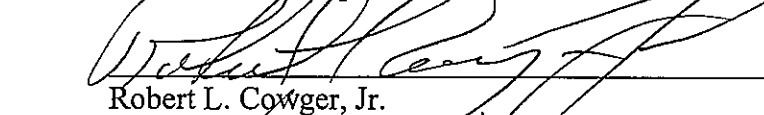
WORCESTER COUNTY COMMISSIONERS



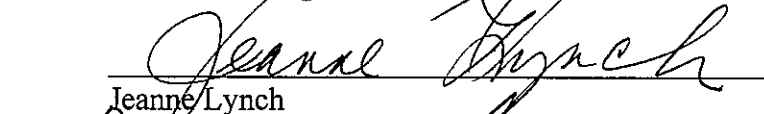
James G. Barrett, President



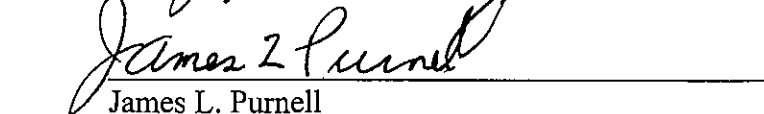
Granville D. Trimmer, Vice President



Robert L. Cowger, Jr.



Jeanne Lynch



James L. Purnell

RESOLUTION NO. 97- 2

**RESOLUTION AMENDING
WATER AND SEWER PLAN FOR WORCESTER COUNTY
EXPANSION OF BERLIN AND ENVIRONS WATER AND SEWER SERVICE AREAS**

WHEREAS, the County Commissioners of Worcester County, Maryland have adopted a comprehensive Water and Sewer Plan pursuant to Section 9-502 of the Environmental Health Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from the Mayor and Council of the Town of Berlin, Maryland to amend said plan; and

WHEREAS, the County Commissioners held a public hearing on November 6, 1996 to hear public comment on the requested amendments;

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that the Water and Sewer Plan for Worcester County is hereby amended as follows:

1. GERMANTOWN ROAD WATER AND SEWER EXTENSION

Add the property on Germantown Road owned by the Trustees of the Tyree A.M.E. Church and categorize as W-1 and S-1 to enable the extension of water and sewer service in order to service the church and alleviate their failing septic system within the corporate limits.

2. ROUTE 346 EAST

Water: Reclassify properties along both sides of Rt. 346 East between Rt. 113 and Rt. 50 to W-1 and add properties along the west side of Seahawk Road and categorize as W-1. Proposed improvements in this area include a new water main extending east along Rt. 346, east along Rt. 50 and south along Seahawk Road and a new 300,000 gallon elevated storage tank on the north side of Rt. 346 East.

Sewer: Reclassify properties along both sides of Rt. 346 East between Rt. 113 and Rt. 50 to S-1 and add parcel 496 as shown on Worcester County tax map 25, the site of a new middle school on the east end of Flower St., and categorize as S-1. Proposed improvements in this area include a new force main along Rt. 113, a new gravity main east along Rt. 346, east along Rt. 50, and south along Seahawk Road, and a new pump station on the north side of Rt. 346 East.

3. ROUTE 346 WEST

Reclassify properties on both sides of Rt. 346 West between Rt. 113 and Rt. 818 and on the south side of Rt. 346 West, west of Rt. 818 to W-1 and S-1. Proposed improvements in this area include a new water main and new gravity sewer to be extended west along Rt. 346.

4. THE BAY CLUB

A plan revision to reflect the Town of Berlin's plans to divert a portion of its treated sewage effluent to The Bay Club Golf Course, located west of town and currently categorized as S-1, for spray irrigation and supply services.

5. ADDITIONAL W-1 AND S-1 AREAS WITHIN TOWN LIMITS

Add an area on the east side of Town including parcel numbers 678, 679, 762, 767, 783, 785, 786, 796 and 860, as shown on Worcester County tax map 301, and an area west of town including parcel numbers 1222, 1279-1 and 3106, as shown on Worcester County tax map 300, and categorize as W-1 and S-1 as they are currently within the town corporate limits.

6. ADDITIONAL W-3 AND S-3 AREAS OUTSIDE TOWN LIMITS

Add an area northwest of town including parcel numbers 3, 146, 278 and 333, as shown on Worcester County tax map 25, and categorize as W-3 and S-3.

7. ADDITIONAL W-1 AND S-1 AREAS OUTSIDE TOWN LIMITS

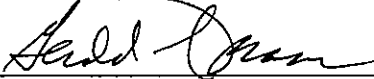
Water: Add an area east of town between Rt. 346 and Flower St. including parcel numbers 89, 94, 233, 267, 269, 276, 279, 280, 281 and 479, as shown on Worcester County tax map 25, and categorize as W-1.

Sewer: Add an area east of town, south of Rt. 346, including parcel numbers 89, 95, 96, 97, 110, 233, 236, 239, 240, 242, 245, 246, 251, 252, 253, 254, 255, 256, 257, 258, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 279, 280, 281, 348, 411, 419, 420, 429, 442, 457, 479, 487 and 497, as shown on Worcester County tax map 25, and categorize as S-1.

AND BE IT FURTHER RESOLVED that these proposed amendments shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-502 and that said amendments shall be officially incorporated into the Water and Sewer Plan upon said approval by MDE.

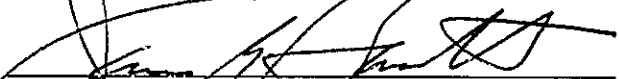
PASSED AND ADOPTED this 7th day of January, 1997, nunc pro tunc November 6, 1996.

ATTEST:

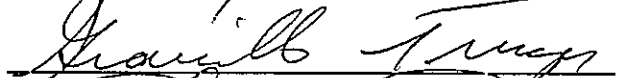


Gerald T. Mason
Chief Administrative Officer

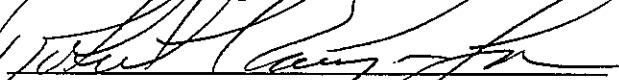
WORCESTER COUNTY COMMISSIONERS



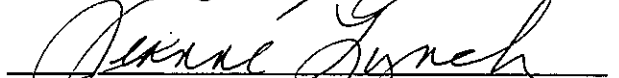
James G. Barrett, President



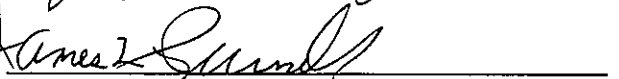
Granville D. Trumper, Vice President



Robert L. Cowger, Jr.



Jeanne Lynch



James L. Purnell

RESOLUTION NO. 97- 6

RESOLUTION AMENDING
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
PROVISION OF PUBLIC WATER AND WASTEWATER SERVICE
OCEAN LANDING SHOPPING CENTER

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Ocean City Partners Limited Partnership to amend said plan; and

WHEREAS, the County Commissioners held a public hearing on January 21, 1997 to hear public comment on the requested amendments;


NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that the Water and Sewerage Plan for Worcester County is hereby amended to add the following:

1. The application of Ocean City Partners Limited Partnership to provide water and wastewater service to the proposed Ocean Landing Shopping Center to be located on the southerly side of U.S. Route 50 to the east of MD Route 589, said property shown on Worcester County Tax Map 26 as Parcel 303. The proposed method of wastewater disposal is spray irrigation.

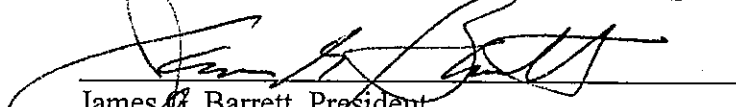
AND BE IT FURTHER RESOLVED that these proposed amendments shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.

PASSED AND ENACTED this 21st day of January, 1997.

ATTEST:


Gerald T. Mason
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS


James B. Barrett, President


Granville D. Trimmer, Vice President


Robert L. Cowger, Jr.

Jeanne Lynch


James L. Purnell

RESOLUTION NO. 97- 49

RESOLUTION AMENDING
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
HOMEPORT PLANNED UNIT DEVELOPMENT

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Ann Lockhart Showell, owner of the proposed Homeport Planned Unit Development (PUD) project (formerly known as Captain's Point PUD), to amend said plan; and

WHEREAS, the Worcester County Planning Commission, at their meeting of August 7, 1997, reviewed and forwarded to the Commissioners a favorable recommendation to the request; and

WHEREAS, the County Commissioners held a public hearing on December 9, 1997 to hear public comment on the requested amendments;


NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that the Water and Sewerage Plan for Worcester County is hereby amended to replace all references to the Captain's Point PUD to reflect the following:

1. The application of Ann Lockhart Showell to provide water and wastewater service to the proposed Homeport Planned Unit Development, to be located on the southerly side of Old Bridge Road and northerly side of Sunset Avenue, to the east of golf Course Road, in West Ocean City, said property shown on Tax Map 27 as Parcels 179, 240, 244, 247, 248, 321, 322, 323, 324, 325, 327, 328, 329, 330, 333, 334, 335, 337, 342, 343, 351, 386, 400, 487, 514, 517, 518, 520, 581 and 619. The proposed method of wastewater disposal is partially through connection to the West Ocean City public sewer system, with the remainder to be disposed of by connection to the sewer system serving Mystic Harbour.


AND BE IT FURTHER RESOLVED that these proposed amendments shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.

PASSED AND ENACTED this 9th day of December, 1997.


ATTEST

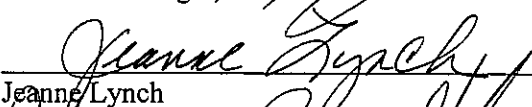

Gerald T. Mason
Chief Administrative Officer

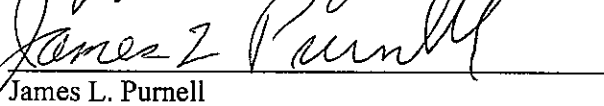
WORCESTER COUNTY COMMISSIONERS


Granville D. Yrimper, President


James G. Barrett, Vice President


Robert L. Cowger, Jr.


Jeannette Lynch


James L. Purnell

RESOLUTION NO. 97- 50

RESOLUTION AMENDING
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
RIDDLE FARM PLANNED UNIT DEVELOPMENT

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Goodwin Taylor, owner of the proposed Riddle Farm Planned Unit Development (PUD) project, to amend said plan; and

WHEREAS, the Worcester County Planning Commission, at their meeting of August 7, 1997, reviewed and forwarded to the Commissioners a favorable recommendation to the request; and

WHEREAS, the County Commissioners held a public hearing on December 9, 1997 to hear public comment on the requested amendments;


NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that the Water and Sewerage Plan for Worcester County is hereby amended to revise all references to the Riddle Farm PUD project to reflect the following:

1. The application of Goodwin Taylor to provide water and wastewater service to the proposed Riddle Farm Planned Unit Development, to be located on the northerly side of U.S. Route 50 to the east of MD Route 589, said property shown on Tax Map 26 as Parcel 1. The proposed method of wastewater disposal is spray irrigation.

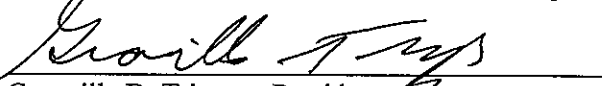
AND BE IT FURTHER RESOLVED that these proposed amendments shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.

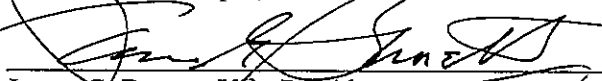
PASSED AND ENACTED this 9th day of December, 1997.


ATTEST:

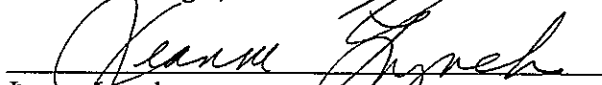

Gerald T. Mason
Chief Administrative Officer

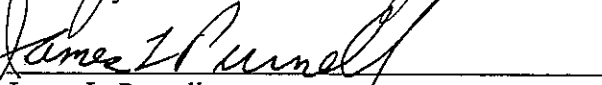
WORCESTER COUNTY COMMISSIONERS


Granville D. Trimper, President


James G. Barrett, Vice President


Robert L. Cowger, Jr.


Jeanne Lynch


James L. Purnell

**RESOLUTION AMENDING
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
SANDPIPER VILLAGE PLANNED COMMERCIAL DEVELOPMENT**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Tade Gerischer on behalf of Curtis W. Mumford to amend said plan to include the proposed provision of potable water to the Sandpiper Village Planned Commercial Development (PCD) located on the westerly side of MD Route 611 to the north of MD Route 707 and south of US Route 50 in West Ocean City; and

WHEREAS, the Worcester County Planning Commission, at their meeting of December 4, 1997, reviewed and forwarded to the Commissioners a favorable recommendation to the request; and

WHEREAS, the County Commissioners held a public hearing on January 20, 1998 to hear public comment on the requested amendments;


NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that the Water and Sewerage Plan for Worcester County is hereby amended to include the provision of potable water to the Sandpiper Village Planned Commercial Development (PCD) specified as follows:

1. The application of Tade Gerischer on behalf of Curtis Mumford to provide potable water to the proposed Sandpiper Village Planned Commercial Development, to be located on the westerly side of MD Route 611 to the north of MD Route 707 and south of US Route 50 in West Ocean City, said property shown on Tax Map 27 as Part of Parcel 510, Lots 1 through 8.

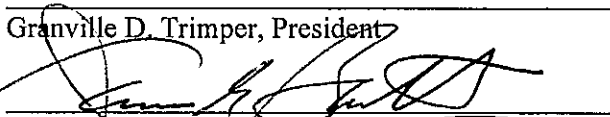
AND BE IT FURTHER RESOLVED that these proposed amendments shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.

PASSED AND ENACTED this 20th day of January, 1998.

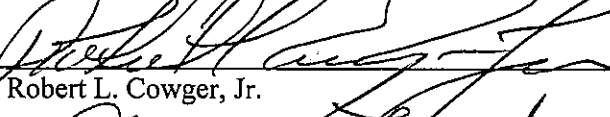
ATTEST:


Gerald T. Mason
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS


Granville D. Trimper, President


James C. Barrett, Vice President


Robert L. Cowger, Jr.


Joanne Lynch


James L. Purnell

RESOLUTION NO. 98- 2

RESOLUTION AMENDING
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
LIGHTHOUSE SOUND

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Lawrence T. Whitlock on behalf of Operating Engineers Local No. 37 Pension Fund to amend said plan to include the proposed provision of water and wastewater service to the proposed Lighthouse Sound project to be located on St. Martins Neck Road to the north of MD Route 90; and

WHEREAS, the Worcester County Planning Commission, at their meeting of August 7, 1997, reviewed and forwarded to the Commissioners a favorable recommendation to the request; and

WHEREAS, the County Commissioners held a public hearing on January 20, 1998 to hear public comment on the requested amendments;


NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that the Water and Sewerage Plan for Worcester County is hereby amended to revise all references to the Lighthouse Sound project to reflect the following:

1. The application of Lawrence T. Whitlock on behalf of Operating Engineers Local No. 37 Pension Fund to provide water and wastewater service to the proposed Lighthouse Sound project to be located on St. Martins Neck Road to the north of MD Route 90, said property shown on Tax Map 17 as Parcel 1. The proposed method of wastewater disposal is spray irrigation.

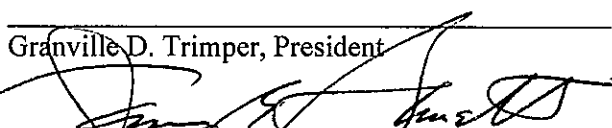
AND BE IT FURTHER RESOLVED that these proposed amendments shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.

PASSED AND ENACTED this 20th day of January, 1998.


ATTEST:


Gerald T. Mason
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS


Granville D. Trimper, President


James G. Barrett, Vice President


Robert L. Cowger, Jr.


Jeanne Lynch


James L. Purnell

RESOLUTION NO. 98- 19

**RESOLUTION EXPANDING THE
MYSTIC HARBOUR SANITARY SERVICE AREA AND
AMENDING THE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO REFLECT SAID EXPANSION**

WHEREAS, pursuant to Section PW 5-305 of the Public Works Article of the Code of Public Local Laws of Worcester County, Maryland, the County Commissioners adopted Resolution No. 98-10 providing for an investigation of a proposed expansion of the Mystic Harbour Sanitary Service area to provide sanitary sewer service and potable water to residents and properties not currently served by public facilities in the West Ocean City and Route 611 Corridor area and to satisfy the provisions of Section 3.1.A of the agreement dated November 25, 1997 ("the Agreement") between the County Commissioners and MH Utilities Corporation (MHU) and Mystic Harbour Water and Wastewater Services, Inc. (MHWWS), hereinafter jointly referred to as "Mystic Harbour," for turnover of the public water and sanitary sewer facilities ("the facilities") to the County; and

WHEREAS, the County Commissioners have evaluated the staff report and investigation on this proposal with respect to public water and sanitary sewer service in the proposed service area as well as adjacent areas and have found that the expansion is desirable for the comfort, convenience, health, safety, and welfare of the people who will be served by the facilities; is feasible for construction and operation of the facilities from an economic and engineering standpoint; is in the best interest of the public health, safety, and welfare of all residents of the County; will not be unduly detrimental to the environment of the County; and the design and operation of the facilities are in accordance with all required permits and standards; and

WHEREAS, the cost of expansion of the facilities will be the sole responsibility of Mystic Harbour as established in the Agreement; and

WHEREAS, the County Commissioners held a duly advertised public hearing on April 21, 1998 to consider the request for expansion of the Mystic Harbour Sanitary Service Area.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland, that:

1. The Mystic Harbour Sanitary Service Area is hereby expanded to include properties along MD Route 611 (Stephen Decatur Highway) not currently served by public facilities, and more specifically described as those properties located in West Ocean City generally bordered on the north by U.S. Route 50 (Ocean Gateway), including an area north of U.S. Route 50 to a depth of up to 1,700 feet bordered on the west by Golf Course Road, bordered on the east by Sinepuxent Bay, bordered on the south by Meadow Road to MD Route 611 (Stephen Decatur Highway), then bordered on the east by MD Route 611, bordered on the south by MD Route 376 (Assateague Road), bordered on the west by Ayres Creek and encompassing properties on both sides of Lewis Road for a distance of approximately 1.1 mile, as well as certain properties north of the aforementioned area and south of U.S. Route 50 located on the west side of MD Route 611 to a varying depth of up to 2,400 feet, all of which comprises an area of 2,900 acres, more or less, and generally shown on the map attached hereto as "Attachment 1."
2. The Mystic Harbour Sanitary Service Area is expanded to incorporate the land described herein to provide potable water and sanitary sewer service to property owners within the expanded sanitary service area who wish to receive such public facilities.

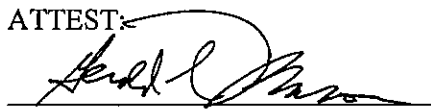
3. The proposed sanitary facilities are planned to be constructed by Mystic Harbour over the next three years with the treatment plant, as expanded, to provide for a total treatment capacity of 250,000 gallons per day, which will serve one thousand (1,000) equivalent dwelling units (EDUs). Future facilities may be constructed within the service area.
4. The proposed public water facilities will be expanded by Mystic Harbour to provide for conveyance of public water to residents who wish to be served by public water. The public water facilities currently have a total capacity to accommodate three thousand (3,000) EDUs. Future facilities may be constructed within the service area.
5. EDUs for sanitary sewer and public water service shall be allocated for existing parcels based upon commitments previously made by Mystic Harbour and commitments to be made by Mystic Harbour in the future.
6. The Mystic Harbour Sanitary Service Area is a non-exclusive service area and its boundary overlaps with other service areas which may also provide service to the residents within this service area. As service is provided, it may become necessary to create sub-areas within the service area. Nothing in this Resolution creates a franchise in favor of any one entity to provide service in this service area.
7. The County Commissioners shall send an appropriate notification to the Maryland Department of the Environment regarding the water appropriations permit in order to satisfy the provisions of Section 3.1.C of the Agreement.
8. The expansion of the Mystic Harbour Sanitary Service Area shall be incorporated into the Water and Sewerage Plan for Worcester County.

AND BE IT FURTHER RESOLVED that this expansion of the Mystic Harbour Sanitary Service Area shall take effect upon the transfer of the facilities to the County by Mystic Harbour in accordance with the Agreement.

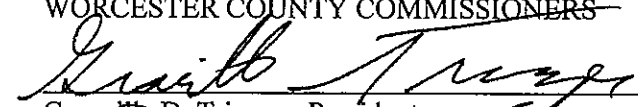
AND BE IT FURTHER RESOLVED that these proposed amendments to the Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Water and Sewerage Plan upon said approval by MDE and transfer of the facilities to the County.

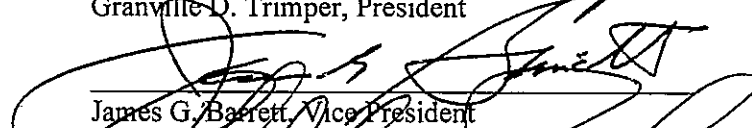
PASSED AND ENACTED this 19th day of May, 1998.

ATTEST:


 Gerald T. Mason
 Chief Administrative Officer

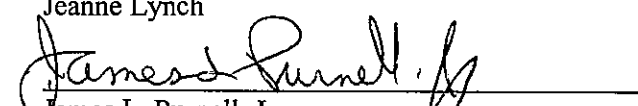
WORCESTER COUNTY COMMISSIONERS

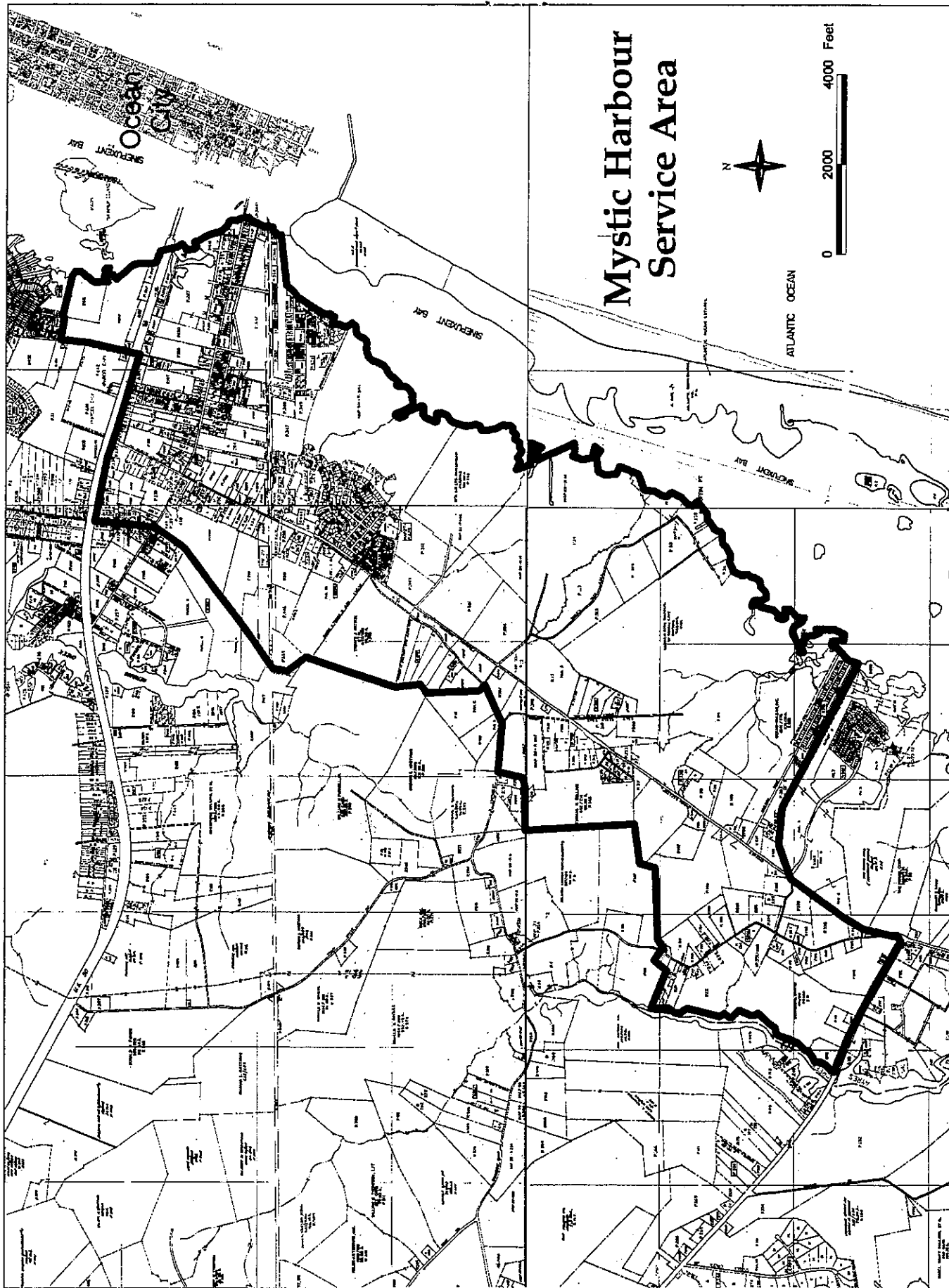

 Granville D. Trimper, President


 James G. Barrett, Vice President


 Robert L. Cowger, Jr.

Jeanne Lynch


 James L. Purnell, Jr.



RESOLUTION NO. 98 - 22

**RESOLUTION AMENDING
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
THE LANDINGS (PINE POINT) AND LEWIS ROAD AREA**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Bayside Landings, L.L.C., owner, to amend said plan regarding the proposed provision of water and wastewater service to the proposed project known as The Landings (Pine Point) located on Stephen Decatur Highway (MD Rt. 611) approximately 9/10 mile north of its intersection with Assateague Road (MD Rt. 376), and other properties located on Lewis Store Road, to reflect the calculation of equivalent dwelling units (EDUs) at the usage rate of 250 gallons per day (gpd), rather than 300 gpd, with a total approved average daily flow of 115,000 gallons per day for the water treatment facilities, yielding a total of 460 EDUs for this project, and a total approved average daily flow of 100,000 gallons per day for the wastewater treatment facilities, yielding a total of 400 EDUs for this project; and

WHEREAS, the Worcester County Planning Commission, at their meeting of April 2, 1998, reviewed and forwarded to the Commissioners a favorable recommendation to the request; and

WHEREAS, the County Commissioners held a public hearing on May 19, 1998 to hear public comment on the requested amendments;


NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that the Water and Sewerage Plan for Worcester County is hereby amended to revise all references to The Landings project to reflect the following:

1. The application of Bayside Landings, L.L.C., owner, to provide water and wastewater service to the proposed project known as The Landings (Pine Point) located on Stephen Decatur Highway (MD Rt 611) approximately 9/10 mile north of its intersection with Assateague Road (MD Rt 376), and other properties located on Lewis Store Road, to reflect the calculation of equivalent dwelling units (EDUs) at the usage rate of 250 gallons per day (gpd), rather than 300 gpd, with a total approved average daily flow of 115,000 gallons per day for the water treatment facilities, yielding a total of 460 EDUs for this project, and a total approved average daily flow of 100,000 gallons per day for the wastewater treatment facilities, yielding a total of 400 EDUs for this project, said property shown on Tax Map 33 as Parcels 149, 159 and 281 and also including properties in the Lewis Road area.

AND BE IT FURTHER RESOLVED that these proposed amendments shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.


PASSED AND ENACTED this 19th day of May, 1998.

ATTEST:

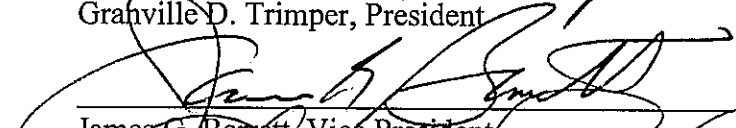


Gerald T. Mason
Chief Administrative Officer

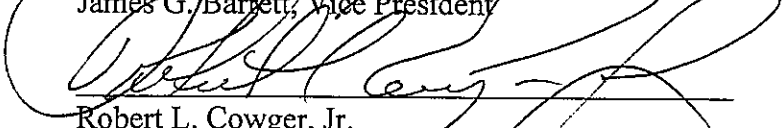
WORCESTER COUNTY COMMISSIONERS



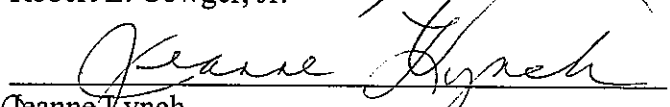
Granville D. Trimper, President



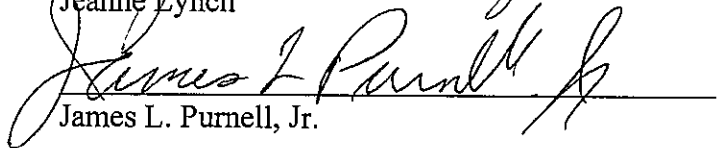
James G. Barrett, Vice President



Robert L. Cowger, Jr.



Jeanne Lynch



James L. Purnell, Jr.

RESOLUTION AMENDING WATER AND SEWERAGE PLAN
FOR WORCESTER COUNTY - LIGHTHOUSE SOUND

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Lawrence T. Whitlock on behalf of Mr. Thomas H. Ruark, Owner, to amend said plan regarding the proposed provision of water and wastewater service to the proposed Lighthouse Sound project to be located on St. Martins Neck Road to the north of MD Route 90, to reflect a total flow of 37,950 gallons per day rather than the current approved flow of 30,030 gallons per day; and

WHEREAS, the Worcester County Planning Commission, at their meeting of November 5, 1998, reviewed and forwarded to the Commissioners a favorable recommendation to the request provided that the application is amended to substitute the term "future uses" for the reference to lodging facilities which are not currently permitted under the Worcester County Zoning Ordinance; and

WHEREAS, the County Commissioners held a public hearing on January 5, 1999 to hear public comment on the requested amendments and agreed with the amendment requested by the Planning Commission;

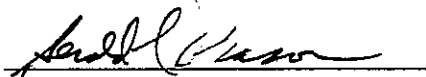
NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that the Water and Sewerage Plan for Worcester County is hereby amended to revise all references to the Lighthouse Sound project to reflect the following:

1. The amended application of Lawrence T. Whitlock on behalf of Thomas H. Ruark, Owner, to increase the amount of potable water service and wastewater service from 30,030 gallons per day to 37,950 gallons per day for "future uses" for the proposed Lighthouse Sound project to be located on St. Martins Neck Road to the north of MD Route 90, said property shown on Tax Map 17 as Parcel 1 and on Tax Map 10 as Parcels 34, 35 and 36. The proposed method of wastewater disposal is spray irrigation.

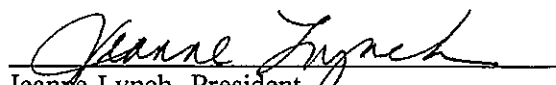
AND BE IT FURTHER RESOLVED that these proposed amendments shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.

PASSED AND ENACTED this 5th day of January, 1999.

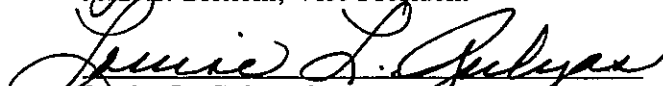
ATTEST:



Gerald T. Mason
Chief Administrative Officer

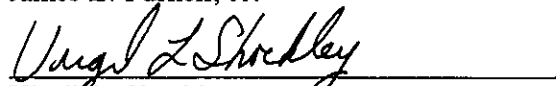
WORCESTER COUNTY COMMISSIONERS


Jeanne Lynch, President


John E. Bloxom, Vice President


Louise L. Gulyas


James L. Purnell, Jr.


Virgil L. Shockley

RESOLUTION NO. 00-11
RESOLUTION AMENDING
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
MERIAL SELECT, INC.

WHEREAS, we the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Neil Helgeson, Engineering Manager of Merial Select, Inc. to amend said plan to include the proposed provision of potable water and sewerage system to the Merial Select, Inc. facility located at the northeast intersection of U.S. Route 50 and MD Route 818 near the Town of Berlin; and

WHEREAS, the County Commissioners held a public hearing on April 18, 2000 to hear public comment on the requested amendments;


NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that the Water and Sewerage Plan for Worcester County is hereby amended to include the provision of potable water and sewerage to the Merial Select Inc. property specified as follows:

1. The application of Neil Helgeson, Engineering Manager of Merial Select, Inc., on behalf of Merial Select Inc. to add their property to the Plan to permit the construction of a proposed potable water and sewerage system, each with a capacity of 0.03 million gallons per day (MGD), to serve the Merial Select, Inc. facility located at the northeast intersection of U.S. Route 50 and MD Route 818 near the Town of Berlin, said property shown on Worcester County Tax Map 25 as Parcel 50.

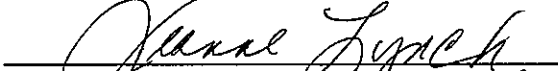
AND IT BE FURTHER RESOLVED that these proposed amendments shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall officially be incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.


PASSED AND ENACTED this 18th Day of April, 2000.

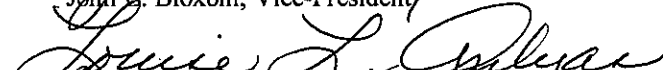
ATTEST:



Gerald T. Mason
Chief Administrative Officer

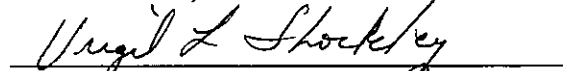
WORCESTER COUNTY COMMISSIONERS


Jeanne Lynch, President


John E. Bloxom, Vice-President


Louise L. Gulyas


James L. Purnell, Jr.


Virgil L. Shockley

RESOLUTION NO. 00 - 24

**RESOLUTION AMENDING WATER AND SEWERAGE PLAN
FOR WORCESTER COUNTY - BERLIN TECHNOLOGY PARK**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from the Mayor and Council of the Town of Berlin, Maryland, to amend said plan regarding the proposed provision of water and wastewater service to certain properties to be annexed into the Town of Berlin for the proposed Berlin Technology Park to be located on the west side of U.S. Route 113, north of U.S. Route 50 on both sides of MD Route 818; and

WHEREAS, the Worcester County Planning Commission, at their meeting of April 6, 2000, reviewed and forwarded to the Commissioners a favorable recommendation of the request; and

WHEREAS, the County Commissioners held a public hearing on May 16, 2000 to hear public comment on the requested amendments; and

WHEREAS, as a result of the public hearing, the County Commissioners agreed to revise the proposed Amendment to remove the area north of the proposed industrial development area which includes properties known as the Beach Club Golf Course and certain lots on both sides of Deer Park Drive and more specifically identified on Tax Map 20 as Parcels 37, 43, 50, 71, 139, 140, 228, 232, 251, 337, 354 (Lots 1 and 2) and 359; and


WHEREAS, the County Commissioners have determined that at such time as the property which is the subject of this proposed Amendment as revised is finally annexed into the corporate limits of the Town of Berlin and appropriate zoning classification finally enacted to permit the construction of the Technology Park contemplated by the Application, that such provisions for water and wastewater service are appropriate and should be planned for.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that effective upon the final annexation of the property planned to be served by the Amendment submitted by the Town of Berlin and as revised by the County Commissioners, the final establishment of zoning classification or classifications on such property permitting the construction of a Technology Park, that the Amendment as applied for by the Mayor and Council of the Town of Berlin, Maryland and as revised by the County Commissioners shall be approved and become a part of the Water and Sewerage Plan for Worcester County to permit the extension of the existing Town water and sewer facilities along Maryland Route 818 and north of U.S. Route 50 to serve the needs of the Technology Park and adjacent areas on the west side of U.S. Route 113, north of U.S. Route 50.

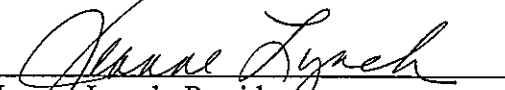
AND BE IT FURTHER RESOLVED that these proposed amendments shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.


PASSED AND ENACTED this 20th day of June, 2000.

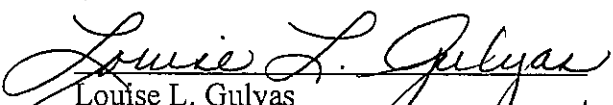
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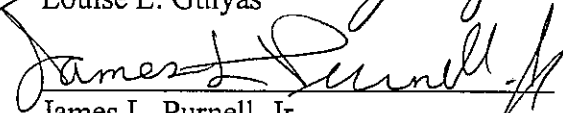

Gerald T. Mason
Chief Administrative Officer


WORCESTER COUNTY COMMISSIONERS


Jeanne Lynch, President


John E. Bloxom, Vice President


Louise L. Gulyas


James L. Purnell, Jr.


Virgil L. Shockley

RESOLUTION NO. 00 - 33

**RESOLUTION AMENDING WATER AND SEWERAGE PLAN
FOR WORCESTER COUNTY - HOME DEPOT PROJECT**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Ocean City Partners Limited Partnership to amend said plan regarding the proposed provision of water and wastewater service to certain properties located on the south side of U.S. Route 50, east of its intersection with MD Route 589; and

WHEREAS, the Worcester County Planning Commission, at their meeting of August 3, 2000, reviewed and forwarded to the Commissioners a favorable recommendation of the request; and

WHEREAS, the County Commissioners held a public hearing on September 19, 2000 to hear public comment on the requested amendments.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that the Water and Sewerage Plan for Worcester County is hereby amended to provide for the extension of water and sewer services to serve the Home Depot project on U.S. Route 50 specified as follows:

1. The application of Ocean City Partners Ltd. Partnership requesting an amendment to the Plan to permit properties located on the south side of U.S. Route 50, east of its intersection with MD Route 589, and shown on Tax Map 26 as Parcels 301 and 303, to use the existing water and sewer system serving the Wal Mart store. The sewer system is proposed to be modified to add a de-nitrification unit to the existing system and an eight-inch gravity line to connect Parcel 301 (site of a proposed Home Depot project) to the existing system located on Parcel 303. Additionally, a three-inch water line will connect Parcel 301 to the well system on Parcel 303.

AND BE IT FURTHER RESOLVED that these proposed amendments shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.

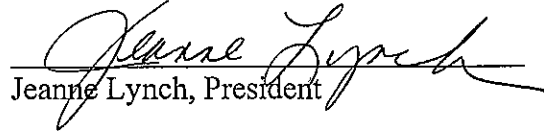
PASSED AND ENACTED this 19th day of September, 2000.

ATTEST.



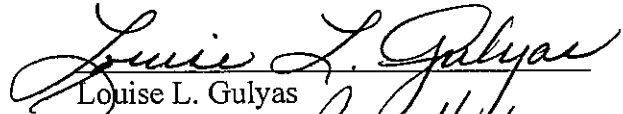
Gerald T. Mason
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS

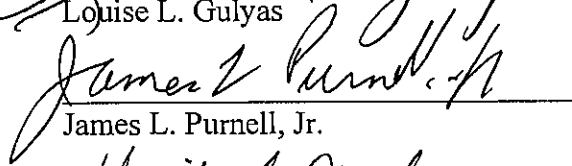


Jeanne Lynch, President

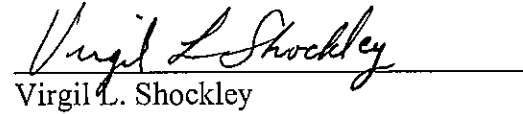
John E. Bloxom, Vice President



Louise L. Gulyas



James L. Purnell, Jr.



Virgil L. Shockley

RESOLUTION NO. 00 - 43

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
AND EXPANDING THE RIVER RUN SERVICE AREA FOR THE
HOWARD HALL/CATHOLIC DIOCESE PROPERTY**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners established the River Run Service Area in which all public sewer facilities serving the River Run development are owned and operated by the County Commissioners; and

WHEREAS, the County Commissioners have received a request from J.W. Salm Engineering, Inc. on behalf of Catholic Diocese Foundation to amend the Worcester County Water and Sewerage Plan to permit the extension of public sewerage service from the existing River Run sewer system by way of a low-pressure small diameter force main through Parcel 230 as shown on Tax Map 15, to serve Parcel 128 as shown on Tax Map 15, hereinafter referred to as "subject property", to allow for the development of a proposed school on the subject property, and to expand the River Run Service Area to include the subject property; and

WHEREAS, the request specifies that the construction of the facilities will begin in the Fall of 2002 and be completed by the Fall of 2003; and

WHEREAS, the River Run Service Area currently has a total capacity of 271 equivalent dwelling units (EDU's) of which 162 have been committed based upon existing development, approved plats and site plans, and that the subject property will require an allocation of 44 EDU's, leaving a reserve capacity of 65 EDU's for any future development in the River Run Service Area until such time as the capacity has been increased in accordance with the current discharge permit and the River Run Amendment and Agreement between the County Commissioners of Worcester County, Maryland and River Run Development Associates, LLC and River Run Community Association dated July 1, 1996, or its successor; and

WHEREAS, River Run Development Associates, LLC has authorized and requested the transfer of 44 EDU's to the subject property in accordance with the provisions of the aforementioned River Run Amendment and Agreement; and

WHEREAS, the Worcester County Planning Commission, at their meeting of November 2, 2000, reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the Comprehensive Development Plan for Worcester County; and

WHEREAS, the County Commissioners held a joint public hearing on December 5, 2000 to hear public comment on the requested amendments to the Worcester County Water and Sewerage Plan and expansion of the River Run Service Area; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section PW 5-305 (Sanitary service areas, sub-areas and amendments) of

the Code of Public Local Laws of Worcester County, Maryland the Commissioners have determined that the proposed expansion of the service area is desirable and in the best interests of the comfort, convenience, health, safety and general welfare of the people who will be served by the facility as well as the best interests of public health, safety and welfare of the residents of the County in general, and that the facilities do not appear to be unduly detrimental to the environment of the County, and that the construction, operation, and design of the facilities are in accordance with all required permits and applicable standards, and are feasible from both an engineering and economic standpoint.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

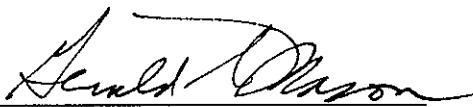
1. The River Run Service Area is hereby expanded to include the subject property; and
2. The Water and Sewerage Plan for Worcester County is hereby amended as specified in the application of J.W. Salm Engineering, Inc. on behalf of Catholic Diocese Foundation to permit the extension of public sewerage service from the River Run sewer system by way of a low-pressure small diameter force main through Parcel 230 as shown on Tax Map 15, to serve Parcel 128 as shown on Tax Map 15, to allow for the development of a proposed school on the subject property.

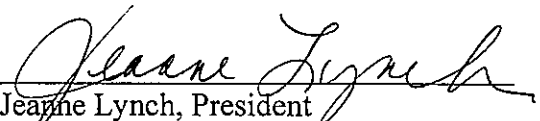
AND BE IT FURTHER RESOLVED that these proposed amendments to the Worcester County Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.

PASSED AND ENACTED this 5th day of December, 2000.

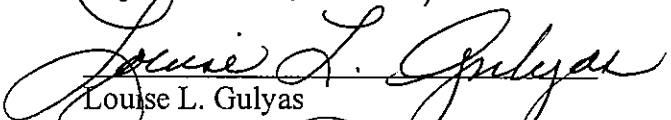
ATTEST:

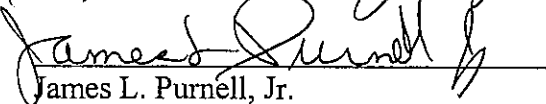
WORCESTER COUNTY COMMISSIONERS

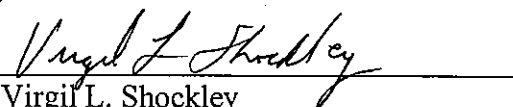

Gerald T. Mason
Chief Administrative Officer


Jeanne Lynch, President


John E. Bloxom, Vice President


Louise L. Gulyas


James L. Purnell, Jr.


Virgil L. Shockley

RESOLUTION NO. 00 - 44

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
AND EXPANDING THE MYSTIC HARBOUR SERVICE AREA FOR THE
MARK ODACHOWSKI PROPERTY**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners established the Mystic Harbour Service Area in which all public water and sewer facilities serving the Mystic Harbour development and the surrounding area are owned and operated by the County Commissioners; and

WHEREAS, the County Commissioners have received an application from Mark Odachowski requesting an amendment to the Worcester County Water and Sewerage Plan to provide sanitary services (domestic water and wastewater service) to property identified on Tax Map 26 as Parcels A, B & C, located near Green Ridge Road, south of MD Route 707 in West Ocean City, hereinafter referred to as "subject property", to extend public mains from Whispering Woods subdivision to the site in order to serve one existing dwelling (on Parcel A) and up to six proposed single family homes (on Parcels B & C) and to expand the Mystic Harbour Service Area to include the subject property; and

WHEREAS, the request specifies that the construction of the facilities will begin in the Spring of 2001 and be completed by the Fall of 2001; and

WHEREAS, the Mystic Harbour Service Area currently has a total capacity of 1,000 equivalent dwelling units (EDU's) of which 918 have been committed based upon existing development, approved plats and site plans, and that the subject property will require an allocation of 7 EDU's, leaving a reserve capacity of 75 EDU's for any future development in the Mystic Harbour Service Area; and

WHEREAS, the County Commissioners have requested and the applicants have agreed that these 7 EDU's may not be sold, transferred or assigned to another property; and

WHEREAS, the Worcester County Planning Commission, at their meeting of November 2, 2000, reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the Comprehensive Development Plan for Worcester County; and

WHEREAS, the County Commissioners held a joint public hearing on December 5, 2000 to hear public comment on the requested amendments to the Worcester County Water and Sewerage Plan and expansion of the Mystic Harbour Service Area; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section PW 5-305 (Sanitary service areas, sub-areas and amendments) of the Code of Public Local Laws of Worcester County, Maryland the Commissioners have

determined that the proposed expansion of the service area is desirable and in the best interests of the comfort, convenience, health, safety and general welfare of the people who will be served by the facility as well as the best interests of public health, safety and welfare of the residents of the County in general, and that the facilities do not appear to be unduly detrimental to the environment of the County, and that the construction, operation, and design of the facilities are in accordance with all required permits and applicable standards, and are feasible from both an engineering and economic standpoint.


NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The Mystic Harbour Service Area is hereby expanded to include the subject property; and
2. The Water and Sewerage Plan for Worcester County is hereby amended as specified in the application of Mark Odachowski to provide sanitary services (domestic water and wastewater service) to property identified on Tax Map 26 as Parcels A, B & C, located near Green Ridge Road, south of MD Route 707 in West Ocean City to extend public mains from Whispering Woods subdivision to the site in order to serve one existing dwelling (on Parcel A) and up to six proposed single family homes (on Parcels B & C) on the subject property, with the condition that these 7 EDU's may not be sold, transferred or assigned to another property.

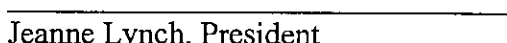
AND BE IT FURTHER RESOLVED that these proposed amendments to the Worcester County Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.


PASSED AND ENACTED this 5th day of December, 2000.

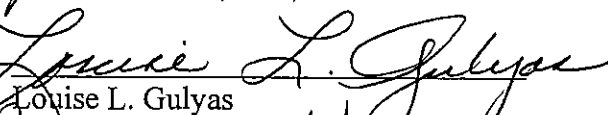
ATTEST:

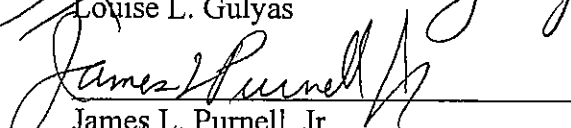

Gerald T. Mason
Chief Administrative Officer

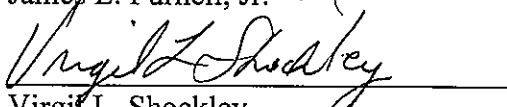
WORCESTER COUNTY COMMISSIONERS


Jeanne Lynch, President


John E. Bloxom, Vice President


Louise L. Gulyas


James L. Purnell, Jr.


Virgil L. Shockley

RESOLUTION NO. 02 - 5

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO INCLUDE THE
MOST BLESSED SACRAMENT SCHOOL WATER SERVICE AREA**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from J.W. Salm Engineering, Inc. on behalf of Catholic Diocese Foundation to amend the Worcester County Water and Sewerage Plan to include the addition of a new service area to be known as the Most Blessed Sacrament School Water Service Area for the establishment of a private water system to serve a new 500-student elementary school (44 EDUs) by way of a 100-foot deep well with on-site mains for on-site distribution to their property only as shown on Tax Map 15 and identified as Parcel 128, hereinafter referred to as "subject property," and

WHEREAS, the request specifies that the construction of the facilities will begin in the Spring of 2002 and be completed by June 2003; and

WHEREAS, the Worcester County Planning Commission, at their meeting of January 3, 2002, reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the Comprehensive Development Plan for Worcester County; and

WHEREAS, the County Commissioners held a public hearing on March 5, 2002 to hear public comment on the requested amendment to the Worcester County Water and Sewerage Plan; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section PW 5-305 (Sanitary service areas, sub-areas and amendments) of the Code of Public Local Laws of Worcester County, Maryland the Commissioners have determined that the proposed establishment of the service area is desirable and in the best interests of the comfort, convenience, health, safety and general welfare of the people who will be served by the facility as well as the best interests of public health, safety and welfare of the residents of the County in general, and that the facilities do not appear to be unduly detrimental to the environment of the County, and that the construction, operation, and design of the facilities are in accordance with all required permits and applicable standards, and are feasible from both an engineering and economic standpoint.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The Most Blessed Sacrament School Water Service Area is hereby established; and


2. The Water and Sewerage Plan for Worcester County is hereby amended as specified in the application of J.W. Salm Engineering, Inc. on behalf of Catholic Diocese Foundation to permit the construction of a private water system to serve a new 500-student elementary school (44 EDUs) by way of a 100-foot deep well with on-site mains for on-site distribution to the subject property.


AND BE IT FURTHER RESOLVED that these proposed amendments to the Worcester County Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.

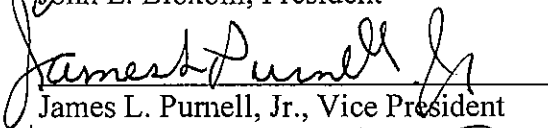
PASSED AND ENACTED this 5th day of March, 2002.

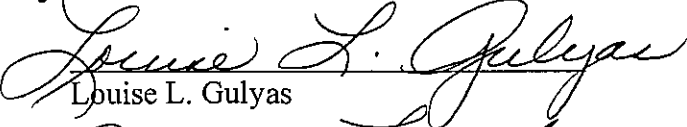
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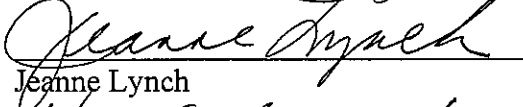
WORCESTER COUNTY COMMISSIONERS

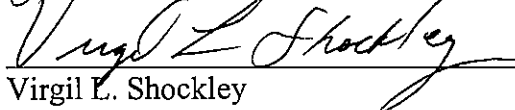

Gerald T. Mason
Chief Administrative Officer


John E. Bloxom, President


James L. Purnell, Jr., Vice President


Louise L. Gulyas


Jeanne Lynch


Virgil L. Shockley

RESOLUTION NO. 02 - 22

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO EXPAND THE TOWN OF SNOW HILL
WATER AND SEWER SERVICE AREAS**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from the Mayor and Council of Snow Hill, Maryland to amend the Worcester County Water and Sewerage Plan to expand the boundaries of the Water and Sewer Service Areas to serve areas with failing septic systems and areas proposed to be annexed into the Town of Snow Hill in the future; and

WHEREAS, the Worcester County Planning Commission, at their meeting of May 2, 2002, reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the Comprehensive Development Plan for Worcester County; and

WHEREAS, the County Commissioners held a public hearing on June 18, 2002 to hear public comment on the requested amendment to the Worcester County Water and Sewerage Plan; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section PW 5-305 (Sanitary service areas, sub-areas and amendments) of the Code of Public Local Laws of Worcester County, Maryland the Commissioners have determined that the proposed expansion of the service area is desirable and in the best interests of the comfort, convenience, health, safety and general welfare of the people who will be served by the facilities as well as the best interests of public health, safety and welfare of the residents of the County in general, and that the facilities do not appear to be unduly detrimental to the environment of the County, and that the construction, operation, and design of the facilities are in accordance with all required permits and applicable standards, and are feasible from both an engineering and economic standpoint.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The Water and Sewerage Plan for Worcester County is hereby amended as specified in the application of the Mayor and Council of Snow Hill, Maryland to expand the boundaries of the Water and Sewer Service Areas to serve areas with failing septic systems and areas proposed to be annexed into the Town of Snow Hill in the future.

AND BE IT FURTHER RESOLVED that these proposed amendments to the Worcester County Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.


PASSED AND ENACTED this 18th day of June, 2002.

ATTEST:

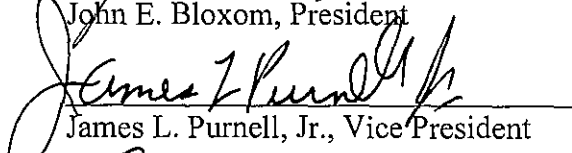
WORCESTER COUNTY COMMISSIONERS



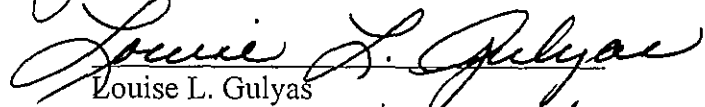
Gerald T. Mason
Chief Administrative Officer



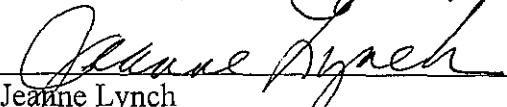
John E. Bloxom, President



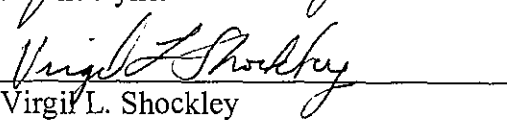
James L. Purnell, Jr., Vice President



Louise L. Gulyas



Jeanne Lynch



Virgil L. Shockley

RESOLUTION NO. 02 - 32

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO ADD THE OCEAN LANDING II
WATER AND WASTEWATER TREATMENT SYSTEM**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from O.C. Realty, LLC c/o Allen and Connie, LLC, to amend the Worcester County Water and Sewerage Plan to add the Ocean Landing II Water and Wastewater Treatment System; and

WHEREAS, the Worcester County Planning Commission, at their meetings of July 25, 2002, and August 1, 2002, reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the Comprehensive Development Plan for Worcester County; and

WHEREAS, the County Commissioners held a public hearing on September 3, 2002 to hear public comment on the requested amendment to the Worcester County Water and Sewerage Plan; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section PW 5-305 (Sanitary service areas, sub-areas and amendments) of the Code of Public Local Laws of Worcester County, Maryland the Commissioners have determined that the proposed addition of the Water and Wastewater Treatment System is desirable and in the best interests of the comfort, convenience, health, safety and general welfare of the people who will be served by the facilities as well as the best interests of public health, safety and welfare of the residents of the County in general, and that the facilities do not appear to be unduly detrimental to the environment of the County, and that the construction, operation, and design of the facilities are in accordance with all required permits and applicable standards, and are feasible from both an engineering and economic standpoint.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The Water and Sewerage Plan for Worcester County is hereby amended as specified in the application of O.C. Realty, LLC c/o Allen and Connie, LLC, to add the Ocean Landing II Water and Wastewater Treatment System to provide water and sewer service to a proposed multi-unit commercial center adjacent to the existing Home Depot store on the south side of U.S. Route 50 near it's intersection with Maryland Route 589. The subject property is more specifically

identified on Worcester County Tax Map 26 as Parcels 301, 302 and 305. Individual unit water service connections and a self-contained gravity collection sewage system using a lagoon/spray irrigation/nutrient management system for sewage treatment would serve the center.



AND BE IT FURTHER RESOLVED that these proposed amendments to the Worcester County Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.

PASSED AND ENACTED this 3rd day of September, 2002.

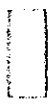
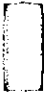
ATTEST:

WORCESTER COUNTY COMMISSIONERS

Gerald T. Mason
Chief Administrative Officer

John E. Bloxom, President

James L. Purnell, Jr., Vice President

Louise L. Gulyas
Jeanne Lynch
Virgil L. Shockley

RESOLUTION NO. 03 - 11

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO ADD THE PENNINGTON COMMONS COMMUNITY SEWER SERVICE AREA
AND PENNINGTON COMMONS COMMERCIAL PROPERTY WATER SYSTEM**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted the Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Pennington Limited Partnership, Allen Skolnick, General Partner, to amend the *Worcester County Comprehensive Water and Sewerage Plan* to add the Pennington Commons Community Sewer Service Area and Pennington Commons Commercial Property Water System; and

WHEREAS, the Worcester County Planning Commission, at their meeting of October 31, 2002, reviewed the application for amendment to the *Worcester County Water and Sewerage Plan* and found the proposal consistent with the *Comprehensive Development Plan for Worcester County*; and

WHEREAS, the County Commissioners held a public hearing on January 7, 2003 to hear public comment on the requested amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add the proposed Pennington Commons Community water and sewer systems, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* (the Plan) is hereby amended as specified in the application of Pennington Limited Partnership, Allen Skolnick, General Partner (the application), with conditions, to add the Pennington Commons Community Sewer System in order to provide sewer service to a proposed 90-unit hotel, a 6,000 square foot restaurant, 4 retail establishments totaling 42,000 square feet and a residential area consisting of 29 single-family homes all of which is to be located on the west side of MD Route 589 across from Manklin Creek Road at the South Gate of the Ocean Pines Community. The sewer system is to include a gravity collection system, pump

station, biological treatment plant, disinfection and spray irrigation for land application, as well as an effluent storage lagoon for winter and emergency storage. The subject property is more specifically identified on Worcester County Tax Map 21 as Parcels 2, 4, 6, 61, 62 and 144. Conditions required by the County Commissioners are as follows:

- a. Revise the application to reflect a planning capacity figure of 300 gallons per day (gpd) per equivalent dwelling unit (EDU) for sewer.
 - b. Effluent shall meet a total nitrogen limit of 3 to 5 mg/l consistent with the Northern Coastal Bays Total Maximum Daily Load (TMDL).
 - c. Provide a biological process with a membrane filter treatment system.
 - d. Provide landscaping screen or a natural buffer between the project's residential portion, wastewater treatment facilities and MD Route 589.
 - e. No system construction is permitted until July 1, 2003 to allow the County time to study alternatives for serving the subject property, perhaps from the Ocean Pines Service Area.
2. The Plan is hereby amended as specified in the application, as amended, to add the Pennington Commons Commercial Property Water System to provide a privately owned shared facility for water service to the leasehold commercial properties on the subject property. The facility for water supply, treatment and distribution will be privately owned and maintained as a Shared Facility under County supervision. Conditions required by the County Commissioners are as follows:
- a. Revise the application to reflect a planning capacity figure of 350 gallons per day (gpd) per equivalent dwelling unit (EDU) for water.
 - b. Residential lots are to be served by a public water system.
 - c. No system construction is permitted until July 1, 2003 to allow the County time to study alternatives for serving the subject property, perhaps from the Ocean Pines Service Area.


AND BE IT FURTHER RESOLVED that these proposed amendments to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland

Department of the Environment (MDE) for review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon said approval by MDE.


PASSED AND ENACTED this 1st day of April, 2003.

ATTEST:

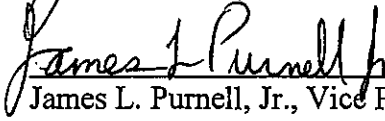
WORCESTER COUNTY COMMISSIONERS



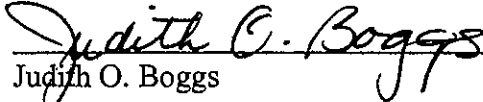
Gerald T. Mason
Chief Administrative Officer



John E. Bloxom, President




James L. Purnell, Jr., Vice President



Judith O. Boggs




Thomas A. Cetola



James C. Church

Louise L. Gulyas



Virgil L. Shockley

RESOLUTION NO. 03 - 12

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO ADD THE ISLAND RESORT CAMPGROUND
PLANNED WATER SYSTEM AND PLANNED SEWERAGE SYSTEM**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted the Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from George E. Young, III, P.C., on behalf of Island Management Inc., to amend the *Worcester County Comprehensive Water and Sewerage Plan* to add the Island Resort Campground Planned Water System and Planned Sewerage System; and

WHEREAS, the Worcester County Planning Commission, at their meeting of March 6, 2003, reviewed the application for amendment to the *Worcester County Water and Sewerage Plan* and found the proposal consistent with the *Comprehensive Development Plan for Worcester County*; and

WHEREAS, the County Commissioners held a public hearing on April 15, 2003 to hear public comment on the requested amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add the proposed Island Resort Campground Planned Water System and Planned Sewerage System, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* (the Plan) is hereby amended as specified in the application of George E. Young, III, P.C., on behalf of Island Management Inc. (the application), to add the Island Resort Campground Planned Water System and Planned Sewerage System in order to provide water and sewer service to 110 seasonal campsites to be located north of Cropper Island Road. The subject site is more specifically identified on Worcester County Tax Map 40 as that part of Parcel 93 from the southeastern side bound by Basset Creek and Porter Creek and the Forest Conservation Area on the northwestern portion of the parcel. The Planned Water System is to include a water conditioner/hypochlorinator for treatment, a hydropneumatic tank for


storage and 7,500 linear feet of 4-inch or small PVC SDR18 water mains for distribution to serve up to 165 people. The Planned Sewerage System is to include a small diameter force main and gravity sewer collection system with pump station to a fixed activated sludge treatment system and a conventional onsite septic system for discharge with a capacity of 16,500 gallons per day to serve up to 165 people.

AND BE IT FURTHER RESOLVED that these proposed amendments to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon said approval by MDE.

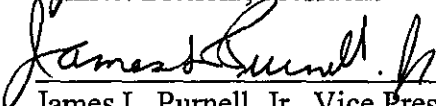
PASSED AND ENACTED this 15th day of April, 2003.


ATTEST:

WORCESTER COUNTY COMMISSIONERS

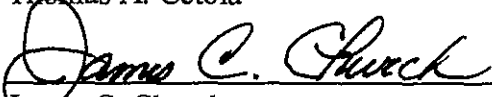

Gerald T. Mason
Chief Administrative Officer



John E. Bloxom, President

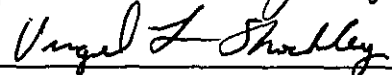

James L. Purnell, Jr., Vice President


Judith O. Boggs


Thomas A. Cetola


James C. Church


Louise L. Gulyas


Virgil L. Shockley

RESOLUTION NO. 03 - 31

**RESOLUTION AMENDING THE
COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO AMEND THE
OCEAN LANDING COMMERCIAL CENTER WATER DISTRIBUTION SYSTEM**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from O.C. Realty, LLC to amend the Worcester County Water and Sewerage Plan to expand the Ocean Landing Commercial Center Water Distribution System; and

WHEREAS, the Worcester County Planning Commission, at their meeting of August 7, 2003, reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the Comprehensive Development Plan for Worcester County; and

WHEREAS, the County Commissioners held a public hearing on September 16, 2003 to hear public comment on the requested amendment to the Worcester County Water and Sewerage Plan; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section PW 5-305 (Sanitary service areas, sub-areas and amendments) of the Code of Public Local Laws of Worcester County, Maryland the Commissioners have determined that the proposed expansion of the Water Distribution System is desirable and in the best interests of the comfort, convenience, health, safety and general welfare of the people who will be served by the facilities as well as the best interests of public health, safety and welfare of the residents of the County in general, and that the facilities do not appear to be unduly detrimental to the environment of the County, and that the construction, operation, and design of the facilities are in accordance with all required permits and applicable standards, and are feasible from both an engineering and economic standpoint.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The Water and Sewerage Plan for Worcester County is hereby amended as specified in the application of O.C. Realty, LLC to expand the Ocean Landing Commercial Center Water Distribution System to provide potable water service to a proposed shopping center, to include 20,892 square feet of retail development and 2,436 square feet of office space, to be located west of the Ocean Landing II project (Home Depot and Wal Mart) on the south side of U.S. Route 50 near its

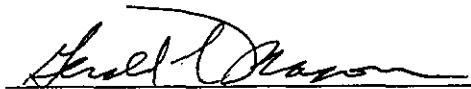
intersection with MD Route 589. The subject property is more specifically identified on Worcester County Tax Map 26 as Parcels 301, 302 and 305. The design calls for the installation of 6-inch and 8-inch distribution and fire mains to be tied into the existing 80-foot deep well located 40-feet south of Wal Mart with a pumping capacity of 25 gallons per minute and a maximum allocation (well capacity) of 35,000 gallons per day.


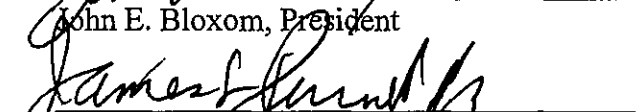
AND BE IT FURTHER RESOLVED that the proposed amendment to the Worcester County Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.

PASSED AND ENACTED this 7th day of October, 2003.

ATTEST:

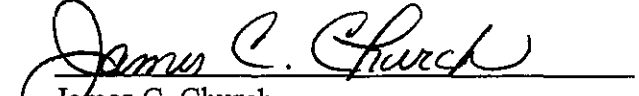
WORCESTER COUNTY COMMISSIONERS

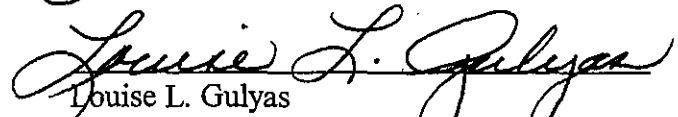

Gerald T. Mason
Chief Administrative Officer



John E. Bloxom, President

James L. Purnell, Jr., Vice President

Judith O. Boggs


Thomas A. Cetola


James C. Church


Louise L. Gulyas


Virgil L. Shockley

RESOLUTION NO. 03 - 39

**RESOLUTION AMENDING THE
COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
OCEAN PINES WASTEWATER TREATMENT PLANT CAPACITY EXPANSION
WORCESTER COUNTY, MARYLAND**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners propose to amend the Worcester County Water and Sewerage Plan to expand the capacity of the Ocean Pines Wastewater Treatment Plant; and

WHEREAS, the Worcester County Planning Commission, at their meeting of November 6, 2003, reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the Comprehensive Development Plan for Worcester County; and

WHEREAS, the County Commissioners held a public hearing on December 16, 2003 to hear public comment on the requested amendment to the Worcester County Water and Sewerage Plan; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section PW 5-305 (Sanitary service areas, sub-areas and amendments) of the Code of Public Local Laws of Worcester County, Maryland the Commissioners have determined that the proposed expansion of the capacity of the Ocean Pines Wastewater Treatment Plant is desirable and in the best interests of the comfort, convenience, health, safety and general welfare of the people who will be served by the facilities as well as the best interests of public health, safety and welfare of the residents of the County in general, and that the facilities do not appear to be unduly detrimental to the environment of the County, and that the construction, operation, and design of the facilities are in accordance with all required permits and applicable standards, and are feasible from both an engineering and economic standpoint.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The Comprehensive Water and Sewerage Plan for Worcester County is hereby amended as proposed by the County Commissioners of Worcester County, Maryland by expanding the capacity of the Ocean Pines Wastewater Treatment Plant (WWTP) from its current capacity of 1.5 million gallons per day (MGD) to 2.3 MGD to serve the ultimate build-out for the Ocean Pines community including the proposed YMCA property, located on MD Route 589 (Racetrack Road) north and south of its intersection with MD Route 90 (Ocean Expressway).


The subject property on which the Ocean Pines WWTP is located is more specifically identified on Worcester County Tax Map 16 as Parcel 78. The design calls for expansion of the current biological nutrient removal (BNR) treatment system, utilizing a gravity and vacuum collection system, with surface discharge of treated effluent to the St. Martin River.

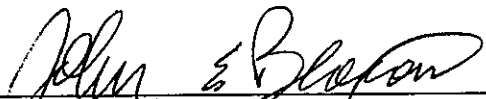
AND BE IT FURTHER RESOLVED that the proposed amendment to the Worcester County Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.

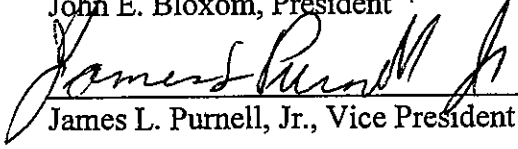
PASSED AND ENACTED this 16th day of December, 2003.


ATTEST:


WORCESTER COUNTY COMMISSIONERS

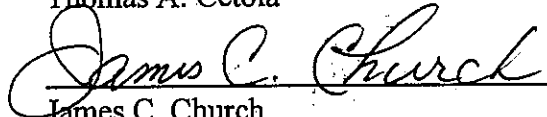

Gerald T. Mason
Chief Administrative Officer


John E. Bloxom, President



James L. Purnell, Jr., Vice President


Judith O. Boggs


Thomas A. Cetola


James C. Church

Louise L. Gulyas


Virgil L. Shockley

RESOLUTION NO. 04 - 3

RESOLUTION AMENDING THE
COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO ADD EXISTING RATEPAYERS FINANCIAL PROTECTION POLICY

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners propose to amend the Worcester County Water and Sewerage Plan to add a policy known as the "Existing Ratepayers Financial Protection Policy" for the purpose of protecting existing ratepayers from costs unrelated to provision of service to them and requiring new development to bear responsibility for all facility and other costs associated with sanitary system expansion to accommodate such development; and

WHEREAS, the Worcester County Planning Commission, at their meeting of December 11, 2003, reviewed the proposed amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the Comprehensive Development Plan for Worcester County; and

WHEREAS, the County Commissioners held a public hearing on January 6, 2004 to hear public comment on the requested amendment to the Worcester County Water and Sewerage Plan.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that a new paragraph G. (Existing Ratepayers Financial Protection Policy) is hereby added to Subsection 2.4.7 (Background Information and Policies - Other Related Policies and Plans) of the Comprehensive Water and Sewerage Plan for Worcester County, Maryland to read as follows:

G. Existing Ratepayers Financial Protection Policy

Policy — New development within a sanitary service area or expansions of an existing service area shall bear responsibility for all facility and other costs associated with sanitary system expansion to accommodate such development. The purpose of this policy is to protect existing ratepayers from costs unrelated to provision of service to them.

System costs which can be attributed to new growth and/or service area expansion shall be solely borne by the developers and/or property owners associated with the growth area or the service area's expansion. Such persons are hereafter referred to as the "Developer".

~~All infrastructure construction~~ costs shall be the developer's responsibility. This shall include all costs up to and including modifications to the existing system's connection point. Further, should additions and/or improvements to the existing system's treatment and/or collection/distribution systems be necessary to accommodate new development, these costs shall also be the developer's responsibility.

Connection Charge— A fee per Equivalent Dwelling Unit (EDU) shall be established to offset the existing system's asset allocation¹ and other current and future costs to serve the new development. This fee shall be set as a uniform amount and shall reflect an equitable share per

¹ Asset allocation refers to the use of existing system capacity and facilities to serve the new development.

EDU of the existing system's capital asset value and other costs. Specifically, this fee shall include:

1. Hook-Up Fee—The cost to connect to the system including costs associated with required changes to the existing system.
2. Equity Contribution—A uniform fee to compensate existing ratepayers for an equitable share of the existing system's value and future capital improvements necessary to serve the new development.

The fee will be collected from the developer and used to offset direct costs to accommodate the system change; the remainder shall be used for future capital costs or to retire existing capital indebtedness.


Connection Charge Establishment and Review— The Connection Charge shall be established each year during the County's budget process.

Operation and Maintenance—Operation and maintenance fees shall be set to be uniform throughout the service area.

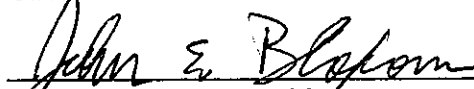
AND BE IT FURTHER RESOLVED that the proposed amendment to the Worcester County Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Environment Article of the Annotated Code of Maryland and that said amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.


PASSED AND ENACTED this 20th day of January, 2004.


ATTEST:


Gerald T. Mason
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS



John E. Bloxom, President


James L. Purnell, Jr., Vice President


Judith O. Boggs


Thomas A. Cetola


James C. Church


Louise L. Gulyas


Virgil L. Shockley

RESOLUTION NO. 04 - 5

**RESOLUTION AMENDING THE
COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
SOUTH OF POCOMOKE CITY TO THE
MARYLAND TOURISM AND VISITOR'S CENTER
WORCESTER COUNTY, MARYLAND**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from the City of Pocomoke City to amend the Worcester County Water and Sewerage Plan to provide sanitary sewer service to the Maryland Tourism and Visitor's Center property and the intervening properties from the Town of Pocomoke's southern boundary designated as S-2 on Figure 3-27 (dated June, 1990) of the *Worcester County Water and Sewerage Plan*. This area includes the Dun Swamp Road area and includes the U.S. Route 13 corridor south to the Virginia State Line. The application specifically requests reclassification of the aforementioned area from an S-2 designation (construction within three to five years) to an S-1 designation (present construction or within two years). Collection and treatment facilities would be provided and owned by Pocomoke City.

WHEREAS, the Worcester County Planning Commission, at their meeting of January 8, 2004, reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the Comprehensive Development Plan for Worcester County; and

WHEREAS, the County Commissioners, at their meeting of January 20, 2004, determined that this amendment constitutes a relatively minor revision and can be processed by administrative procedure as opposed to requiring a public hearing; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section PW 5-305 (Sanitary service areas, sub-areas and amendments) of the Code of Public Local Laws of Worcester County, Maryland the Commissioners have determined that the proposed upgrade of the status of the subject area south of the Town of Pocomoke City to the Virginia State Line from S-2 to S-1 is desirable and in the best interests of the comfort, convenience, health, safety and general welfare of the people who will be served by the facilities as well as the best interests of public health, safety and welfare of the residents of the County in general, and that the facilities do not appear to be unduly detrimental to the environment of the County, and that the construction, operation, and design of the facilities are in accordance with all required permits and applicable standards, and are feasible from both an engineering and economic standpoint.


NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as proposed by the City of Pocomoke to upgrade the status of the originally designated S-2 area south of the current town limits in the vicinity of Dun Swamp Road and along the U.S. Route 13 corridor south to the Virginia State Line as shown in Figure 3-27 (dated June, 1990; *Worcester County Water and Sewerage Plan*). This area is hereby re-designated from S-2 (construction within three to five years) to S-1 (present construction or within two years). Collection facilities will be extended from the existing terminus at the Upper Deck Restaurant south along U.S. Route 13 to the Maryland Tourism and Visitor's Center near the Virginia State Line. Pocomoke City Wastewater Treatment Plant will treat the waste and the collection facilities will be maintained by Pocomoke City.

AND BE IT FURTHER RESOLVED that the proposed amendment to the Worcester County Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Environment Article of the Annotated Code of Maryland and that said amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.


PASSED AND ENACTED this 3rd day of February, 2004.

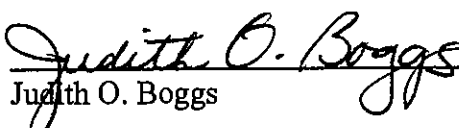
ATTEST:


Gerald T. Mason
Chief Administrative Officer


WORCESTER COUNTY COMMISSIONERS

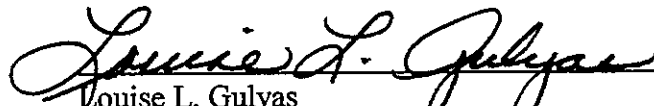

John E. Bloxom, President

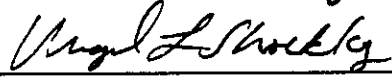

James L. Purnell, Jr., Vice President


Judith O. Boggs

Thomas A. Cetola


James C. Church


Louise L. Gulyas


Virgil L. Shockley

RESOLUTION NO. 04 - 15

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO ADD THE BAYPOINTE PLANTATION PLANNED SEWERAGE SYSTEM**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted the Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from John H. Burbage, Jr., et. al., to amend the *Worcester County Comprehensive Water and Sewerage Plan* to add the Baypointe Plantation Planned Sewerage System; and

WHEREAS, the Worcester County Planning Commission, at their meeting of December 4, 2003, reviewed the application for amendment to the *Worcester County Water and Sewerage Plan* and found the proposal consistent with the *Comprehensive Development Plan for Worcester County*; and

WHEREAS, the County Commissioners held a public hearing on May 4, 2004 to hear public comment on the requested amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add the proposed Baypointe Plantation Planned Sewerage System, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* (the Plan) is hereby amended as specified in the application of John H. Burbage, Jr., et. al., to add the Baypointe Plantation Planned Sewerage System in order to provide public sewer service to a proposed 33-lot subdivision to be located on the north side of Gum Point Road at its easterly terminus, to the east of MD Rt. 589, and bound on the north by the southerly boundary of Ocean Pines and on the east and south by Turville Creek, in the Third Tax District of Worcester County, Maryland. The subject property is more specifically identified on Worcester County Tax Map 21 as Parcel 257 and comprises approximately 145-acres of land. The planned sewerage collection and treatment system is to consist of a central on-site wastewater treatment plant and soil disposal system with individual grinder pumps to convey the sewage to a central collection area to serve the 33-lots, all of


which is to be installed by June 2005. The new Baypointe Plantation Planned Sewerage System will be designated "S-1, Existing & Planned System" in the *Worcester County Comprehensive Water and Sewerage Plan*.


AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon said approval by MDE.

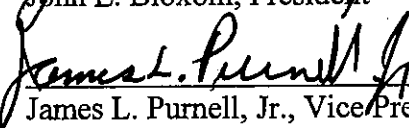
PASSED AND ENACTED this 18th day of May, 2004.


ATTEST:


WORCESTER COUNTY COMMISSIONERS

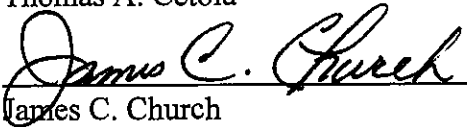

Gerald T. Mason
Chief Administrative Officer


John E. Bloxom, President



James L. Purnell, Jr., Vice President


Judith O. Boggs


Thomas A. Cetola


James C. Church

Louise L. Gulyas


Virgil L. Shockley

RESOLUTION NO. 04 - 16

RESOLUTION AMENDING THE
WORCESTER COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN
TO ADD A POLICY REQUIRING PRETREATMENT FOR LARGE SEPTIC SYSTEMS
IN THE ATLANTIC COASTAL BAYS CRITICAL AREA
IN WORCESTER COUNTY, MARYLAND

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners propose to amend the Worcester County Water and Sewerage Plan to add a policy requiring pretreatment for large septic systems in the Atlantic Coastal Bays Critical Area in Worcester County; and

WHEREAS, the Worcester County Planning Commission, at their meeting of April 8, 2004, reviewed the proposed amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the Comprehensive Development Plan for Worcester County; and

WHEREAS, the County Commissioners held a public hearing on May 18, 2004 to hear public comment on the requested amendment to the Worcester County Water and Sewerage Plan.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that a new paragraph H. (Pretreatment Facilities for Large Septic Systems in the Atlantic Coastal Bays Critical Area) is hereby added to Subsection 2.4.7 (Background Information and Policies - Other Related Policies and Plans) of the Comprehensive Water and Sewerage Plan for Worcester County, Maryland to read as follows:


H. Pretreatment Facilities for Large Septic Systems in the Atlantic Coastal Bays Critical Area

On properties located wholly or partially within the Atlantic Coastal Bays Critical Area, as defined by state and local law, all septic systems designed for or capable of disposing of more than 5,000 gallons of effluent per day which are installed or replaced after July 1, 2004 shall have a pretreatment facility installed and maintained in such a manner so as not to discharge effluent containing greater than eight (8) milligrams per liter of total nitrogen.


AND BE IT FURTHER RESOLVED that the proposed amendment to the Worcester County Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Environment Article of the Annotated Code of Maryland and that said amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.

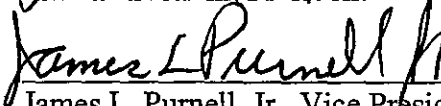
PASSED AND ENACTED this 18th day of May, 2004.

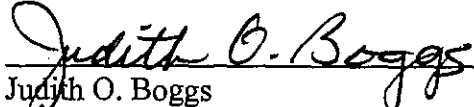
ATTEST:


Gerald T. Mason
Chief Administrative Officer

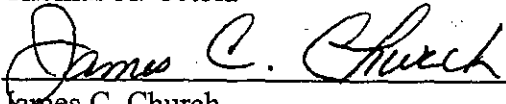
WORCESTER COUNTY COMMISSIONERS

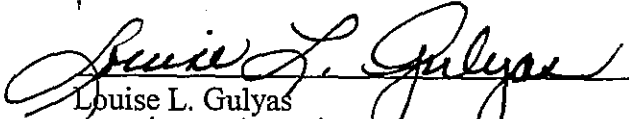

John E. Bloxom, President

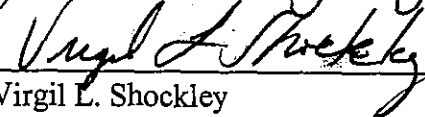

James L. Purnell, Jr., Vice President


Judith O. Boggs


Thomas A. Cetola


James C. Church


Louise L. Gulyas


Virgil L. Shockley

RESOLUTION NO. 04 - 28

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO ADD THE FIRST SHORE FEDERAL SAVINGS AND LOAN PROPERTY
TO THE PREVIOUSLY APPROVED AMENDMENT FOR PENNINGTON COMMONS**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted the Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners amended the *Comprehensive Water and Sewerage Plan for Worcester County* by Resolution No. 03-11, adopted on April 1, 2003, to add the Pennington Commons Community Sewer System, with conditions, to provide sewer service to a proposed 90-unit hotel, a 6,000 square foot restaurant, 4 retail establishments totaling 42,000 square feet and a residential area consisting of 29 single-family homes; and the Pennington Commons Commercial Property Water System, with conditions, to provide a privately owned shared facility for water service to the leasehold commercial properties and a public water system to serve the residential lots on the subject property; and

WHEREAS, the County Commissioners have received a request from Richard Eisenberg, Esquire, and Martin Neat to amend the *Worcester County Comprehensive Water and Sewerage Plan* to add the First Shore Federal Savings and Loan property, shown as Lot 1 on Parcel 274 on Worcester County Tax Map 21, to the previously approved amendment for Pennington Commons to provide public water and sewer service for the existing uses on said property; and

WHEREAS, the Worcester County Planning Commission, at their meeting of May 6, 2004, reviewed the application for amendment to the *Worcester County Water and Sewerage Plan* and found the proposal consistent with the *Comprehensive Development Plan for Worcester County*; and

WHEREAS, the County Commissioners held a public hearing on June 15, 2004 to hear public comment on the requested amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add the First Shore Federal Savings and Loan property to the previously approved amendment for Pennington Commons to provide public water and sewer service for the existing uses on said property, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

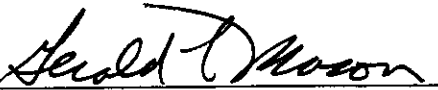
1. The *Comprehensive Water and Sewerage Plan for Worcester County* (the Plan) is hereby amended as specified in the revised application of Richard Eisenberg, Esquire, and Martin Neat (the application), with conditions, to amend the Pennington Commons Community Sewer System in order to provide sewer service to the existing First Shore Federal Savings and Loan property with one equivalent dwelling unit (EDU) at a rate of 300 gallons per day (gpd) to serve the existing uses on said property and the proposed 29 unit residential development and approximate 77,345 square feet of commercial/retail usage in the Pennington Commons development, all of which is to be located on the west side of MD Route 589 across from Manklin Creek Road at the South Gate of the Ocean Pines Community. The sewer system is to include a gravity collection system, pump station, biological treatment plant, disinfection and spray irrigation for land application, as well as an effluent storage lagoon for winter and emergency storage. The subject property is more specifically identified on Worcester County Tax Map 21 as Lots 1, 2, 4 and 6A of Parcel 274 and Parcels 61, 62, 93 and 144, comprising approximately 73 acres of land. Conditions required by the County Commissioners are as follows:
 - a. The application shall reflect a planning capacity figure of 300 gallons per day (gpd) per equivalent dwelling unit (EDU) for sewer.
 - b. Effluent shall meet a total nitrogen limit of 3 to 5 mg/l consistent with the Northern Coastal Bays Total Maximum Daily Load (TMDL).
 - c. Provide a biological process with a membrane filter treatment system.
 - d. Provide landscaping screen or a natural buffer between the project's residential portion, wastewater treatment facilities and MD Route 589.
2. The Plan is further amended as specified in the revised application, to add the Pennington Commons Community Water System, incorporating the subject area specified herein, in which will potable water service will be contractually provided from the existing Ocean Pines Service Area.

AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon said approval by MDE.

PASSED AND ENACTED this 15th day of June, 2004.

ATTEST:


WORCESTER COUNTY COMMISSIONERS



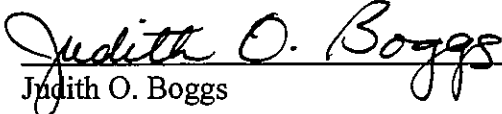
Gerald T. Mason
Chief Administrative Officer




John E. Bloxom, President




James L. Purnell, Jr., Vice President




Judith O. Boggs



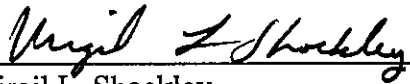
Thomas A. Cetola



James C. Church



Louise L. Gulyas



Virgil L. Shockley

RESOLUTION NO. 04 - 432

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO ADD THE BAY POINT PLANTATION WATER SYSTEM**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted the Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Bay Point Plantation, Inc., to amend the *Worcester County Comprehensive Water and Sewerage Plan* to add the Bay Point Plantation Water System; and

WHEREAS, the Worcester County Planning Commission, at their meeting of July 1, 2004, reviewed the application for amendment to the *Worcester County Water and Sewerage Plan* and found the proposal consistent with the *Comprehensive Development Plan for Worcester County*; and

WHEREAS, the County Commissioners held a public hearing on October 5, 2004 to hear public comment on the requested amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add the proposed Bay Point Plantation Water System, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:


1. The *Comprehensive Water and Sewerage Plan for Worcester County* (the Plan) is hereby amended as specified in the application of Bay Point Plantation, Inc., to add the Bay Point Plantation Water System in order to provide public water service by contract from the Ocean Pines Sanitary Service Area to a proposed 33-lot subdivision to be located on the north side of Gum Point Road at its easterly terminus, to the east of MD Rt. 589, and bound on the north by the southerly boundary of Ocean Pines and on the east and south by Turville Creek, in the Third Tax District of Worcester County, Maryland. The subject property is more specifically identified on Worcester County Tax Map 21 as Parcel 257 and comprises approximately 145-acres of land. The water system will use public water mains designed and constructed in accordance with Worcester County standards, all of which is to be installed by June 2007, with the water supply to be

provided by bulk purchase contract of 33 equivalent dwelling units (EDUs) of water service from the Ocean Pines Service Area. The new Bay Point Plantation Water System will be designated "W-1, Existing & Planned System" in the *Worcester County Comprehensive Water and Sewerage Plan*.

AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon said approval by MDE.


PASSED AND ENACTED this 5th day of October, 2004.

ATTEST:

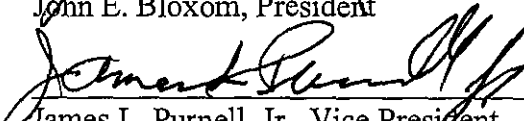


Gerald T. Mason
Chief Administrative Officer


WORCESTER COUNTY COMMISSIONERS



John E. Bloxom, President



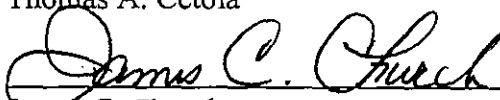
James L. Purnell, Jr., Vice President



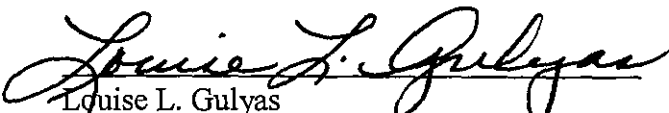
Judith O. Boggs



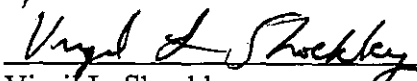
Thomas A. Cetola



James C. Church



Louise L. Gulyas



Virgil L. Shockley

RESOLUTION NO. 04 - 47

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO ADD THEE GINARENEE PIAZZA PRIVATE WATER SERVICE SYSTEM**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from AMJ, LLC, A.J. Mariani, to amend the *Worcester County Comprehensive Water and Sewerage Plan* to add the Thee GinaRenee Piazza Water System; and

WHEREAS, the Worcester County Planning Commission, at their meeting on July 7, 2004, reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the *Comprehensive Development Plan* for Worcester County; and

WHEREAS, the County Commissioners held a public hearing on September 7, 2004 to hear public comment on the requested amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add the proposed Thee GinaRenee Piazza Planned Water System, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the application of AMJ, LLC, to add the Thee GinaRenee Piazza Water System to provide water service to a proposed 20 EDUs of commercial development on the south side of U.S. Route 50, adjacent to Herring Creek. This property is more specifically identified on Worcester County Tax Map 26 as Parcel 148. The water system will use a 10,000 gallon Hydro Pneumatic tank, a Water Right Duplex water softener and a 3" Turbine Water Meter with 4" and 2" distribution piping and will withdraw water from the Manokin Aquifer. The new Thee GinaRenee Piazza water system will be designated "W-1, Existing and Planned System" in the *Comprehensive Water and Sewerage Plan for Worcester County*.

AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.

PASSED AND ADOPTED this 3rd day of November, 2004.

ATTEST:

Gerald T. Mason
Gerald T. Mason
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS

John E. Bloxom
John E. Bloxom, President

James L. Purnell, Jr.
James L. Purnell, Jr., Vice President

Judith O. Boggs
Judith O. Boggs

Thomas A. Cetola
Thomas A. Cetola

James C. Church
James C. Church

Louise L. Gulyas
Louise L. Gulyas

Virgil L. Shockley
Virgil L. Shockley

RESOLUTION NO. 04 - 50

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO ADD THE GREATER OCEAN PINES SANITARY SERVICE AREA**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted the Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have submitted a proposal to amend the *Worcester County Comprehensive Water and Sewerage Plan* (Water and Sewerage Plan) to add the Greater Ocean Pines Sanitary Service Area; and

WHEREAS, the Worcester County Planning Commission, at their meetings of October 7, 2004 and October 18, 2004, reviewed the proposal for amendment to the Water and Sewerage Plan and found the proposal to be inconsistent with the *Comprehensive Development Plan for Worcester County* (Comprehensive Plan) as submitted and suggested certain amendments to the proposal in order to become consistent with the Comprehensive Plan; and

WHEREAS, the County Commissioners held a public hearing on December 7, 2004 to hear public comment on the proposed amendment to the Water and Sewerage Plan; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add the proposed Greater Ocean Pines Sanitary Service Area, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the proposal (incorporated herein by reference) of the County Commissioners of Worcester County, Maryland, to reflect the addition of the Greater Ocean Pines Sanitary Service Area for the purpose of providing public sewer service from the Ocean Pines Sewer System to 611 equivalent dwelling units (EDUs) of existing and proposed residential and commercial development along both sides of Gum Point Road, Maryland Route 589 (Racetrack Road) from Gum Point Road to the Showell Park property and the west side of Beauchamp Road, all of which surrounds the community of Ocean Pines, in the Third Tax District of Worcester County, Maryland. The additional capacity to serve these properties is proposed to be derived from reconfiguration of the treatment units at the Ocean Pines Wastewater Treatment Plant which may result in an increase in rated capacity of 150,000 gallons per day (gpd) or 600 EDUs and/or an


engineering capacity study of the plant as configured after the current expansion is complete for actual processing capacity, with service by means of an appropriate collection and conveyance system. Existing and planned developed areas within the Greater Ocean Pines Sanitary Service Area will be designated "S-1, Existing and Planned System" while areas of possible future service will be designated "S-3, Future System within 6 to 10 years" in the *Comprehensive Water and Sewerage Plan for Worcester County*.

AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon said approval by MDE.

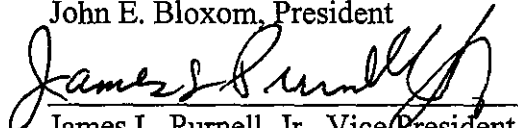
PASSED AND ENACTED this 7th day of December, 2004.

ATTEST:

WORCESTER COUNTY COMMISSIONERS

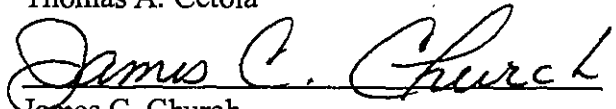

Gerald T. Mason
Chief Administrative Officer

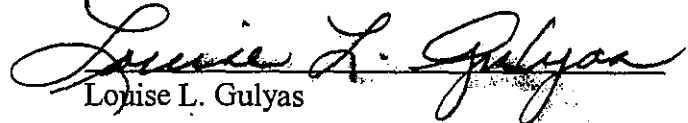
John E. Bloxom, President


James L. Purnell, Jr., Vice President

Judith O. Boggs


Thomas A. Cetola


James C. Church


Louise L. Gulyas

Virgil L. Shockley

RESOLUTION NO. 04 - 51

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO ADD SNUG HARBOR AND ENVIRONS TO THE
ASSATEAGUE POINTE SANITARY SERVICE AREA**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted the Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have submitted a proposal to amend the *Worcester County Comprehensive Water and Sewerage Plan* (Water and Sewerage Plan) to remove Snug Harbor and Environs from the Mystic Harbour Sanitary Service Area and add said area to the Assateague Pointe Sanitary Service Area; and

WHEREAS, the Worcester County Planning Commission, at their meeting of November 4, 2004, reviewed the application for amendment to the *Worcester County Water and Sewerage Plan* and found the proposal consistent with the *Comprehensive Development Plan for Worcester County*; and

WHEREAS, the County Commissioners held a public hearing on December 21, 2004 to hear public comment on the requested amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to remove Snug Harbor and Environs from the Mystic Harbour Sanitary Service Area and add said area to the Assateague Pointe Sanitary Service Area, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:


1. The *Comprehensive Water and Sewerage Plan for Worcester County* (the Plan) is hereby amended as specified in the proposal (incorporated herein by reference) of the County Commissioners of Worcester County, Maryland, to reflect the removal of Snug Harbor and Environs from the Mystic Harbour Sanitary Service Area and addition of said area to the Assateague Pointe Sanitary Service Area for the purpose of providing public sewer service from the Assateague Pointe Sewer System to 78 equivalent dwelling units (EDUs) of existing and potential residential development along both sides of Snug Harbor Road and Meadow Drive, east of Maryland Route 611 (Stephen Decatur Highway), in the Tenth Tax

District of Worcester County, Maryland. The subject properties are more specifically identified on Worcester County Tax Map 33 as Parcels 136, 152, 208, 223, 251, 257, 265, 303, 346 and 347, and as described in Exhibit A attached hereto. Said area to be added to the Assateague Pointe Sanitary Service Area from the Mystic Harbour Sanitary Service Area will retain its current designation of "S-1, Existing and Planned System" in the *Comprehensive Water and Sewerage Plan for Worcester County* and will be served with 19,500 gallons per day (gpd) of available treatment capacity at the Assateague Pointe Wastewater Treatment Plant, with service by means of an appropriate collection and conveyance system.

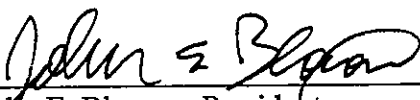
AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon said approval by MDE.

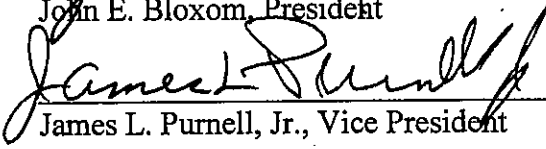
PASSED AND ENACTED this 21st day of December, 2004.

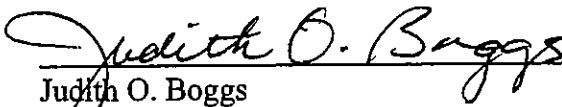
ATTEST:

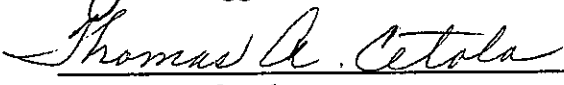

Gerald T. Mason
Chief Administrative Officer

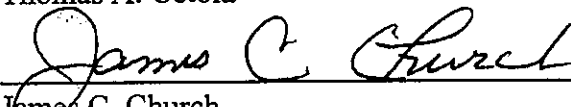
WORCESTER COUNTY COMMISSIONERS

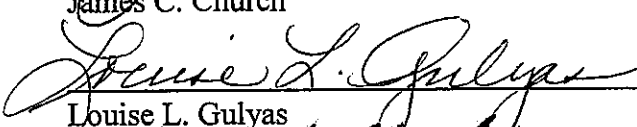

John E. Bloxom, President


James L. Purnell, Jr., Vice President


Judith O. Boggs


Thomas A. Cetola


James C. Church


Louise L. Gulyas


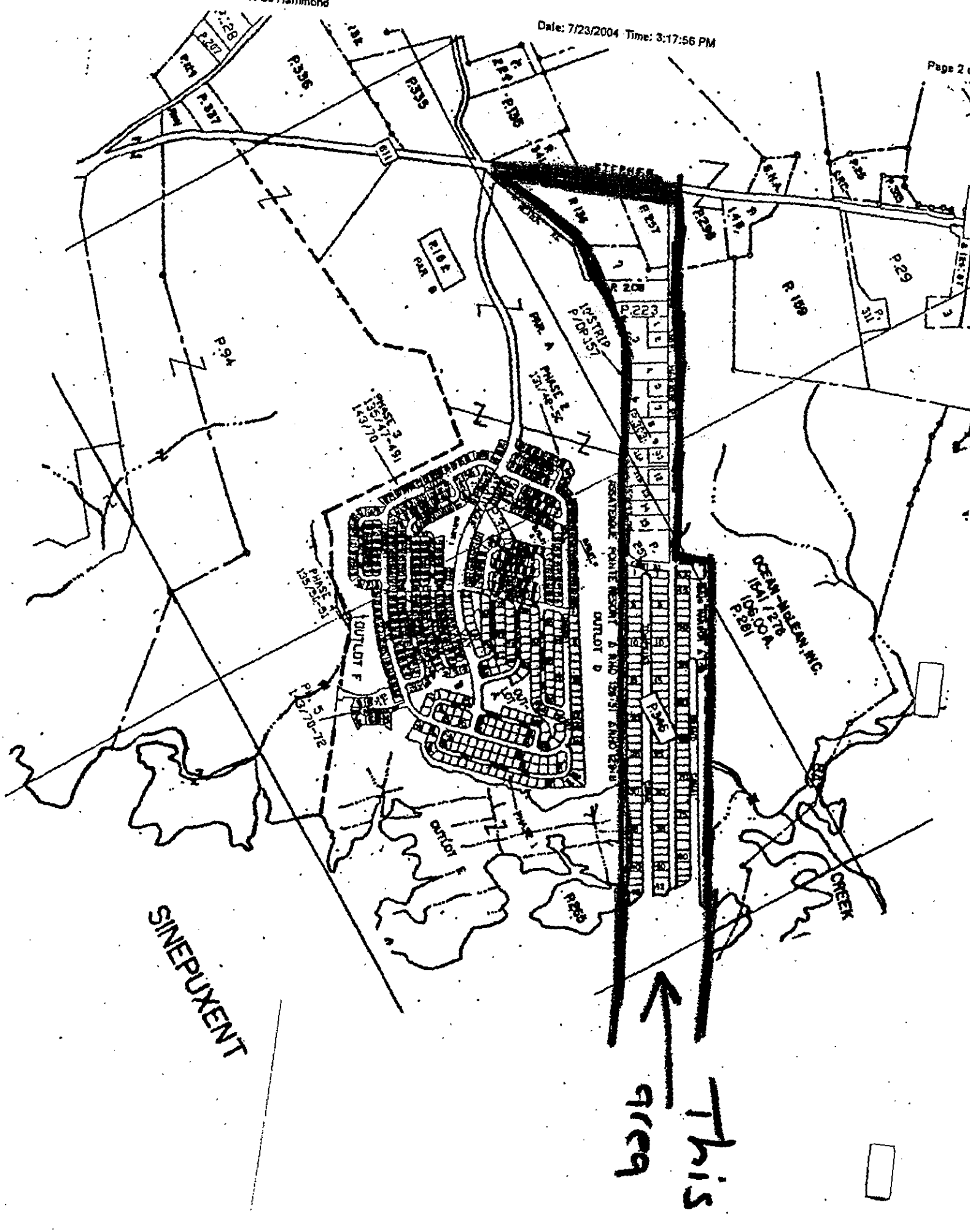

Virgil L. Shockley

Exhibit A

Snug Harbor Area

Description of the Expansion of the Assateague Pointe Sanitary Service Area and Deletion from the Mystic Harbour Sanitary Service Area

All that area as follows: beginning at the northeasterly corner of the intersection of Snug Harbor Road and Stephen Decatur Highway (sometimes known as Route 611) and from thence running in a south easterly direction by and with the northerly side of Snug Harbor Road to its intersection with the westerly side of First Street as shown on the Plat of Snug Harbor, Plat No. 1 recorded among the Land Records of Worcester County, Maryland in Liber CWN 1, Folio 99 thence by and with the west side of First Street in a northeasterly direction to a point at the end of the westerly side of First Street as shown on said plat of Snug Harbor and from said point running in a general south easterly direction across First Street to the northerly corner of the lot 43 which is located on the north easterly side of Hastings Drive and thence continuing in a straight line by and binding with the northeasterly lines of said Lots 43 through 84 of Snug Harbor (which are located on the northeasterly side of Hastings Drive and by and with the southerly line of the Grand Canal part of the way to the Sinepuxent Bay at the easterly corner of Lot 84 in Snug Harbor thence by and with the shoreline of the Bay in a southwesterly direction across the easterly end of Hastings Drive (sometimes known as Snug Harbor Road) and by and with the southeasterly line of Lot 42 of Snug Harbor (which abuts Hastings Drive) and across the mouth of the Tompkins Canal and the southeasterly line of Lot 43 of Snug Harbor (which abuts Meadow Road) and across the southeasterly end of Meadow Road to a point where a southwesterly line of Meadow Road meets the Sinepuxent Bay and thence in a northwesterly direction by and with the northeasterly line of Assateague Pointe Resort which coincides with the southwesterly line of Meadow Road and such line projected in a northwesterly direction part of the way and the lands of the Methodist Church to the intersection of Assateague Way and Route 611 thence in a northeasterly direction by and with the easterly side of Stephen Decatur Road (also known as Route 611) to the point of beginning.



RESOLUTION NO. 05 - 1

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY TO ADD
THE SUNSATIONS INTERIM PRIVATE MULTI-USE WATER SYSTEM**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Sunsations Realty, LLC, to amend the *Worcester County Comprehensive Water and Sewerage Plan* to add the Sunsations Interim Private Multi-Use Water System; and

WHEREAS, the Worcester County Planning Commission, at their meeting on December 2, 2004, reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the *Comprehensive Development Plan* for Worcester County; and

WHEREAS, the County Commissioners held a public hearing on January 18, 2005 to hear public comment on the requested amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add the proposed Sunsations Interim Private Multi-Use Water System, is desirable.


NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the application of Sunsations Realty, LLC, to add the Sunsations Interim Private Multi-Use Water System to provide 5,320 gallons per day (gpd) or 19 EDUs of water service to the proposed Sunsations commercial project on the south side of U.S. Route 50 (Ocean Gateway), between Maryland Route 611 (Stephen Decatur Highway) and Elm Street, in the Tenth Tax District of Worcester County, Maryland. The subject property is more specifically identified on Worcester County Tax Map 27 as Parcel 148. The water system will include a 260-foot deep well drilled into the Ocean City Aquifer through a 4-inch diameter pipe with a pumping capacity of between 50 and 100 gallons per minute and associated distribution piping. The Sunsations Interim Private Multi-Use Water System will be designated as a W-1 (Immediate service or within two Years) water service area in the *Comprehensive Water and Sewerage Plan for Worcester County*.


AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.

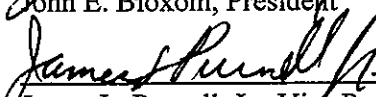
PASSED AND ADOPTED this 18th day of January, 2005.


ATTEST:

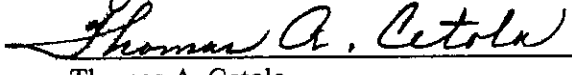

Gerald T. Mason
Chief Administrative Officer

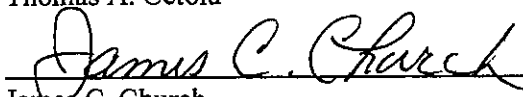
WORCESTER COUNTY COMMISSIONERS

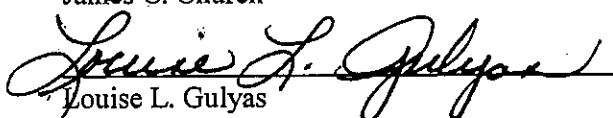

John E. Bloxom, President



James L. Purnell, Jr., Vice President


Judith O. Boggs


Thomas A. Cetola


James C. Church


Louise L. Gulyas


Virgil L. Shockley

RESOLUTION NO. 05 - 9

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO ADD THE GREATER OCEAN PINES SANITARY SERVICE AREA**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted the *Comprehensive Water and Sewerage Plan* for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have submitted a proposal to amend the *Worcester County Comprehensive Water and Sewerage Plan* (Water and Sewerage Plan) to add the Greater Ocean Pines Sanitary Service Area; and

WHEREAS, the Worcester County Planning Commission, at their meetings of October 7, 2004 and October 18, 2004, reviewed the proposal for amendment to the Water and Sewerage Plan and found the proposal to be inconsistent with the *Comprehensive Development Plan for Worcester County* (Comprehensive Plan) as submitted and suggested certain amendments to the proposal in order to become consistent with the Comprehensive Plan; and

WHEREAS, the Worcester County Planning Commission found that the proposed amendment would be consistent with the Comprehensive Plan if the proposed "S-3" areas were deleted from the service area and if the existing service areas for River Run and the Pine Shore Golf Course were removed; and

WHEREAS, the County Commissioners held a public hearing on December 7, 2004 to hear public comment on the proposed amendment to the Water and Sewerage Plan; and

WHEREAS, after further consideration, the County Commissioners have agreed to revise the proposed amendment as recommended by the Planning Commission, with the addition of the planned YMCA property on the north side of Gum Point Road as an "S-1" area, in order to be consistent with the Comprehensive Plan; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add the proposed Greater Ocean Pines Sanitary Service Area, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

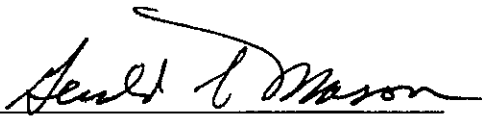
1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the proposal of the County Commissioners of Worcester County, Maryland, and as amended to reflect certain revisions as recommended by the Worcester County Planning Commission and the addition of the planned YMCA property on the north side of Gum Point Road as an "S-1" area, to reflect the addition of the Greater Ocean Pines Sanitary Service Area for the purpose of

providing public sewer service from the Ocean Pines Sewer System to 600 equivalent dwelling units (EDUs) of existing and proposed residential and commercial development along both sides of Gum Point Road, Maryland Route 589 (Racetrack Road) from Gum Point Road to the Showell Park property and the west side of Beauchamp Road, all of which surrounds the community of Ocean Pines, in the Third Tax District of Worcester County, Maryland. The additional capacity to serve these properties is proposed to be derived from reconfiguration of the treatment units at the Ocean Pines Wastewater Treatment Plant which may result in an increase in rated capacity of 150,000 gallons per day (gpd) or 600 EDUs and/or an engineering capacity study of the plant as configured after the current expansion is complete for actual processing capacity, with service by means of an appropriate collection and conveyance system. Existing and planned developed areas within the Greater Ocean Pines Sanitary Service Area will be designated "S-1, Existing and Planned System" in the *Comprehensive Water and Sewerage Plan for Worcester County*.

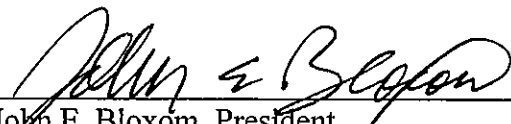
AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon said approval by MDE.

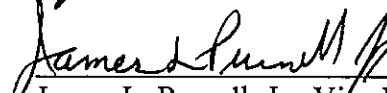
PASSED AND ENACTED this 5th day of April, 2005.

ATTEST:


Gerald T. Mason
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS



John E. Bloxom, President

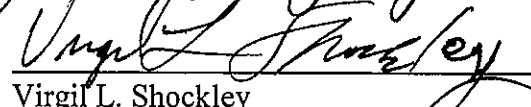

James L. Purnell, Jr., Vice President


Judith O. Boggs


Thomas A. Cetola

James C. Church


Louise L. Gulyas


Virgil L. Shockley

RESOLUTION NO. 05 - 17

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY TO REFLECT WATER AND
SEWER SERVICE TO THE NORTHERN WORCESTER COUNTY YMCA**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from the Northern YMCA and Steen Associates, Inc. to amend the *Worcester County Comprehensive Water and Sewerage Plan* (the Plan) to include sanitary services to the site of the proposed Northern Worcester County YMCA and the proposed site of the Ocean Pines Chamber of Commerce to The Plan; and

WHEREAS, the Worcester County Planning Commission, at their meeting on March 3, 2005, reviewed the revised application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the *Comprehensive Development Plan* for Worcester County; and

WHEREAS, the County Commissioners held a public hearing on May 3, 2005 to hear public comment on the requested amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add the Northern Worcester County YMCA Water and Sewer Service Area, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

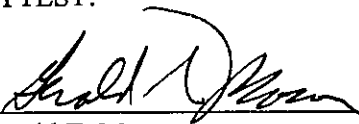
1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the application of Northern YMCA and Steen Associates, Inc. to reflect the provision of public water and sewer service from the Ocean Pines Water and Wastewater Systems to the proposed Northern Worcester County YMCA and the proposed Ocean Pines Chamber of Commerce office on the subject property located on the north side of Gum Point Road, south of Ocean Pines, in the Third Tax District of Worcester County, Maryland. The subject property is more specifically identified on Worcester County Tax Map 21 as Parcel 118 and comprises approximately 26-acres of land. The application proposes for the subject property to receive public water and sewer service from the Ocean Pines Service Area for up to fourteen (14) equivalent dwelling units (EDUs) for the YMCA and one (1) EDU for the Ocean Pines Chamber of Commerce for a total of up to fifteen (15) EDUS for both projects, as specified by prior agreement between Ocean Pines Association, Inc. (OPA), Steen Associates, Inc, and Committee to Bring a YMCA to Northern Worcester County using existing capacity, accomplished by the OPA relinquishing 15 EDUs of their unused water and

sewer capacity for re-allocation by the County Commissioners to serve the subject property. Such service will be provided by means of public water and sewer mains to be designed and constructed in accordance with County standards. The subject property will be designated as a W-1 and S-1 (Immediate service or within two Years) water service area and sewer service area respectively in the *Comprehensive Water and Sewerage Plan for Worcester County*. Service will be provided by means of public water and sewer mains to be designed and constructed in accordance with County standards, all of which is to be installed by June 28, 2008.

AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.

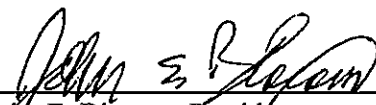
PASSED AND ADOPTED this 17th day of May, 2005.

ATTEST:

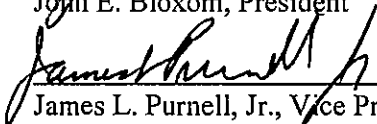


Gerald T. Mason
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS




John E. Bloxom, President

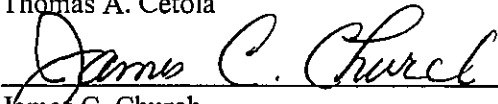


James L. Purnell, Jr., Vice President

Judith O. Boggs



Thomas A. Cetola

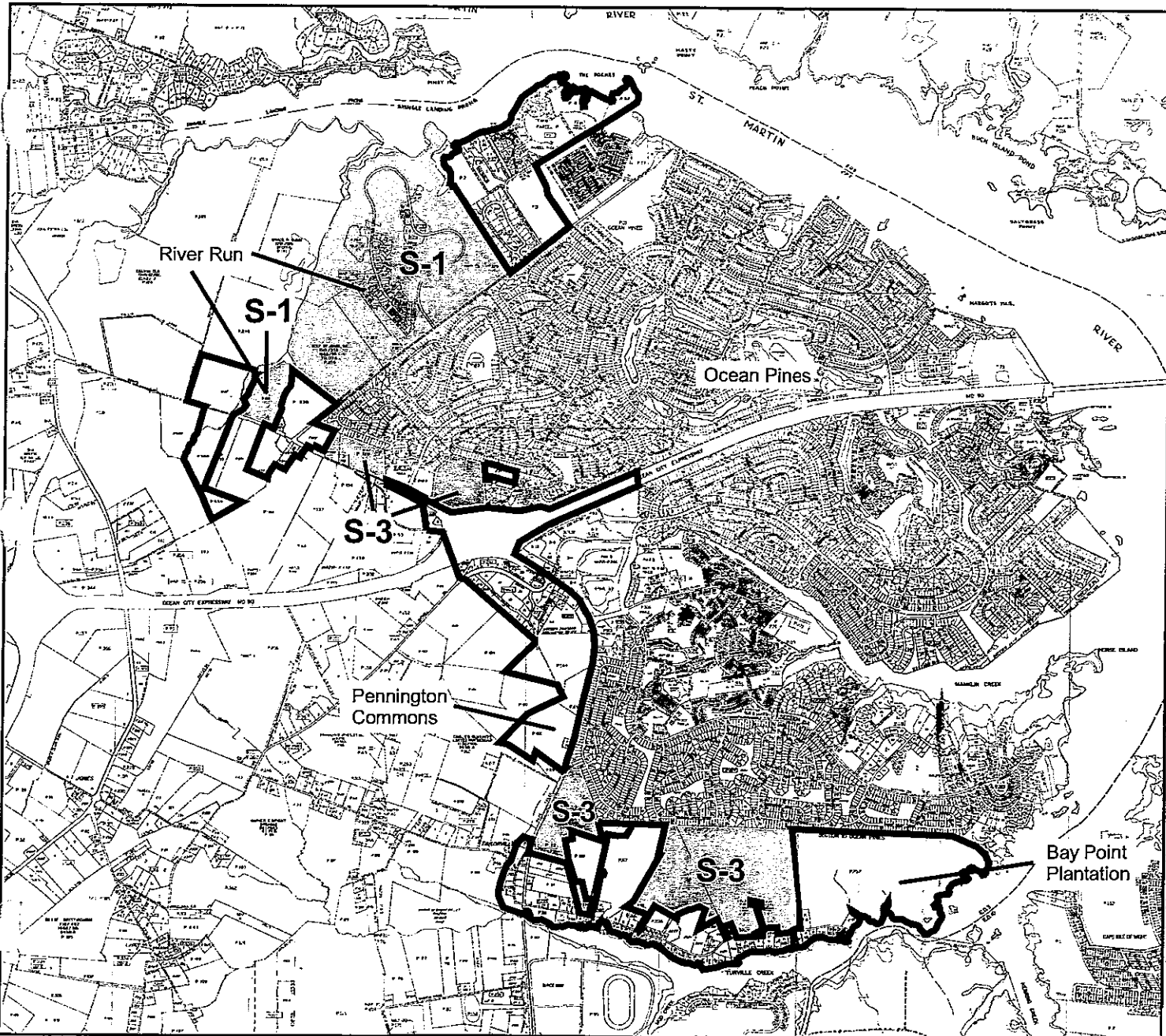


James C. Church

Louise L. Gulyas





Virgil L. Shockley



Greater Ocean Pines Sanitary Service Area

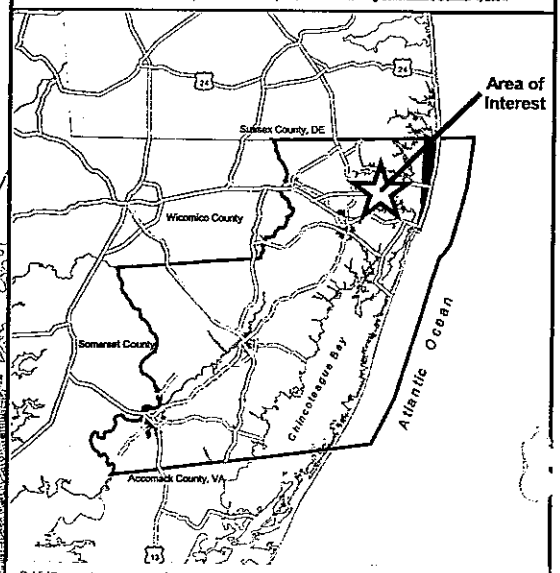


 Greater Ocean Pines Sanitary Service Area (GOPSSA) Boundary approved by County Commissioners on April 4, 2005
S-1 (Present to 2 years)

 Areas removed from County Commissioners GOPSSA amendment application dated October 4, 2004 by Planning Commission



Prepared by Worcester County Department of Comprehensive Planning, April 5, 2005.
Source: County Commissioners, April 4, 2005 and Planning Commission, October 4, 2004.



RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY TO EXPAND THE SNOW HILL WATER AND SEWER SERVICE AREAS FOR THE SUMMERFIELD DEVELOPMENT

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from the Mayor and Council of the Town of Snow Hill, Maryland, to amend the *Worcester County Comprehensive Water and Sewerage Plan* (the Plan) to expand the Snow Hill Water and Sewer Service Areas to provide service to the proposed Summerfield Development south of the Town of Snow Hill; and

WHEREAS, the Worcester County Planning Commission, at their meeting on April 7, 2005, reviewed the revised application for amendment to the Plan and found that the proposal is consistent with the *Comprehensive Development Plan* for Worcester County; and

WHEREAS, the County Commissioners held a public hearing on May 17, 2005 to hear public comment on the requested amendment to the Plan; and

WHEREAS, the applicant revised their application on June 6, 2005 to include only those properties which are the subject of the proposed annexation into the Town of Snow Hill, Maryland; and

WHEREAS, as a result of their investigation and evaluation of the revised proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the Commissioners have determined that the revised proposed amendment to the Plan to expand the Snow Hill Water and Sewer Service Areas, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the revised application of the Town of Snow Hill, Maryland, to expand the Snow Hill Water and Sewer Service Areas for the purpose of providing public water and sewer service to the proposed Summerfield Development south of the Town of Snow Hill in the Second Tax District of Worcester County, Maryland. The subject property incorporated within the expansion area is more specifically identified on Worcester County Tax Map 63 as parcels 3, 4, 5, 20, 21, 25, 67, 88, 89, 90, 91, 94, 102, 106, 107, 108, 144, 153, 161, 171, 177 and 183, and Worcester County Tax Map 71 as parcels 1 and 49, and totals 1,021.5 acres more or less bounded on the east by Worcester Highway (US Route 113), bounded on the south by Castle Hill Road west to Market Street (MD Route 394) north to Moat Road (not including the Castle Hill Estates subdivision) and then west to the Chesapeake Bay Critical Area Line along the Pocomoke River, bounded on the west by said Critical Area line and bounded on the north by Tax Map 63, Parcel 24 and the current southern boundary of the Town of Snow Hill, Maryland back to the beginning point along US Route 113. The Summerfield development, incorporated within the expanded service area, will include a mixture of single family, multi-family, townhouse, and commercial uses. Proposed improvements include the following:

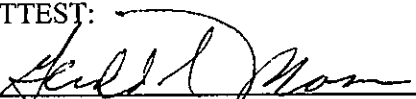
1. Extend the water and sewer service areas to include the subject properties;
2. Modify the water supply system by:
 - a. Expanding the system treatment capacity from 2,000 equivalent dwelling units (EDUs) to 4,800 EDUs;

- b. Constructing three new wells (+/- 350-feet deep) and provide disinfection, pH control, fluoridation, and corrosion control; and
 - c. Constructing a 1 million gallon per day (MGD) elevated storage tank on Coulbourne Lane.
3. Modify the sewer system by:
- a. Constructing a new 1.2 MGD Oxidation ditch (Bardenpho) wastewater treatment plant (WWTP) with discharge to the Pocomoke River;
 - b. Treating the wastewater effluent's total nitrogen concentration to 3 milligrams per liter (mg/l) and to a total phosphorous concentration of 0.4 mg/l and to comply with all applicable Snow Hill, County, and state standards, regulations, and permits;
 - c. Constructing a collection system for the Summerfield development, which will deliver wastewater to the existing WWTP until the new plant is constructed and then connecting the collection system to the upgraded WWTP; and
 - d. Decommissioning and demolishing the existing WWTP.
4. Construct the new WWTP and have it in operation within three years from the annexation date.
5. Portions of the service area are proposed for "W-1, W-2, and W-3" water service areas as shown on the attached map entitled "Snow Hill and Environs Water Service Area" and "S-1, S-2, and S-3" sewer service areas as shown on the attached map entitled "Snow Hill and Environs Sewer Service Area."

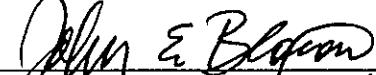
AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.

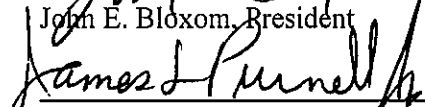
PASSED AND ADOPTED this 7th day of June, 2005.

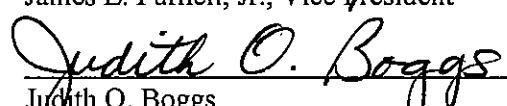
ATTEST:



 Gerald T. Mason
 Chief Administrative Officer


WORCESTER COUNTY COMMISSIONERS

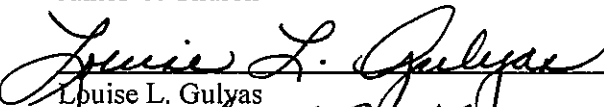

 John E. Bloxom, President

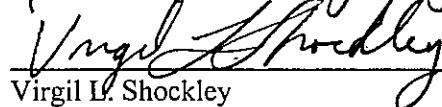

 James L. Purnell, Jr., Vice President


 Judith O. Boggs

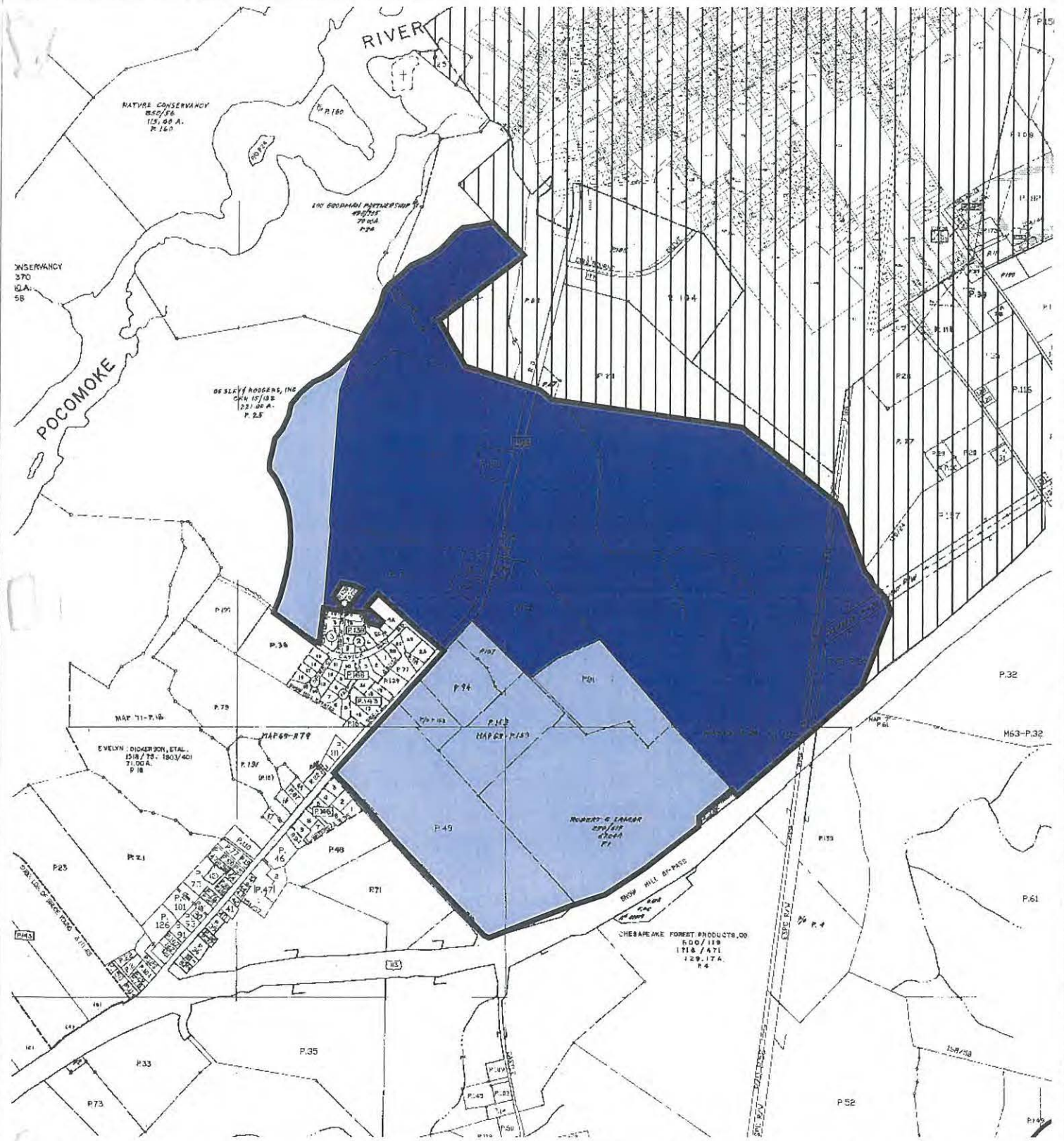

 Thomas A. Cetola






 James C. Church


 Louise L. Gulyas


 Virgil L. Shockley

Snow Hill and Environs Water Service Area



-  Proposed Project Boundary
-  Existing Sewer Service Area
- Sanitary Service Areas**
-  W1 - Present to 2 years
-  W2 - Future Service (3 to 5 years)

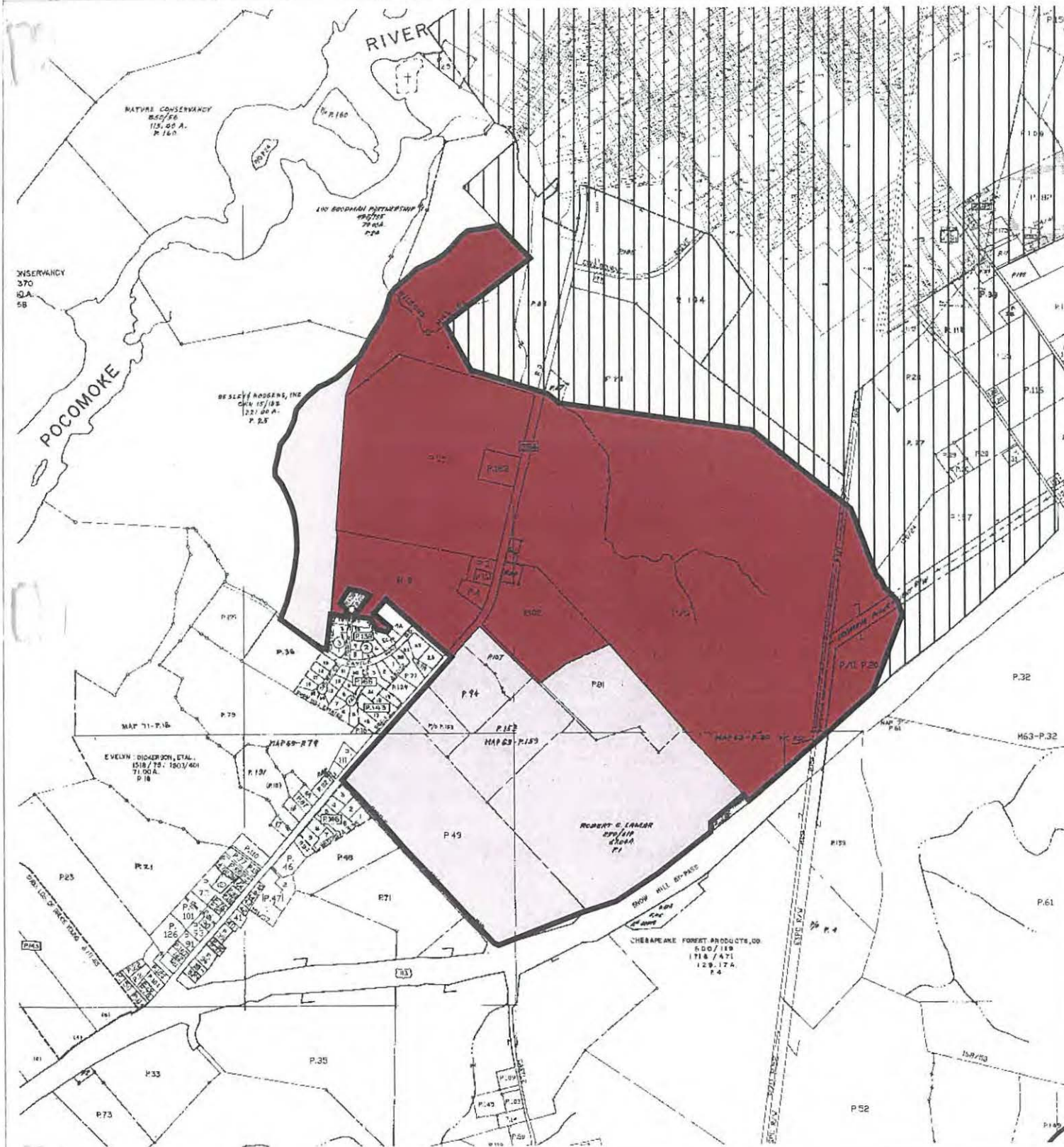
Resolution #05-22; Date: June 7, 2005





500 0 500 1000 Feet



Prepared by Worcester County Department of Comprehensive Planning, June 6, 2005.
Source: Worcester County, June 6, 2005. Maryland Department of Planning provided 2004 Tax Map images.
Filepath: c:/keota/s&wammend/base.apr

Snow Hill and Environs Sewer Service Area



-  Proposed Project Boundary
-  Existing Sewer Service Area
- Sanitary Service Areas**
-  S1 - Present to 2 years
-  S2 - Future Service (3 to 5 years)

Resolution #05-22; Date: June 7, 2005



Prepared by Worcester County Department of Comprehensive Planning, June 6, 2005.
 Source: Worcester County, June 6, 2005. Maryland Department of Planning provided 2004 Tax Map images.
 Filepath: c:\keota\s&wammend\base.apr

RESOLUTION NO. 06 - 19

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO ADD WATER AND SEWERAGE PLANNING DESIGNATIONS**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have proposed to amend the *Worcester County Comprehensive Water and Sewerage Plan* to add water and sewerage planning designations in order to be consistent with State of Maryland water and sewerage designations; and

WHEREAS, the Worcester County Planning Commission, at their meetings on May 4, 2006 and June 1, 2006, reviewed an application for amendment to the Worcester County Water and Sewerage Plan to provide for Interconnection of the Ocean Pines and Riddle Farms water systems during which they recommended the addition of these new water and sewerage planning designations in order to ensure that the Interconnection proposal is consistent with the *Comprehensive Development Plan* for Worcester County; and

WHEREAS, the County Commissioners held a public hearing on August 15, 2006 to hear public comment on the proposed amendment to add the water and sewerage planning designations to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add the proposed water and sewerage planning designations is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that the *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended to add water and sewerage planning designations as follows:

1. Amend Section 3.2, "Existing Water Systems" of the *Worcester County Comprehensive Water and Sewerage Plan* to add the following text:

The "W-4" designation is allowed under state regulation but is not needed at this time. The designation may be defined and used in the future.

The "W-5" designation is allowed under state regulation but is not needed at this time. The designation may be defined and used in the future.

"W-6" means areas where there is no planned service within the ten-year planning period and no service shall be provided.

2. Amend Section 4.4, "Existing Sewerage Systems" of the *Worcester County Comprehensive Water and Sewerage Plan* to add the following text:

The "S-4" designation is allowed under state regulation but is not needed at this time. The designation may be defined and used in the future.

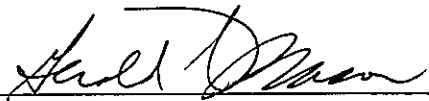
The "S-5" designation is allowed under state regulation but is not needed at this time. The designation may be defined and used in the future.

"S-6" means areas where there is no planned service within the ten year planning period and no service shall be provided.

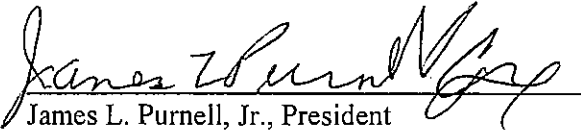
AND BE IT FURTHER RESOLVED that these proposed amendments to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that these amendments shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.

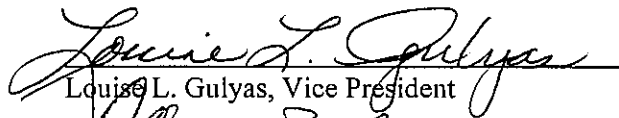
PASSED AND ADOPTED this 15th day of August, 2006.


ATTEST:

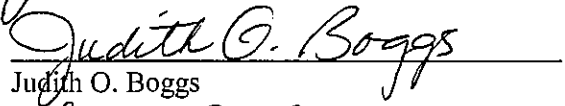

Gerald T. Mason
Chief Administrative Officer


WORCESTER COUNTY COMMISSIONERS



James L. Purnell, Jr., President

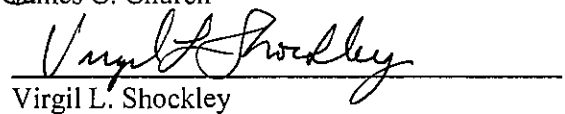

Louise L. Gulyas, Vice President


John E. Bloxom


Judith O. Boggs


Thomas A. Cetola


James C. Church


Virgil L. Shockley

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY TO REFLECT
EXPANSION OF THE LIGHTHOUSE SOUND SANITARY SERVICE AREA**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Salt Grass Point Farm, LLC, to amend the *Worcester County Comprehensive Water and Sewerage Plan* (the Plan) to include sanitary services to their proposed subdivision located on both sides of Salt Grass Point Road south of Saint Martins Neck Road by expanding the Lighthouse Sound Sanitary Service Area (the application); and

WHEREAS, the Worcester County Planning Commission, at their meeting on February 2, 2006, reviewed the application and found that the proposal is consistent with the land use objectives of the *Comprehensive Development Plan, Worcester County, Maryland* adopted April 11, 1989 and supplemented September 16, 1997, but inconsistent with the natural resources and public facilities objectives of the *Comprehensive Development Plan*; and

WHEREAS, at the recommendation of the Worcester County Planning Commission, the County Commissioners amended the application to also include sanitary services to several other properties in the vicinity of the Lighthouse Sound Sanitary Service Area located on Salt Grass Point Road, Saint Martins Neck Road and MD Route 90 (Ocean Expressway) to be consistent with the natural resources and public facilities objectives of the *Comprehensive Development Plan*; and

WHEREAS, the County Commissioners held a public hearing on September 5, 2006 to hear public comment on the requested amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the amended proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to expand the Lighthouse Sound Sanitary Service Area, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that the *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the application of Salt Grass Point Farm, LLC, as amended by the County Commissioners of Worcester County, Maryland, to reflect the provision of public sewer service from the Lighthouse Sound wastewater system to several properties in the vicinity of the Lighthouse Sound Sanitary Service Area, as follows:

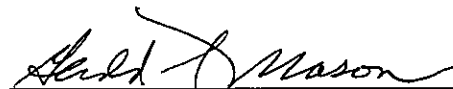
1. The Lighthouse Sound Sanitary Service Area is hereby expanded to include the proposed Salt Grass Subdivision (Tax Map 10, Parcels 31 and 33; Tax Map 16, Parcel 1) located on both sides of Salt Grass Point Road south of Saint Martins Neck Road; Grove Market (Tax Map 10, Parcel 244) located on the south side of Saint Martins Neck Road east of Salt Grass Point Road; properties at the south end of Salt Grass Point Road owned by Hemphill (Tax Map 16, Parcels 2, 3 and 34) and Widgeon (Tax Map 16, Parcel 37); and will serve by contract the Worcester County Isle of Wight Office (Tax Map 17, Parcel 20) located on the west side of Saint Martins Neck Road and the north side of MD Route 90 (Ocean Expressway) and the Worcester County Isle of Wight Park (Tax Map 17, Parcels 6 (item 1 only), 17 and 24) located on the south side of MD Route 90 at its intersection with Saint Martins Neck Road. The above referenced expansion of the Lighthouse Sound Sanitary Service Area is shown on the map entitled "Water and Sewer Plan Amendment - Lighthouse Sound - S-1 Proposed - Case 2006-1" dated July 2006, attached hereto.

2. The flow which was previously reserved for the banquet hall and lodging units at Lighthouse Sound is hereby reallocated to accommodate the above referenced properties.
3. Wastewater collection lines shall be installed to serve the above referenced properties, as well as three (3) lots located on Salt Grass Point Road owned by Thomas H. Ruark which are already included in the Lighthouse Sound Sanitary Service Area, and the cost of said installation shall be borne by the benefitting property owners including the developer of the subdivision, the County and the referenced lot owners on Salt Grass Point Road, pursuant to individual agreements.
4. The Lighthouse Sound Wastewater Treatment Plant (WWTP) shall be re-rated to reflect additional treatment capacity of 3,000 gallons per day (gpd) conditioned upon the re-allocation of 8,600 gpd of the existing treatment capacity to serve the above referenced properties and a binding commitment by the owner of the golf course and clubhouse property to accept the additional 3,000 gpd of effluent for disposal by spray irrigation on the golf course property, and subject to approval by the Maryland Department of the Environment (MDE). The additional capacity of 3,000 gpd shall be allocated to the Golf Clubhouse Parcel (Tax Map 17, Parcel 1).

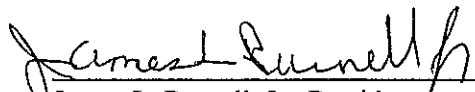
AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.

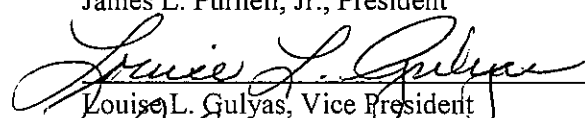
PASSED AND ADOPTED this 19th day of September, 2006.

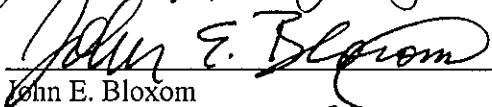
ATTEST:



 Gerald T. Mason
 Chief Administrative Officer


WORCESTER COUNTY COMMISSIONERS


 James L. Purnell, Jr., President

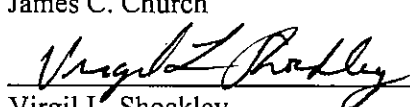

 Louise L. Gulyas, Vice President

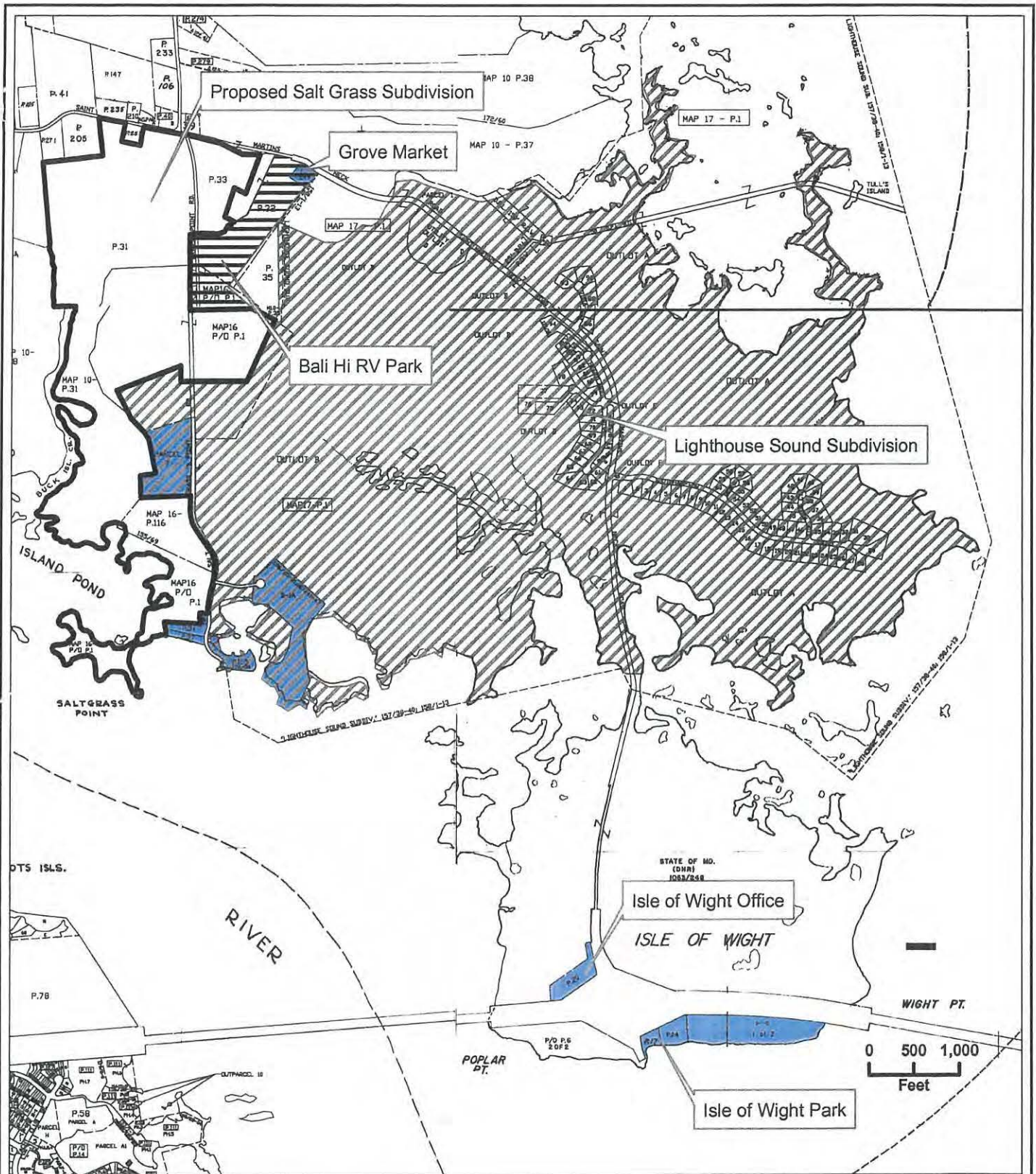

 John E. Bloxom






 Judith O. Boggs


 Thomas A. Cetola

 James C. Church


 Virgil L. Shockley



-  Proposed S-1 -- Salt Grass Subdivision
-  Proposed S-1-- Septic Connections
-  S1-- Present-2 years
-  Private System

Water and Sewer Plan Amendment

Lighthouse Sound S-1 Proposed Case 2006-1



Prepared by Worcester County Department of Comprehensive Planning, July 2006 Source: Water and Sewer Plan with Amendments, Worcester County Commissioners

RESOLUTION NO. 06 - 27

**RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE
PLAN FOR WORCESTER COUNTY TO ADD
NASSAWANGO ESTATES SHARED FACILITY SEWERAGE SYSTEM**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Nassawango Golf Course, Inc., to amend the *Worcester County Comprehensive Water and Sewerage Plan* (the Plan) to add the Nassawango Estates Shared Facility Sewerage System to serve their 11 lot subdivision located on both sides of Nassawango Road (MD Route 364) surrounded by the Nassawango Golf Course, west of the Town of Snow Hill, as shown on the map attached hereto entitled "Proposed Amendment - Nassawango Estates"; and

WHEREAS, the Worcester County Planning Commission, at their meeting on September 7, 2006 reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the *Comprehensive Development Plan* for Worcester County; and

WHEREAS, the County Commissioners held a public hearing on October 24, 2006 to hear public comment on the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add the Nassawango Estates Shared Facility Sewerage System is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:


1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the application of Nassawango Golf Course, Inc. to add the Nassawango Estates subdivision for the purpose of establishing a shared facility sewerage system to serve their property located on both sides of Nassawango Road (MD Route 364) surrounded by the Nassawango Golf Course west of the Town of Snow Hill, in the Seventh Tax District of Worcester County, Maryland. The subject property is more specifically identified on Worcester County Tax Map 70 as Parcel 21 and comprises approximately 8-acres of land, comprising a total of eleven (11) lots, as shown on the map attached hereto entitled "Proposed Amendment - Nassawango Estates." The application proposes the establishment of a small package treatment plant with spray irrigation on the existing golf course with a total capacity of 3,300 gallons per day (gpd) of sewage flow from these 11 lots, all of which is to be installed by December 2007. Water service will be provided by individual private wells on each lot and is therefore not a part of this application.

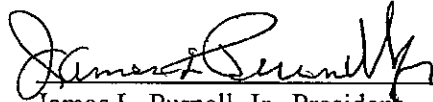
AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.

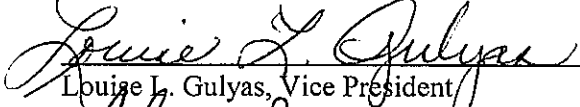
PASSED AND ADOPTED this 8th day of November, 2006.

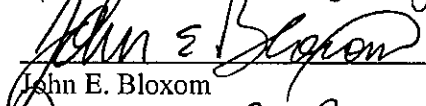
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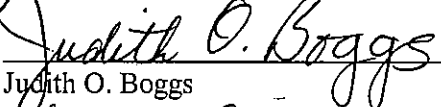
WORCESTER COUNTY COMMISSIONERS

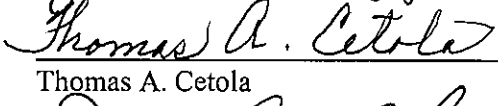

Gerald T. Mason
Chief Administrative Officer

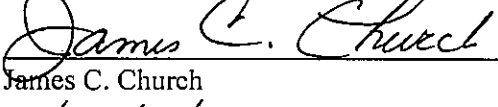

James L. Purnell, Jr., President



Louise L. Gulyas, Vice President


John E. Bloxom


Judith O. Boggs


Thomas A. Cetola


James C. Church


Virgil L. Shockley



Proposed Amendment

Nassawango Estates

S1 Proposed

Case 2006-8



Prepared by Worcester County Department of Comprehensive Planning, August 21, 2006
 Source: Aerial Imagery, Maryland Department of Natural Resources, March 2004;
 Tax Maps, Maryland Department of Planning, 2005.

 Proposed S1 Amendment

RESOLUTION NO. 06 - 28

**RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE
PLAN FOR WORCESTER COUNTY TO ADD THE
WORCESTER CAREER & TECHNOLOGY CENTER IN NEWARK**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners, on behalf of the Worcester County Board of Education, have proposed to amend the *Worcester County Comprehensive Water and Sewerage Plan* (the Plan) to add the Worcester Career & Technology Center (WCTC) campus, to be designated as "S-1, Existing and Planned System" for the purpose of providing public sewer service from the Newark Wastewater Treatment Plant (WWTP) to the proposed Worcester Career & Technology Center to be located at the southeast intersection of US Route 113 (Worcester Highway) and Central Site Lane, south of Newark, in the Fourth Tax District of Worcester County, Maryland, more specifically identified on Worcester County Tax Map 48 as Parcel 27 and comprising approximately 147-acres of land (the "subject property"), and including the area of the adjacent railroad right-of-way and/or US Route 113 right-of-way from the subject property to the Newark WWTP in which the sewer pipeline is proposed to be located, to be designated as "S-6, No Planned Service" to clarify that this area is for the transmission lines only and no sewer service shall be provided to properties adjacent thereto, all of which is shown on the map attached hereto entitled "Sewer Planning Area - Career & Technology Center" ; and

WHEREAS, the application proposes to contract with the Newark Sanitary Service Area for treatment of 9,000 gallons per day of sewerage flow on an annual average from the WCTC campus, with transmission of the sewage from the WCTC campus to be provided by means of public sewer mains to be designed and constructed in accordance with County standards and to be installed within the railroad right-of-way or within the US Route 113 right-of-way between the WCTC campus and the Newark WWTP, all of which is to be installed by June 2008; and

WHEREAS, the Worcester County Planning Commission, at their meeting on July 6, 2006 reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal was inconsistent with the *Comprehensive Development Plan* for Worcester County unless the Newark WWTP was converted for effluent disposal by spray irrigation in lieu of the current point source discharge to Marshall Creek; and

WHEREAS, the County Commissioners held a public hearing on October 24, 2006 to hear public comment on the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of the public hearing and in response to the comments of the Worcester County Planning Commission, the County Commissioners have committed to spray irrigate the additional effluent from the Newark WWTP generated as a result of service to the WCTC campus either on the subject property or on property in the vicinity of the Newark WWTP, and to further investigate the feasibility of spray irrigating all of the effluent from the Newark WWTP; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, and subject to the amendment of the application to commit to spray irrigate the additional effluent from the Newark WWTP generated as a result of service to the WCTC campus, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add the Worcester Career & Technology Center campus for public sewer service by contract from the Newark Sanitary Service Area is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:


1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the proposal of the County Commissioners of Worcester County, Maryland, to add the Worcester Career & Technology Center (WCTC) campus to be designated as "S-1, Existing and Planned System" for the purpose of treatment and disposal of 9,000 gallons per day of sewerage flow on an annual average from the WCTC campus by the Newark Wastewater Treatment Plant (WWTP). The proposed Worcester Career & Technology Center is to be located at the southeast intersection of US Route 113 (Worcester Highway) and Central Site Lane, south of Newark, in the Fourth Tax District of Worcester County, Maryland, more specifically identified on Worcester County Tax Map 48 as Parcel 27 and comprises approximately 147-acres of land (the "subject property"), as shown on the map attached hereto entitled "Sewer Planning Area - Career & Technology Center".
2. The Worcester Career & Technology Center will be served by the Newark WWTP. The sewer pipeline will extend from the center along US Route 113 or along the railroad right-of-way behind the school, north to the Newark WWTP. The pipeline is a cross-country transmission line without connections, and is not a service line. There is no intent to serve the intervening properties, which are designated by this plan as S-6, No Planned Service. The pipeline only will be used to serve the Worcester Career & Technology Center.
3. The County Commissioners have committed to spray irrigate the additional effluent from the Newark WWTP generated as a result of service to the WCTC campus either on the subject property or on property in the vicinity of the Newark WWTP, and to further investigate the feasibility of spray irrigating all of the effluent from the Newark WWTP.

AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.

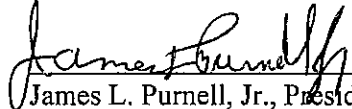
PASSED AND ADOPTED this 8th day of November, 2006.

ATTEST:

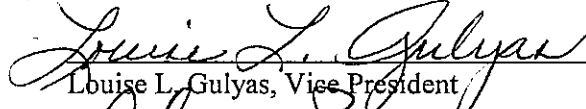
WORCESTER COUNTY COMMISSIONERS



Gerald T. Mason
Chief Administrative Officer



James L. Purnell, Jr., President




Louise L. Gulyas, Vice President



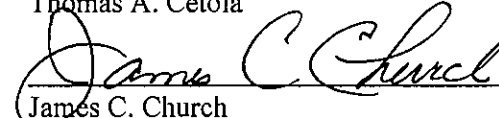
John E. Bloxom



Judith O. Boggs



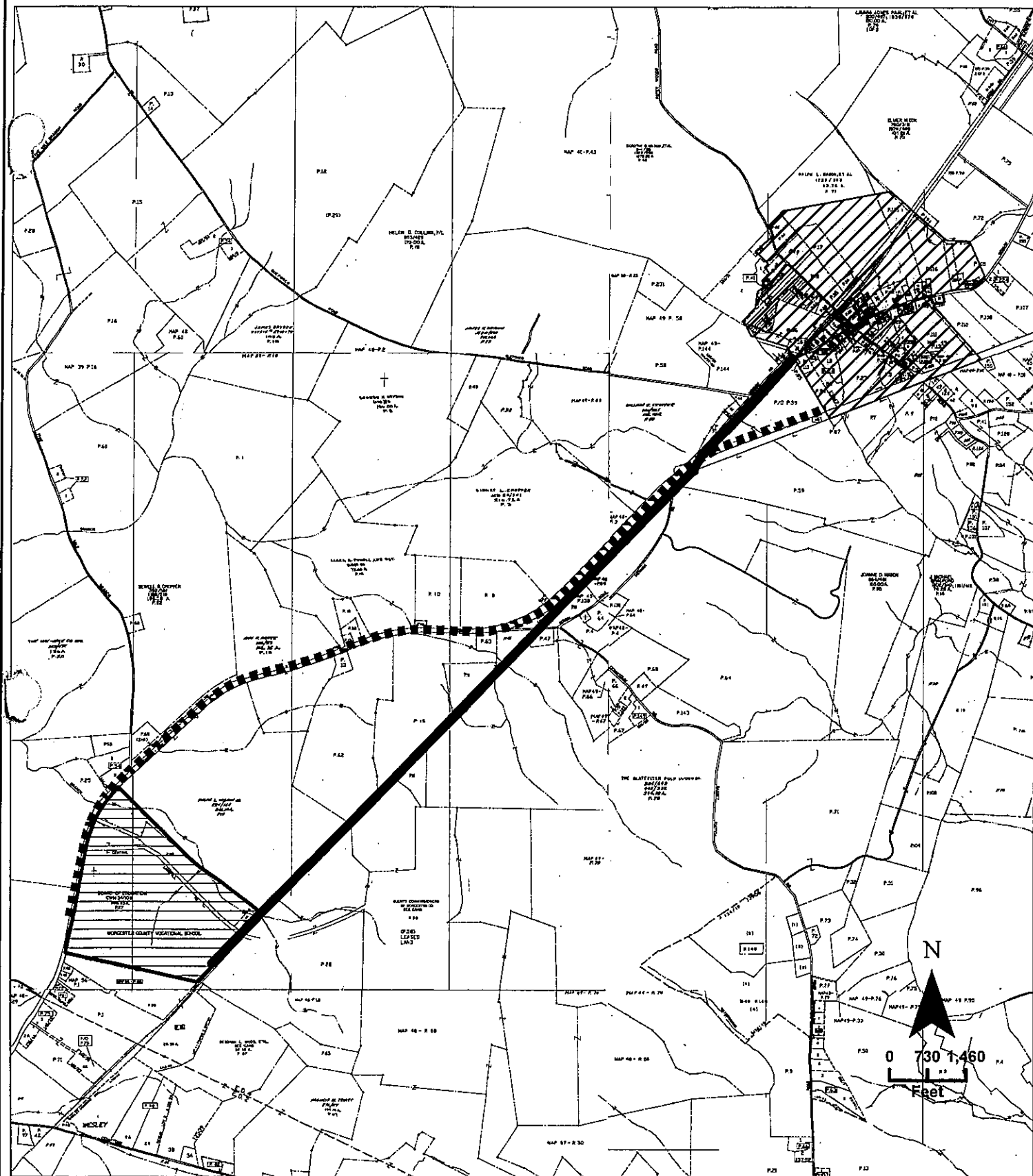
Thomas A. Cetola







James C. Church



Virgil L. Shockley



-  Alternate Pipeline: Proposed S6--No Planned Service
-  Proposed Pipeline: Proposed S6--No Planned Service
-  Proposed S1
-  S1--Present - 2 years



Sewer Planning Area Career & Technology Center Sewer Infrastructure Proposed Case 2006-6

Prepared by Worcester County Department of Comprehensive Planning, November 2, 2006
Source: Proposed Pipeline, Department of Public Works; 1994 Comprehensive Plan Water and Sewerage Systems, Worcester County Department of Comprehensive Planning, 1994 (as amended).

RESOLUTION NO. 06 - 29

**RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE
PLAN FOR WORCESTER COUNTY TO EXPAND THE
LEWIS ROAD PLANNING AREA**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have proposed to amend the *Worcester County Comprehensive Water and Sewerage Plan* (the Plan) as shown on the map attached hereto entitled "Planning Area Expansion - Lewis Road" to expand the Lewis Store Road Planning Area to add property owned by the Town of Ocean City and a private residence to the Lewis Store Road Planning Area to be designated as "W-1, Existing and Planned System" in order to receive public water service from The Landings water system. The subject properties are located on both sides of Lewis Road approximately 1 mile north of its intersection with Stephen Decatur Highway (MD Route 611), east of the Town of Berlin, in the Tenth Tax District of Worcester County, Maryland, and are more specifically identified on Worcester County Tax Map 33 as Parcel 121 (private residence) and Parcel 122 (Town of Ocean City property) and comprise approximately 38-acres of land; and

WHEREAS, the County Commissioners have further proposed to officially change the name of this Planning Area to "Lewis Road Planning Area," and

WHEREAS, the Worcester County Planning Commission, at their meeting on September 7, 2006 reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the *Comprehensive Development Plan* for Worcester County; and

WHEREAS, the County Commissioners held a public hearing on October 24, 2006 to hear public comment on the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to expand the Lewis Road Planning Area is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

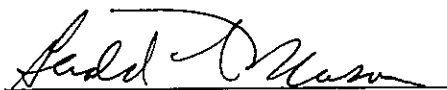
1. The County Commissioners of Worcester County, Maryland hereby officially rename the Lewis Store Road Planning Area as the "Lewis Road Planning Area."
2. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended, as shown on the map attached hereto entitled "Planning Area Expansion - Lewis Road" and as specified in the proposal of the County Commissioners of Worcester

County, Maryland, to expand the Lewis Road Planning Area to add property owned by the Town of Ocean City and a private residence to the Lewis Road Planning Area to be designated as "W-1, Existing and Planned System" in order to receive public water service from The Landings water system. The subject properties are located on both sides of Lewis Road approximately 1 mile north of its intersection with Stephen Decatur Highway (MD Route 611), east of the Town of Berlin, in the Tenth Tax District of Worcester County, Maryland, and are more specifically identified on Worcester County Tax Map 33 as Parcel 121 (private residence) and Parcel 122 (Town of Ocean City property) and comprise approximately 38-acres of land. The proposal provides for one (1) equivalent dwelling unit (EDU), or 250 gallons per day, of water service to each of these lots from the existing water line which was recently installed along Lewis Road

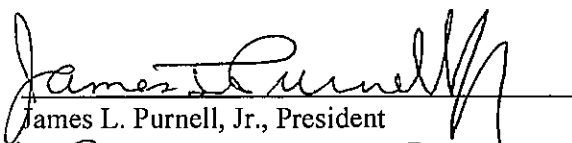
AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.

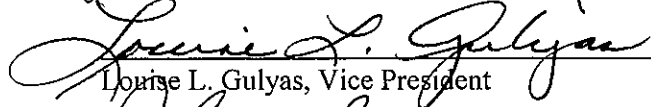
PASSED AND ADOPTED this 8th day of November, 2006.


ATTEST:

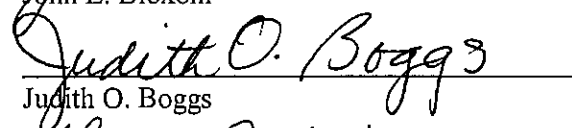

Gerald T. Mason
Chief Administrative Officer

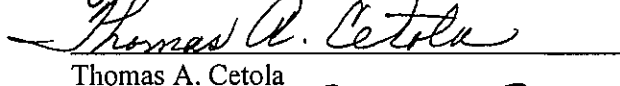
WORCESTER COUNTY COMMISSIONERS

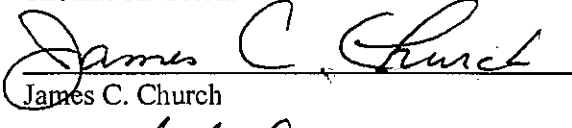

James L. Purnell, Jr., President

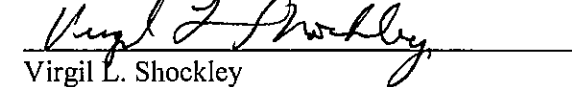

Louise L. Gulyas, Vice President

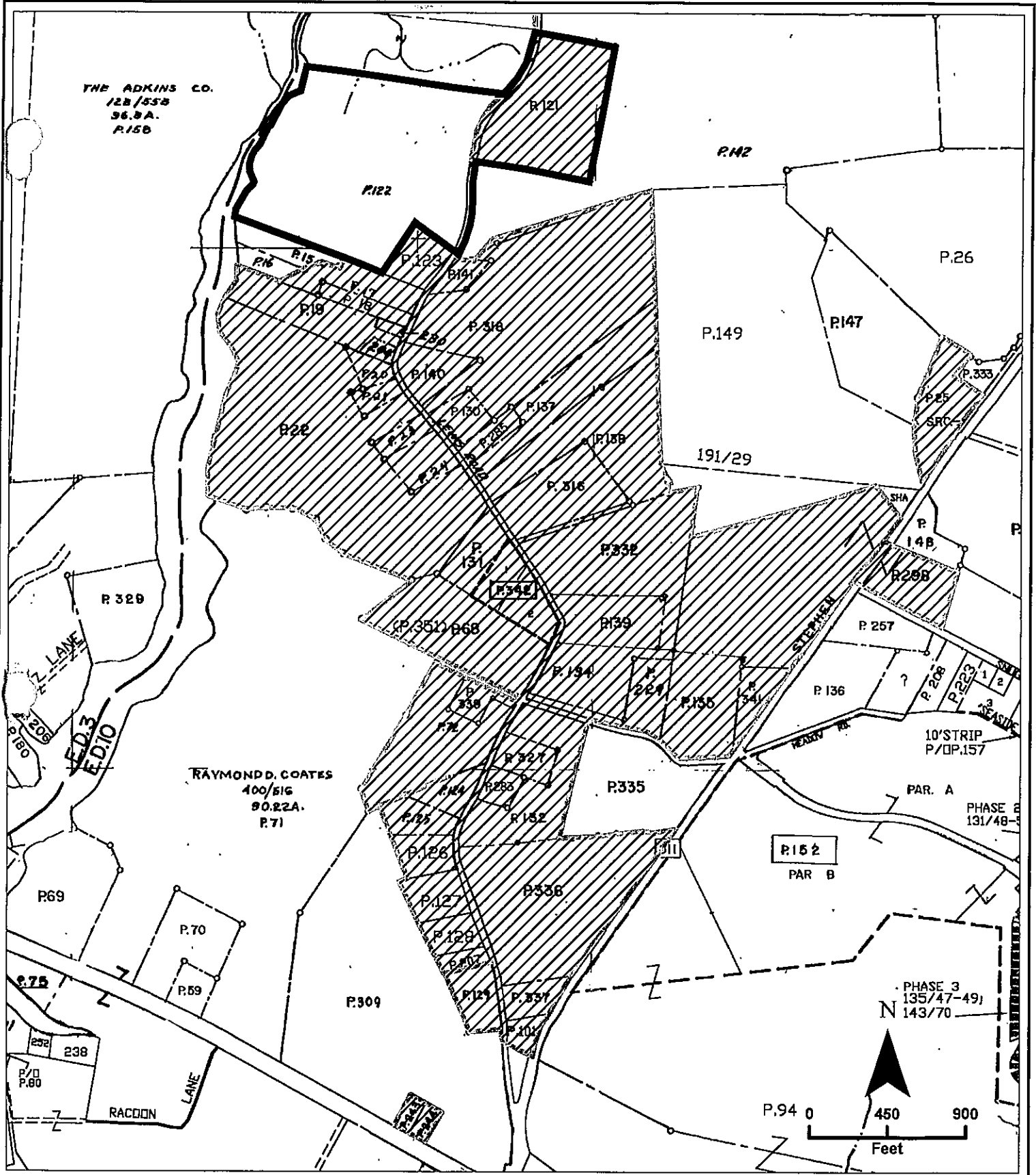

John E. Bloxom


Judith O. Boggs


Thomas A. Cetola




James C. Church


Virgil L. Shockley



Planning Area Expansion

Lewis Road W1 Proposed Case 2006-9

-  Proposed W1 Amendment
-  Lewis Road Sanitary Service Area



Prepared by Worcester County Department of Comprehensive Planning, November 2, 2006
 Source: 1994 Comprehensive Plan Water and Sewerage Systems, Worcester County Department of Comprehensive Planning, 1994 (as amended); Tax Maps, Maryland Department of Planning, 2005.

RESOLUTION NO. 07 - 2

**RESOLUTION AMENDING THE
COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO EXPAND THE RIDDLE FARM SEWER PLANNING AREA**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have proposed to amend the *Worcester County Comprehensive Water and Sewerage Plan* (the Plan) as shown on the map attached hereto entitled "Planning Area Expansion - Riddle Farm" to expand the Riddle Farm Sewer Planning Area to provide public sewer service to Wal-Mart/Home Depot and the proposed Ocean Landing II commercial development and Berlin Fire Department property adjacent to the Wal Mart/Home Depot. The subject properties are located on the south side of Ocean Gateway (US Route 50) just east of its intersection with Racetrack Road (MD Route 589), east of the Town of Berlin, in the Third Tax District of Worcester County, Maryland. The subject properties are more specifically identified on Worcester County Tax Map 26 as Parcels 303 and 455 (Wal Mart/Home Depot) and Parcels 301, 302 and 305 (Ocean Landing II commercial development and Berlin Fire Department) and comprise approximately 356-acres of land; and

WHEREAS, the Worcester County Planning Commission, at their meeting on December 7, 2006 reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the *Comprehensive Development Plan* for Worcester County; and

WHEREAS, the County Commissioners held a public hearing on February 6, 2007 to hear public comment on the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to expand the Riddle Farm Sewer Planning Area is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended, as shown on the map attached hereto entitled "Planning Area Expansion - Riddle Farm" and as specified in the proposal of the County Commissioners of Worcester County, Maryland, to expand the Riddle Farm Sewer Planning Area for the purpose of providing public sewer service from the Riddle Farm wastewater treatment plant; and
2. The portion of the sewer planning expansion area designated Commercial Center by the *Worcester County Comprehensive Development Plan* and the land owned by the Berlin Fire Department will be designated S-1 (immediate service), while the portion designated as Agriculture will be designated as S-6 (no planned service). The Riddle Farm Wastewater Treatment Plant is proposed to be expanded from a treatment capacity of

0.20 million gallons per day (MGD) to a total capacity of 0.28 MGD to accommodate the expansion of the sewer planning area. The application proposes the provision of two hundred sixty-seven (267) equivalent dwelling units (EDU) at 300 gallons per day (gpd) per EDU of sewer service with 94 EDUs to be allocated to the above referenced properties, which includes 2 EDUs for the Berlin Fire Department property. The application further proposes that the existing 4,800 gpd onsite septic system currently serving Wal Mart/Home Depot will be abandoned, but that the 23,000 gpd spray irrigation system originally approved to serve the Ocean Landing II commercial development would be retained by the developer for future use at the property identified on Tax Map 26 as Parcel 305.


AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.


PASSED AND ADOPTED this 20th day of February, 2007.


ATTEST:

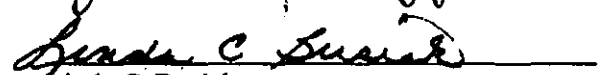

Gerald T. Mason
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS


James L. Purnell, Jr., President



Louise L. Gulyas, Vice President

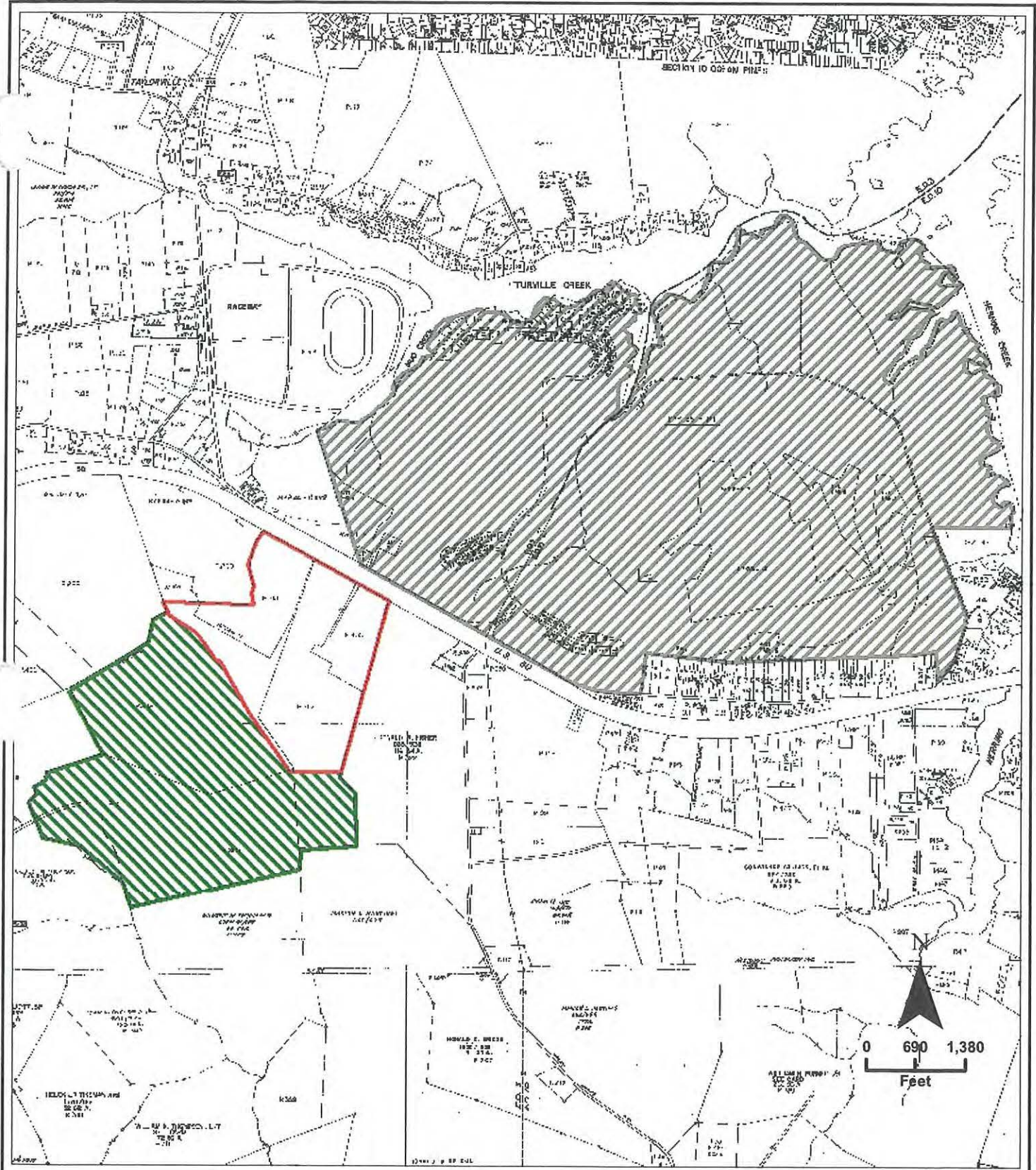

Judith O. Boggs


Linda C. Busick


James O. Church


Robert L. Cowger, Jr.


Virgil L. Shockley



Planning Area Expansion

Riddle Farm
S1 and S6 Proposed
Case 2006-5

-  Riddle Farm Sanitary Service Area
- Sewer Category**
-  S1--Present - 2 years
-  S6--No Planned Service



Prepared by Worcester County Department of Comprehensive Planning, January 10, 2007
 Source: 1994 Comprehensive Plan Water and Sewerage Systems, Worcester County
 Department of Comprehensive Planning, 1994 (as amended);
 Tax Maps, Maryland Department of Planning, 2005.

RESOLUTION NO. 07 - 4

**RESOLUTION AMENDING THE
COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO EXPAND THE RIDDLE FARM WATER PLANNING AREA**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have proposed to amend the *Worcester County Comprehensive Water and Sewerage Plan* (the Plan) as shown on the map attached hereto entitled "Planning Area Expansion - Riddle Farm" to expand the Riddle Farm Water Planning Area to provide public water service to Wal-Mart/Home Depot and the proposed Ocean Landing II commercial development and Berlin Fire Department property adjacent to the Wal Mart/Home Depot. The subject properties are located on the south side of Ocean Gateway (US Route 50) just east of its intersection with Racetrack Road (MD Route 589), east of the Town of Berlin, in the Third Tax District of Worcester County, Maryland. The subject properties are more specifically identified on Worcester County Tax Map 26 as Parcels 303 and 455 (Wal Mart/Home Depot) and Parcels 301, 302 and 305 (Ocean Landing II commercial development and Berlin Fire Department) and comprise approximately 356-acres of land; and

WHEREAS, the Worcester County Planning Commission, at their meeting on February 1, 2007 reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the *Comprehensive Development Plan* for Worcester County; and

WHEREAS, the County Commissioners held a public hearing on March 6, 2007 to hear public comment on the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to expand the Riddle Farm Water Planning Area is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

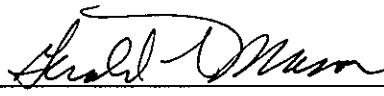
1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended, as shown on the map attached hereto entitled "Planning Area Expansion - Riddle Farm" and as specified in the proposal of the County Commissioners of Worcester County, Maryland, to expand the Riddle Farm Water Planning Area for the purpose of providing public water service from the Riddle Farm water treatment plant; and
2. The portion of the water planning expansion area designated Commercial Center by the *Worcester County Comprehensive Development Plan* and the land owned by the Berlin Fire Department will be designated W-1 (immediate service), while the portion designated as Agriculture will be designated as W-6 (no planned service). The application proposes the provision of ninety-four (94) equivalent dwelling units (EDU) at

350 gallons per day (gpd) per EDU of water service, for a total flow of 32,900 gpd of currently available excess capacity, to be allocated to the above referenced properties, which includes 2 EDUs for the Berlin Fire Department property.

AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.

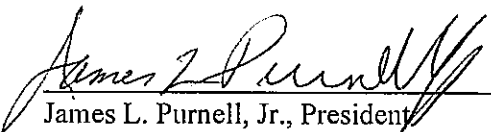
PASSED AND ADOPTED this 6th day of March, 2007.

ATTEST:



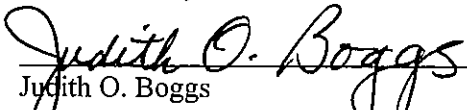
Gerald T. Mason
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS

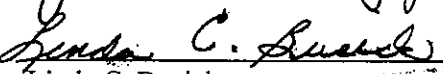


James L. Purnell, Jr., President


Louise L. Gulyas, Vice President



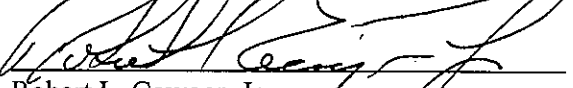
Judith O. Boggs



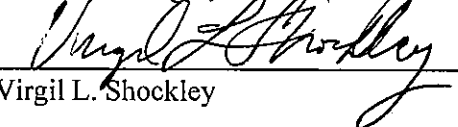
Linda C. Busick



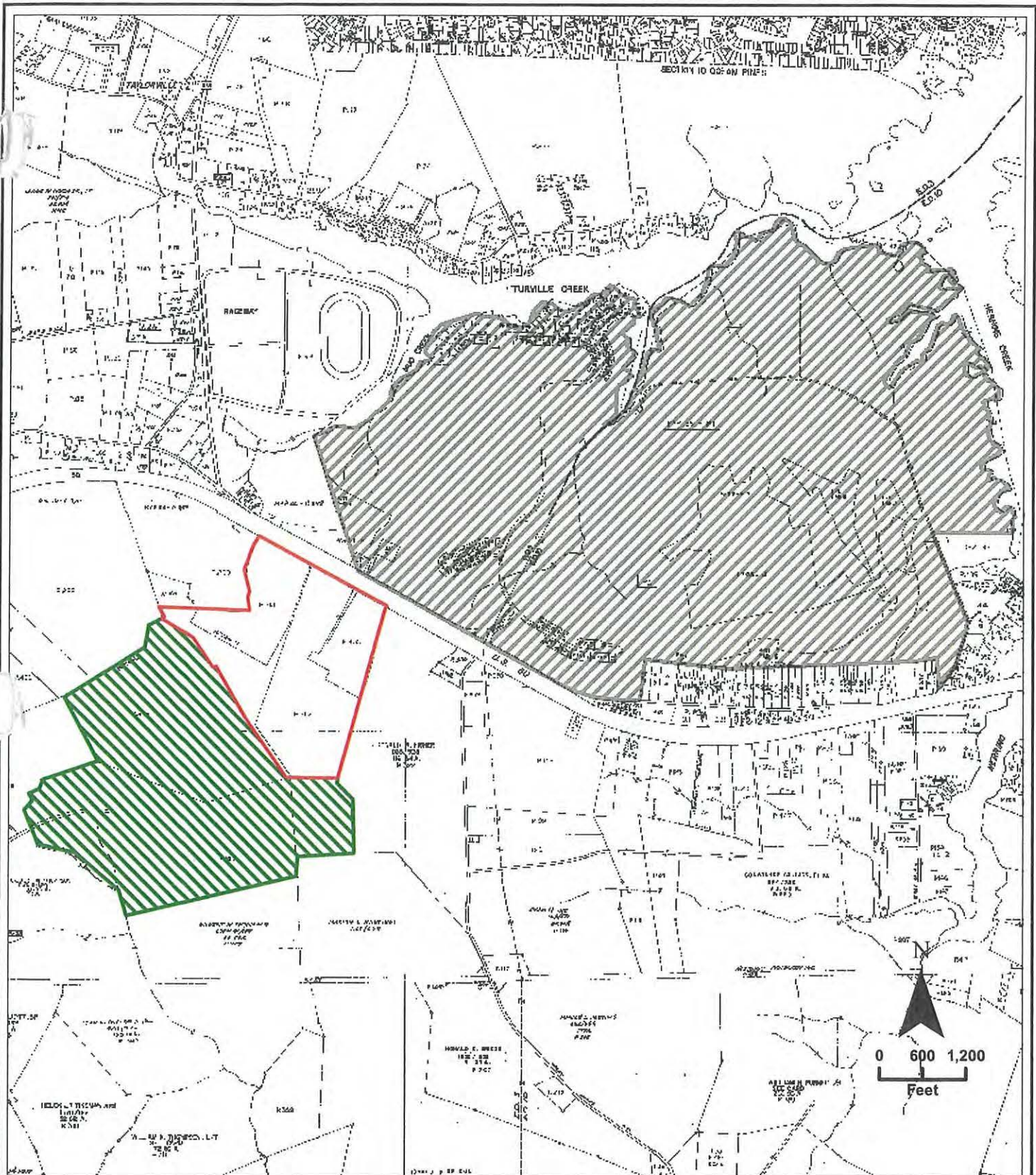
James C. Church



Robert L. Cowger, Jr.






Virgil L. Shockley



Planning Area Expansion

Riddle Farm W1 and W6 Proposed Case 2007-2

-  Riddle Farm Sanitary Service Area
-  W-1--Present - 2 years
-  W-6--No Planned Service



Prepared by Worcester County Department of Comprehensive Planning, February 1, 2007
 Source: 1994 Comprehensive Plan Water and Sewerage Systems, Worcester County
 Department of Comprehensive Planning, 1994 (as amended);
 Tax Maps, Maryland Department of Planning, 2005.

RESOLUTION NO. 07 - 25

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY FOR
INTERCONNECTION OF OCEAN PINES AND RIDDLE FARM WATER SYSTEMS**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have proposed to amend the *Worcester County Comprehensive Water and Sewerage Plan* to provide for Interconnection of the Ocean Pines and Riddle Farms water systems to add redundancy for maintenance purposes and special circumstances in both service areas; and

WHEREAS, the Worcester County Planning Commission, at their meetings on May 4, 2006 and June 1, 2006, reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the *Comprehensive Development Plan* for Worcester County; and

WHEREAS, while the proposed location of the interconnecting pipeline has changed since June 1, 2006, the Worcester County Planning Commission has reviewed the new proposed location and found that the revised location is not a significant change from the proposal that they previously reviewed and therefore continue to find the proposal to be consistent with the *Comprehensive Development Plan* for Worcester County; and

WHEREAS, the County Commissioners held a public hearing on September 18, 2007 to hear public comment on the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to provide for Interconnection of the Ocean Pines and Riddle Farms water systems to add redundancy for maintenance purposes and special circumstances in both service areas, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:


1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the proposal of the County Commissioners of Worcester County, Maryland to provide for Interconnection of the Ocean Pines and Riddle Farms water systems located north of U.S. Route 50 and east of Maryland Route 589 in the Third Tax District of Worcester County, Maryland to add redundancy for maintenance purposes and special circumstances in both service areas. The interconnecting pipeline may extend north from the Riddle Farm water system crossing under Turville Creek

and through Bay Point Plantation to the Ocean Pines water system, or may be installed in such other location as the County Commissioners determine to be in the best interests of the respective service areas. Properties outside the boundaries of either service area and adjacent to the interconnecting pipeline will be designated as W-6 (No Planned Service) in the *Worcester County Comprehensive Water and Sewerage Plan*. The interconnecting pipeline is a cross-country transmission line without connections, and is not a service line. There is no intent to serve the intervening properties. The pipeline only will be used to serve the Ocean Pines and Riddle Farm sanitary service areas, as well as the River Run sanitary service area and other areas which receive water by contract from the Ocean Pines or Riddle Farm sanitary service areas now or in the future. The proposed interconnecting pipeline facilities are to be installed by 2011.

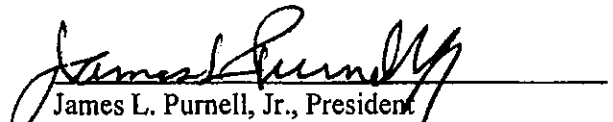
AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.

PASSED AND ADOPTED this 18th day of September, 2007.

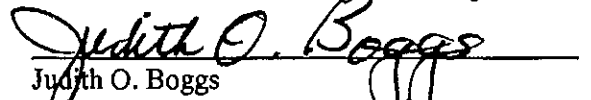
ATTEST:

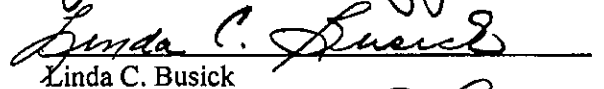

Gerald T. Mason
Chief Administrative Officer

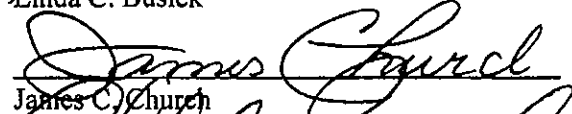
WORCESTER COUNTY COMMISSIONERS

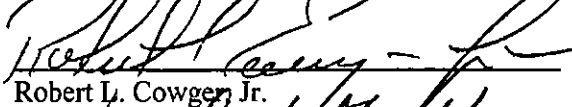

James L. Purnell, Jr., President


Louise L. Gulyas, Vice President


Judith O. Boggs


Linda C. Busick


James C. Church


Robert L. Cowger, Jr.


Virgil L. Shockley

RESOLUTION NO. 07 - 32

**RESOLUTION AMENDING THE
COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
FOR LAND APPLICATION DISPOSAL OF TREATED WASTEWATER EFFLUENT
FOR THE TOWN OF SNOW HILL, WORCESTER COUNTY, MARYLAND**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Hugh Cropper, IV, representing Mark Odachowski, to amend the *Worcester County Comprehensive Water and Sewerage Plan* to add a spray irrigation facility, for land application disposal of treated wastewater effluent from the Town of Snow Hill, on approximately 477 acres of land located on the east end of Timmons Road, more specifically identified on Worcester County Tax Map 56 as Parcels 25 and 83, as shown on the map attached hereto entitled "Spray Irrigation Facility—Summerfield", and

WHEREAS, the Worcester County Planning Commission, at their meeting on September 6, 2007 reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the *Worcester County Comprehensive Development Plan*; and

WHEREAS, the County Commissioners held a public hearing on November 20, 2007 to hear public comment on the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add a spray irrigation facility for land application disposal of treated wastewater effluent from the Town of Snow Hill is desirable.

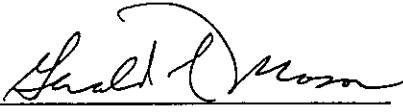
NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended, as specified in the application of Hugh Cropper, IV, to add a spray irrigation facility located on the east end of Timmons Road, on property more specifically identified on Worcester County Tax Map 56 as Parcels 25 and 83, as shown on the map attached hereto entitled "Spray Irrigation Facility — Summerfield", for land application disposal of treated wastewater effluent from the Town of Snow Hill.

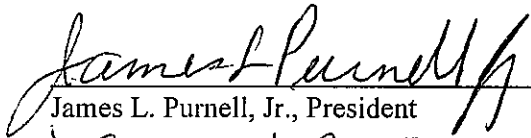
AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.

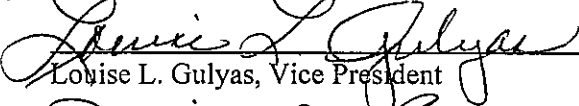
PASSED AND ADOPTED this 20th day of November, 2007.

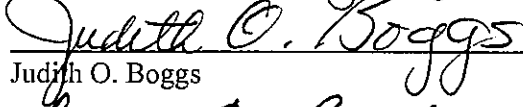
ATTEST:

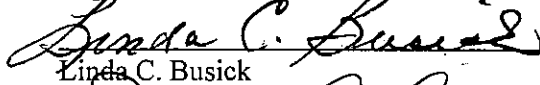

Gerald T. Mason
Chief Administrative Officer


WORCESTER COUNTY COMMISSIONERS

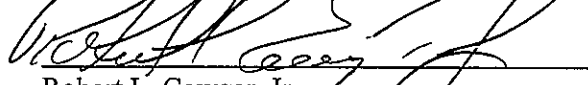

James L. Purnell, Jr., President

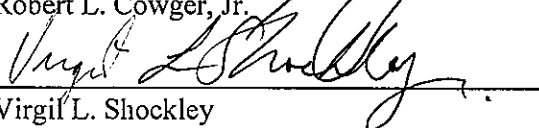

Louise L. Gulyas, Vice President

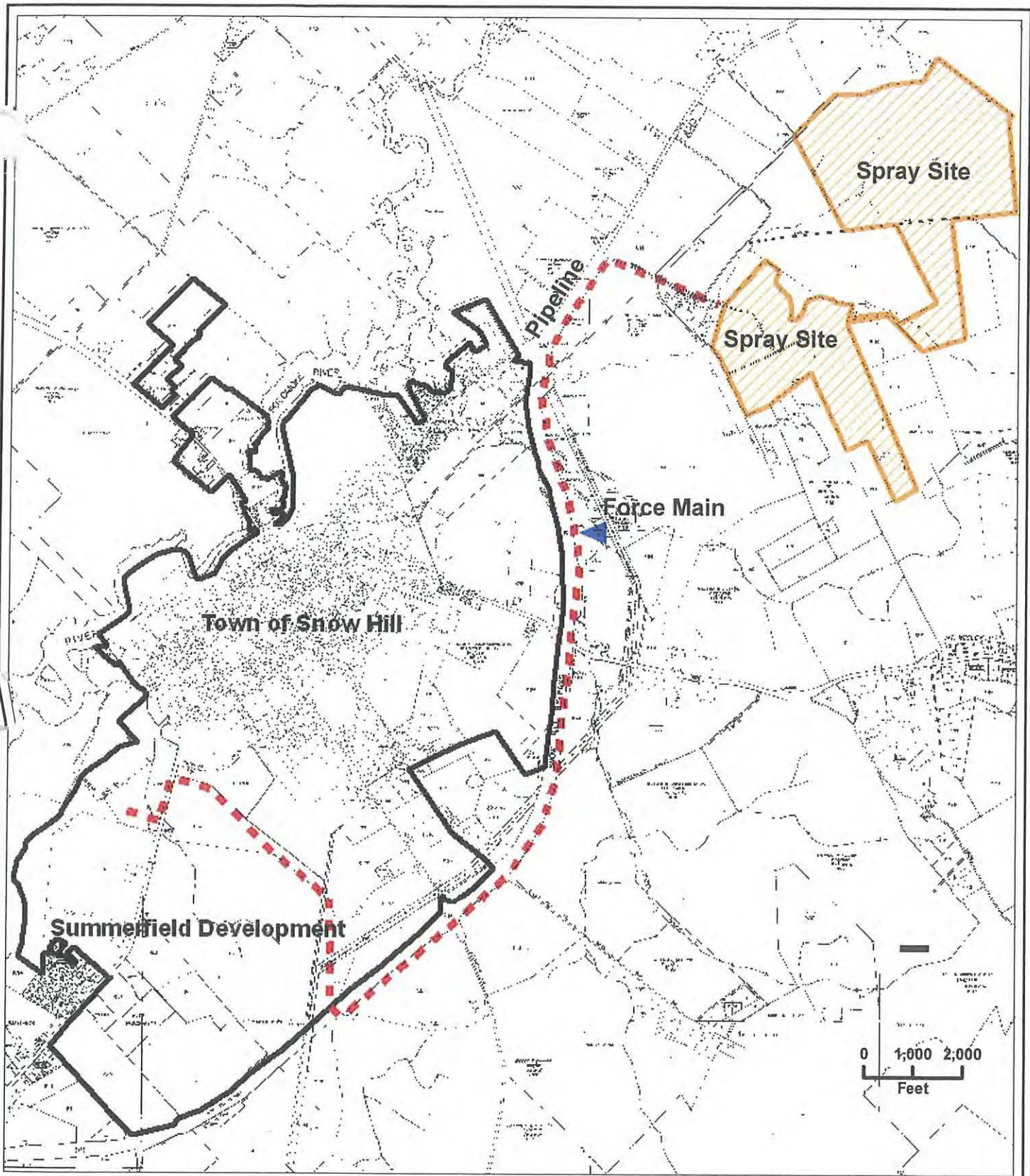

Judith O. Boggs






Linda C. Busick


James C. Church


Robert L. Cowger, Jr.


Virgil L. Shockley



-  Proposed Force Main
-  Proposed Pipeline
-  Proposed Spray Irrigation Site
-  Snow Hill Water and Sewer Planning Area



Spray Irrigation Facility Summerfield Spray Irrigation Proposed Case 2007-4

Prepared by Worcester County Department of Comprehensive Planning, August 27, 2007
 Source: 1994 Comprehensive Plan Water and Sewerage Systems, Worcester County
 Department of Comprehensive Planning, 1994 (as amended);
 Tax Maps, Maryland Department of Planning, 2006.

RESOLUTION NO. 07 - 33

RESOLUTION AMENDING THE
COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO EXPAND THE SNOW HILL SEWER PLANNING AREA AND PUBLIC SEWER
SYSTEM TO SERVE POCOMOKE RIVER STATE PARK - SHAD LANDING AREA

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from the Town of Snow Hill, Maryland, to expand the Snow Hill S-1 (Present - 2 Years) sewer planning area to designate the Pocomoke River State Park - Shad Landing Area for extension of public sanitary sewer service from the Snow Hill Wastewater Treatment Plant (WWTP). The Shad Landing Area property is located southwest of the Town of Snow Hill in the Second and Eighth Tax Districts of Worcester County, Maryland, and more specifically identified on Worcester County Tax Map 71 as Parcel 28. The Shad Landing Area property is owned by the Maryland Department of Natural Resources and is proposed for 33 equivalent dwelling units (EDU's) of sewer service (8,250 gallons per day) to correct a public health issue resulting from the failing septic tanks at Shad Landing. The sewage line to connect Shad Landing to the new Snow Hill WWTP is proposed to run along US Route 113. All intervening properties along the transmission line are proposed to be designated S-6 (No Planned Service) in the *Worcester County Comprehensive Water and Sewerage Plan*. The proposed sewer planning area expansion is as shown on the map attached hereto entitled "Planning Area Expansion – Snow Hill", and

WHEREAS, the Worcester County Planning Commission, at their meeting on October 4, 2007 reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the *Worcester County Comprehensive Development Plan*; and

WHEREAS, the County Commissioners held a public hearing on November 20, 2007 to hear public comment on the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to expand the Snow Hill S-1 (Present - 2 Years) sewer planning area to designate the Pocomoke River State Park - Shad Landing Area for extension of public sanitary sewer service from the Snow Hill Wastewater Treatment Plant (WWTP), is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:


1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby

amended as specified in the application of the Town of Snow Hill, Maryland, to expand the Snow Hill S-1 (Present - 2 Years) sewer planning area to designate the Pocomoke River State Park - Shad Landing Area for extension of public sanitary sewer service from the Snow Hill Wastewater Treatment Plant (WWTP). The Shad Landing Area property is located southwest of the Town of Snow Hill in the Second and Eighth Tax Districts of Worcester County, Maryland, and more specifically identified on Worcester County Tax Map 71 as Parcel 28. The Shad Landing Area property is owned by the Maryland Department of Natural Resources and is proposed for 33 equivalent dwelling units (EDU's) of sewer service (8,250 gallons per day) to correct a public health issue resulting from the failing septic tanks at Shad Landing. The sewage line to connect Shad Landing to the new Snow Hill WWTP is proposed to run along US Route 113. All intervening properties along the transmission line are proposed to be designated S-6 (No Planned Service) in the *Worcester County Comprehensive Water and Sewerage Plan*. The proposed sewer planning area expansion is as shown on the map attached hereto entitled "Planning Area Expansion – Snow Hill"

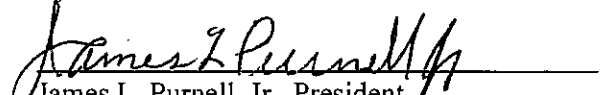
AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.


PASSED AND ADOPTED this 20th day of November, 2007.

ATTEST:

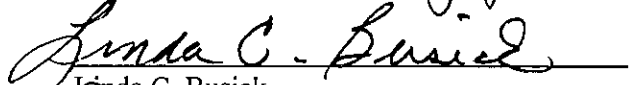

Gerald T. Mason
Chief Administrative Officer

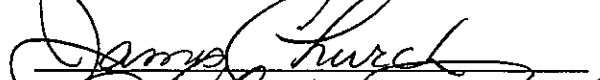
WORCESTER COUNTY COMMISSIONERS



James L. Purnell, Jr., President

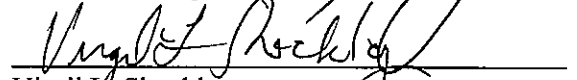

Louise L. Gulyas, Vice President

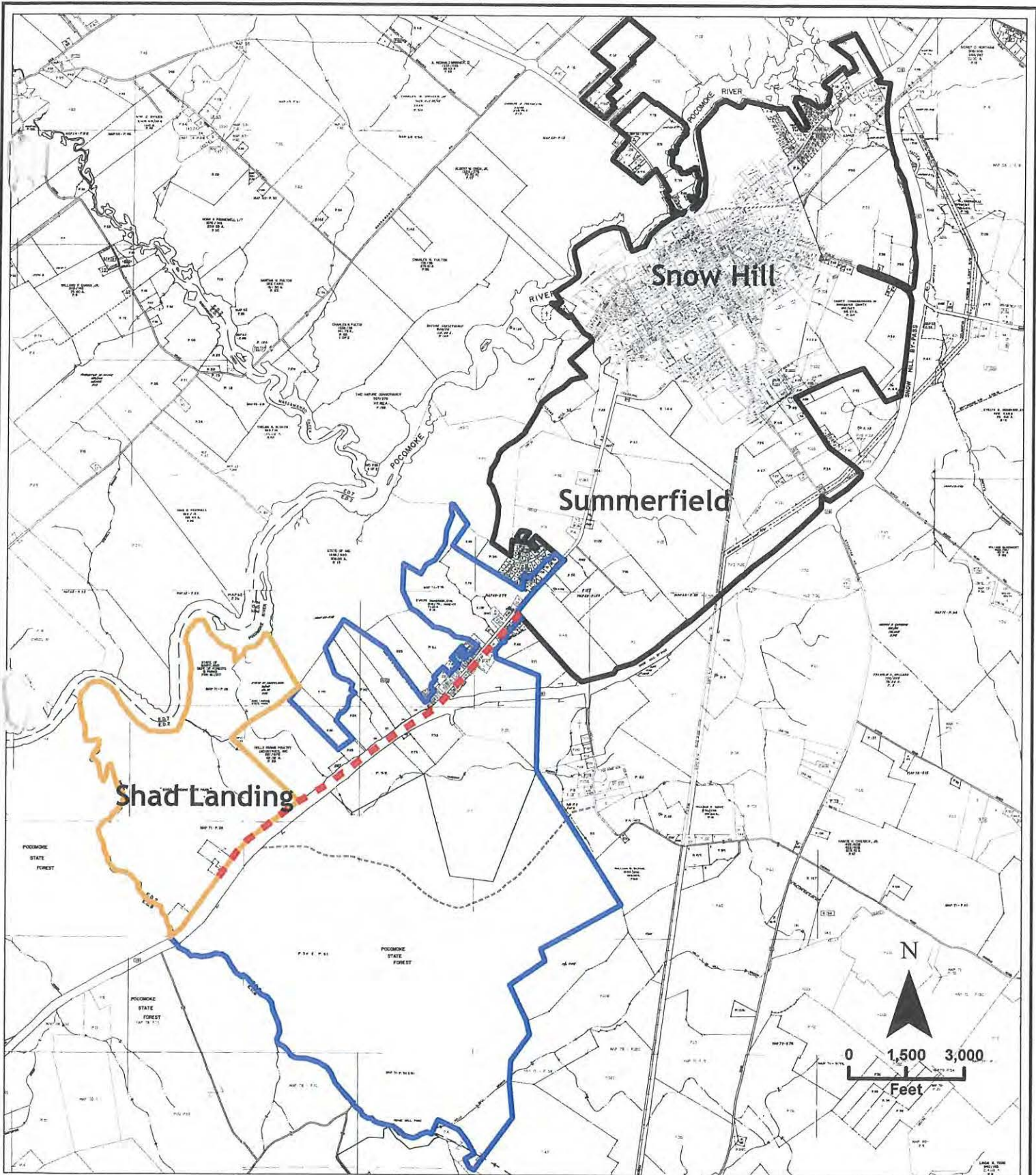

Judith O. Boggs



Linda C. Busick


James C. Church


Robert L. Cowger, Jr.



Virgil L. Shockley




 Snow Hill Water and Sewer Planning Area

 Pipeline

Sewer Planning Categories

 S-1--Present - 2 years

 S-6--No Planned Service

Planning Area Expansion - Snow Hill

Shad Landing
S-1 and S-6 Proposed
Case 2007-5



Prepared by Worcester County Department of Comprehensive Planning, November 19, 2007
Source: Aerial Imagery, Maryland Department of Natural Resources, March 2004;
Tax Maps, Maryland Department of Planning, 2006.

RESOLUTION NO. 07 - 35

RESOLUTION AMENDING THE
COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO ADDRESS ZONING CONSISTENCY

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have proposed to amend the *Worcester County Comprehensive Water and Sewerage Plan* to clarify the plan's zoning consistency policy and include additional language in Section 1.1.3 ("Disclamation") and revised language in Section 1.4.1 ("Procedures for Plan Amendments"), Section 3.2 ("Existing Water Systems") and Section 4.4 ("Existing Sewer Systems") to allow for long-term water and sewer planning without requiring immediate zoning consistency. Zoning consistency will be required prior to the designation of property as S-1/W-1 (served or planned to be served within two years). The added language of Section 1.1.3 ("Disclamation") will ensure that when properties designated for sanitary service are added to the water and sewer plan, this shall not be construed for rezoning purposes to be an unplanned change in the neighborhood's character or a zoning mistake and the passage of time alone shall not be misconstrued in any way to indicate a change in the water and sewer designation or zoning of the property; and

WHEREAS, the Worcester County Planning Commission, at their meetings on November 1, 2007 and December 6, 2007 reviewed the proposed amendments to the Worcester County Water and Sewerage Plan and found the proposal to be consistent with the *Worcester County Comprehensive Development Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendments to the *Worcester County Comprehensive Water and Sewerage Plan* to clarify the plan's zoning consistency policy, are desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The Comprehensive Water and Sewerage Plan for Worcester County is hereby amended to repeal and reenact Section 1.1.3 ("Disclamation") and Section 1.4.1 ("Procedures for Plan Amendments") to read as follows. Revisions are provided hereafter with added text underlined and deleted text in ~~strikethrough~~:

1.1.3 Disclamation

- A. The inclusion of any water and sewer system in this plan does not legally obligate Worcester County or any of its political subdivisions to take any action to implement such project or to enforce the implementation of such projects. Any water and sewer system in the plan must meet all applicable County, State and Federal laws and regulations concerning the construction and operation of such systems and must secure all required County, State and Federal permits.

- B. Designation of a project as either an S-2/W-2 or S-3/W-3 in this plan shall not be construed as evidence for upgrading of a water or sewer service area to one providing for a shorter planning period merely by the passage of time. Failure to provide service within a designated time frame as contained in the plan shall only be considered as unfulfilled planning objectives. Furthermore, the inclusion of a property in the water and sewer plan does not, in and of itself, constitute a change in the character of the neighborhood for rezoning purposes.

1.4 PROCEDURES FOR PLAN AMENDMENTS

1.4.1 General

Proposed amendments to the Water and Sewerage Plan will be considered by the County Commissioners only if the amendments are consistent with the provisions of the Comprehensive Development Plan and existing zoning classifications. If a proposed water or sewage project is not consistent with existing zoning classifications In addition, the W-1 and S-1 portion of proposed amendments must be consistent with existing zoning classifications. If the W-1 or S-1 portion of a proposed water or sewage project is not consistent with the existing zoning classifications, the amendment may be proposed in conjunction with an application for zoning reclassification. In such event the Water and Sewerage Plan amendment public hearing shall be conducted jointly with the rezoning hearing.

2. The Comprehensive Water and Sewerage Plan for Worcester County is hereby amended to repeal and reenact the enumerated passages in Section 3.2 ("Existing Water Systems") and Section 4.4 ("Existing Sewer Systems") to read as follows. Revisions are provided hereafter with added text underlined and deleted text in ~~strikethrough~~:

3.2 EXISTING WATER SYSTEMS

Drawing Designation

"W-1" means areas served or planned to be served by community, multi-use or shared facilities which are either existing, under construction, or are planned to be built within two years. Only W-1 designated properties can receive water service. Extension of water systems can only be made to properties designated W-1. The W-1 designation can only be established if the property's use will be consistent with existing zoning.

"W-2" means areas where improvements or extension, or construction of new, community, multi-use, or shared facilities are planned within a three to five year period. Extension of water systems can not be made to properties designated W-2. The W-2 designation should be considered no water service until amended to a W-1 designation.

"W-3" means areas where improvements or extension, or construction of new, community, multi-use, or shared facilities are planned within a six to ten year period. Extension of water systems can not be made to properties designated W-3. The W-3 designation should be considered no water service until amended to a W-1 designation.

4.4 EXISTING SEWER SYSTEMS

Drawing Designation

"S-1" means areas served or planned to be served by community, multi-use or shared sanitary facilities which are either existing, under construction, or are planned to be built within two

years. Only S-1 designated properties can receive sewerage service. Extension of sewerage systems can only be made to properties designated S-1. The S-1 designation can only be established if the property's use will be consistent with existing zoning.


"S-2" means areas where improvements or extension, or construction of new, community, multi-use, or shared facilities are planned within a three to five year period. Extension of sewerage systems can not be made to properties designated S-2. The S-2 designation should be considered no sewerage service until amended to an S-1 designation.

"S-3" means areas where improvements or extension, or construction of new, community, multi-use, or shared facilities are planned within a six to ten year period. Extension of sewerage systems can not be made to properties designated S-3. The S-3 designation should be considered no sewerage service until amended to an S-1 designation.

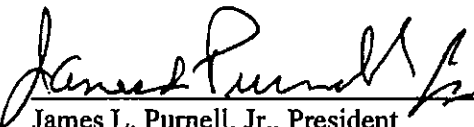
AND BE IT FURTHER RESOLVED that these proposed amendments to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that these amendments shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.

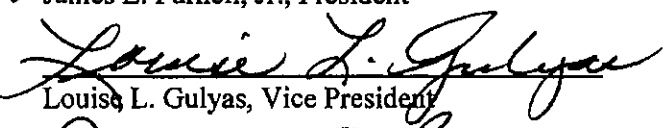
PASSED AND ADOPTED this 18th day of December, 2007.

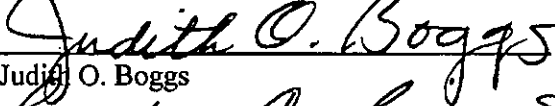
ATTEST:

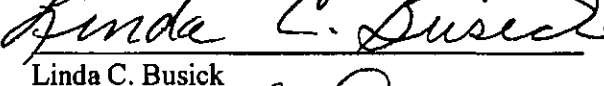

Gerald T. Mason
Chief Administrative Officer

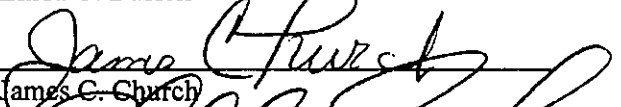
WORCESTER COUNTY COMMISSIONERS

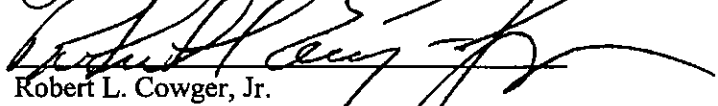

James L. Purnell, Jr., President

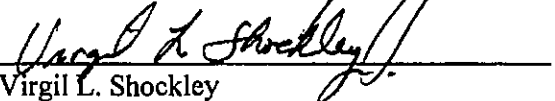

Louise L. Gulyas, Vice President


Judith O. Boggs


Linda C. Busick


James C. Church


Robert L. Cowger, Jr.


Virgil L. Shockley

RESOLUTION NO. 07 - 36

RESOLUTION AMENDING THE
COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO EXPAND THE TOWN OF BERLIN SEWER PLANNING AREA
AND PUBLIC SEWER SERVICE SYSTEM

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from the Town of Berlin to amend the Worcester County Comprehensive Water and Sewerage Plan as shown on the attached map entitled "Planning Area Expansion - Town of Berlin" dated November 30, 2007 to provide public sewer service to the proposed service areas adjacent to the town. The Town of Berlin plans to upgrade and expand the town's sewerage system to increase the system's capacity from 600,000 gallons per day (gpd) to 1.4 million gallons per day (MGD) for an increase of 3,200 equivalent dwelling units (EDUs) at a rate of 250 gpd per EDU. Areas to be served with the expanded capacity surround the existing Berlin Town Limits and are proposed to be designated for future service in one of the following categories: S-1 (Present to 2 years), S-2 (future service in 3 to 5 years), or S-3 (future service in 6 to 10 years). The wastewater treatment capacity is proposed to be increased in two phases of 400,000 gpd each. One or two wastewater treatment plants (WWTP), as determined by the Town of Berlin, will be developed/renovated to produce this capacity. The Town of Berlin proposes to ultimately provide Enhanced Nutrient Removal (ENR) treatment for all wastewater and also provides options to address nutrient reductions in the interim, and

WHEREAS, the Worcester County Planning Commission, at their meetings on October 4, 2007 AND DECEMBER 13, 2007 reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found the proposal to be consistent with the *Worcester County Comprehensive Development Plan* if certain conditions are met within a ten year schedule; and

WHEREAS, the County Commissioners held a public hearing on December 4, 2007 to hear public comment on the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, THE COUNTY COMMISSIONERS HAVE DETERMINED THAT IT WOULD BE IN THE BEST INTEREST OF THE CITIZENS OF WORCESTER COUNTY TO LIMIT THE TOWN'S EXPANSION TO PROVIDE FOR AN INCREASE OF THE SYSTEM'S CAPACITY FROM 600,000 GPD TO 750,000 GPD FOR AN INCREASE OF 600 EDU'S PROVIDED BY A SINGLE PLANT WITHIN A 3- TO 5-YEAR PLANNING PERIOD; AND

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment and conditions to the *Worcester County Comprehensive Water and Sewerage Plan* to expand the Town of Berlin Sewer System and Sewer Planning Area as limited above, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

- 1) The Comprehensive Water and Sewerage Plan for Worcester County is hereby amended as specified in the Town of Berlin, Maryland's amendment application to upgrade and expand the town's sewer system and planned sewer service areas subject to the conditions listed below.
- 2) The town's WWTP, collection and disposal systems will be upgraded and expanded in phases and may eventually treat and dispose of up to ~~1.4 million~~ 750,000 gallons per day of sewage. Within ~~ten~~ THREE TO FIVE years of adoption of this resolution, the disposal method shall be land application.
- 3) The system's planned service areas are reconfigured to be consistent with the attached map entitled "Planning Area Expansion-Town of Berlin" dated November 30, 2007.
- 4) The County Commissioners of Worcester County further resolve that for this amendment to remain consistent with the *Worcester County Comprehensive Development Plan* and *The Comprehensive Water and Sewerage Plan* the following conditions and schedule shall be met:
 - a) Conditions:
 - i. Adopt and implement a strategy and appropriate ordinances to eliminate the Berlin sewerage system's point discharge and associated nutrient water pollution to improve the Newport Bay system's water quality so that it can meet the TMDL.
 - ii. Stipulate that use of stream discharge for waste disposal will be an interim measure TO BE USED AS A LAST RESORT AS A RESULT OF UNFAVORABLE WEATHER CONDITIONS and the town will eliminate its nutrient pollution to the Newport Bay and implement land application for waste disposal or other appropriate pollution reduction methods within the ~~10-~~ 3- TO 5-year planning period.
 - iii. Redesignation of sewer planning areas to "S-1" and/or the creation of new "S-1" sewer planning areas shall be a major amendment to the water and sewerage plan and require a public hearing.
 - iv. Provide an ENR treatment plant at ~~the Berlin Properties North (BPN) site or other appropriate site or~~ expand the existing plant SITE in a way that is engineered, configured, and piped to use land application once this option becomes available.
 - v. ~~Annex the BPN wastewater treatment plant (WWTP) site (if outside the corporate limits) into the Town of Berlin.~~
 - v. Spray irrigate effluent from the Bottle Branch WWTP under non-emergency conditions (examples of emergency conditions include severe weather and system maintenance).
 - vi. Eliminate the Berlin Sewerage System's effluent point discharge within the ~~ten-~~

THREE- TO FIVE-year planning period.

- vii. Adopt an ordinance to reduce the stormwater pollution load further than required by current state standards by July 1, 2008. This approach is referred to as "low impact" development standards.
- viii. Adopt ordinances requiring developers of land annexed for development be responsible for providing wastewater spray irrigation capacity for 125% of the wastewater capacity requested/approved for the site by July 1, 2008.
- ix. Implement appropriate nutrient reduction measures to offset to the maximum extent feasible, nutrient pollution to the Newport Bay.
- x. The town will pursue reducing its stream discharge by reusing effluent. This work will explore and as appropriate implement permitted reuse effluent on areas such as:
 - (1) Parks and open spaces that conform to state and county guidelines.
 - (2) Golf courses
 - (3) Roadway median strips
 - (4) Industrial/commercial reuse, such as, cooling, processing and similar uses
 - (5) Residential irrigation

b) Schedule for Condition Implementation

i. Short-term (1 to 4 3 Years)

- (1) Complete effluent reuse analysis of land in and immediately adjacent to the Town of Berlin suitable (under current regulations) for irrigation using ENR effluent from the new and/or expanded wastewater treatment plant.
- (2) In cooperation with the county, seek additional spray irrigation sites near the existing spray irrigation site.
- (3) Modify the collection system to limit flow to the Bottle Branch plant equal to proven spray irrigation capacity, currently 0.4 MGD. The remaining flow would be directed to the proposed TREATED TO ENR STANDARDS plant.¹
- (4) Construct a new ENR plant or expand the existing plant in a manner designed, engineered, and configured to use spray irrigation as the ultimate disposal method.
- (5) Maximize the capacity of the existing spray site through technical and other means. Seek grants and other funds to eliminate the stream discharge and improve the Coastal Bays' health.
- (6) Establish and identify specific budget line items to provide staff and

¹The Bottle Branch plant would be equipped with stream discharge for emergency and maintenance uses.

consultant resources to support:

- (a) Research and apply for grants and other financing.
 - (b) Pursue studies and pilot programs to develop irrigation capacity or other appropriate methods of nutrient elimination.
 - (c) Promote public education to reduce non-point source nutrient runoff.
 - (d) Enforcement of low impact development standards.
- (7) Berlin will immediately proceed with the following:
- (a) Adopt ordinances requiring land annexed for development be responsible for developing wastewater spray irrigation acceptable to the Town for 125% of the wastewater capacity requested/approved for the site.
 - (b) Adopt ordinances requiring low impact development and enhanced stormwater control and treatment procedures.
- (8) Implement appropriate nutrient reduction measures to offset to the maximum extent feasible nutrient pollution to the Newport Bay.

ii) **Mid LONG-term (3 TO 5 to 7 Years)**

- (1) Formally reassess the nutrient reduction strategy and add effective new technologies or other measures that accelerate the elimination of nutrient pollution to the Newport Bay subwatershed.
 - (A) UNLESS SPRAY IRRIGATION HAS BEEN FULLY IMPLEMENTED BY SEPTEMBER 1, 2010, THE COUNTY COMMISSIONERS SHALL HOLD A PROGRESS HEARING AT WHICH THE TOWN OF BERLIN SHALL DEMONSTRATE THEIR PROGRESS IN ACHIEVING THE ELIMINATION OF NUTRIENT POLLUTION TO THE NEWPORT BAY SUBWATERSHED, AND THE PUBLIC SHALL HAVE AN OPPORTUNITY TO COMMENT. FOLLOWING THE PUBLIC HEARING, THE COUNTY COMMISSIONERS SHALL TAKE APPROPRIATE ACTION TO ENSURE THE ELIMINATION OF NUTRIENT POLLUTION TO THE NEWPORT BAY SUBWATERSHED WITHIN THE THREE-TO FIVE-YEAR PLANNING PERIOD.
- (2) Continue to require new developments seeking annexation to the Town to provide wastewater spray irrigation acceptable to the Town for 125% of the wastewater capacity requested/approved for the site.
- (3) Continue to pursue "pilot programs" and regulatory relief to enhance the total irrigation capacity of the spray site currently owned and operated by the Town of Berlin
- (4) ~~Research and apply for grants and other funds to eliminate nutrient pollution to the Newport Bay.~~ ELIMINATE THE SYSTEM'S NUTRIENT POLLUTION TO THE NEWPORT BAY SUBWATERSHED.

~~iii) Long-term (7 to 10 years)~~

- ~~(1) Formally reassess the nutrient reduction strategy and add effective new technologies or other measures that accelerate the elimination of nutrient pollution to the Newport Bay subwatershed.~~
 - ~~(2) Continue to implement as appropriate additional spray irrigation capacity, re-use, and water recycling.~~
 - ~~(3) Continue to require new developments seeking annexation to the Town to provide wastewater spray irrigation acceptable to the Town for 125% of the wastewater capacity requested/approved for the site.~~
 - ~~(4) Eliminate the system's nutrient pollution to the Newport Bay subwatershed~~
- 5) Should the town's wastewater system become inconsistent with the *Worcester County Development Plan* or the county's *Comprehensive Water and Sewerage Plan*, the county and the town will take appropriate action to bring it into consistency

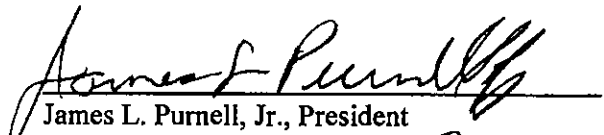
AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.


PASSED AND ADOPTED this 18th day of December, 2007.

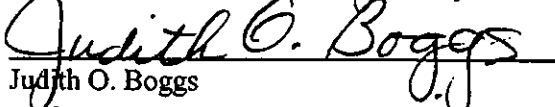
ATTEST:



Gerald T. Mason
Chief Administrative Officer

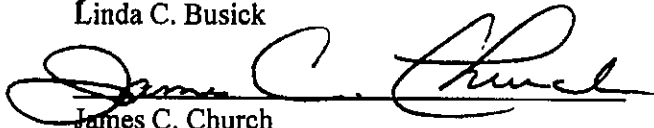
WORCESTER COUNTY COMMISSIONERS


James L. Purnell, Jr., President

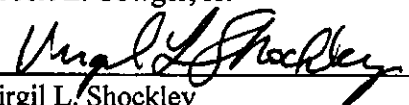

Louise L. Gulyas, Vice President

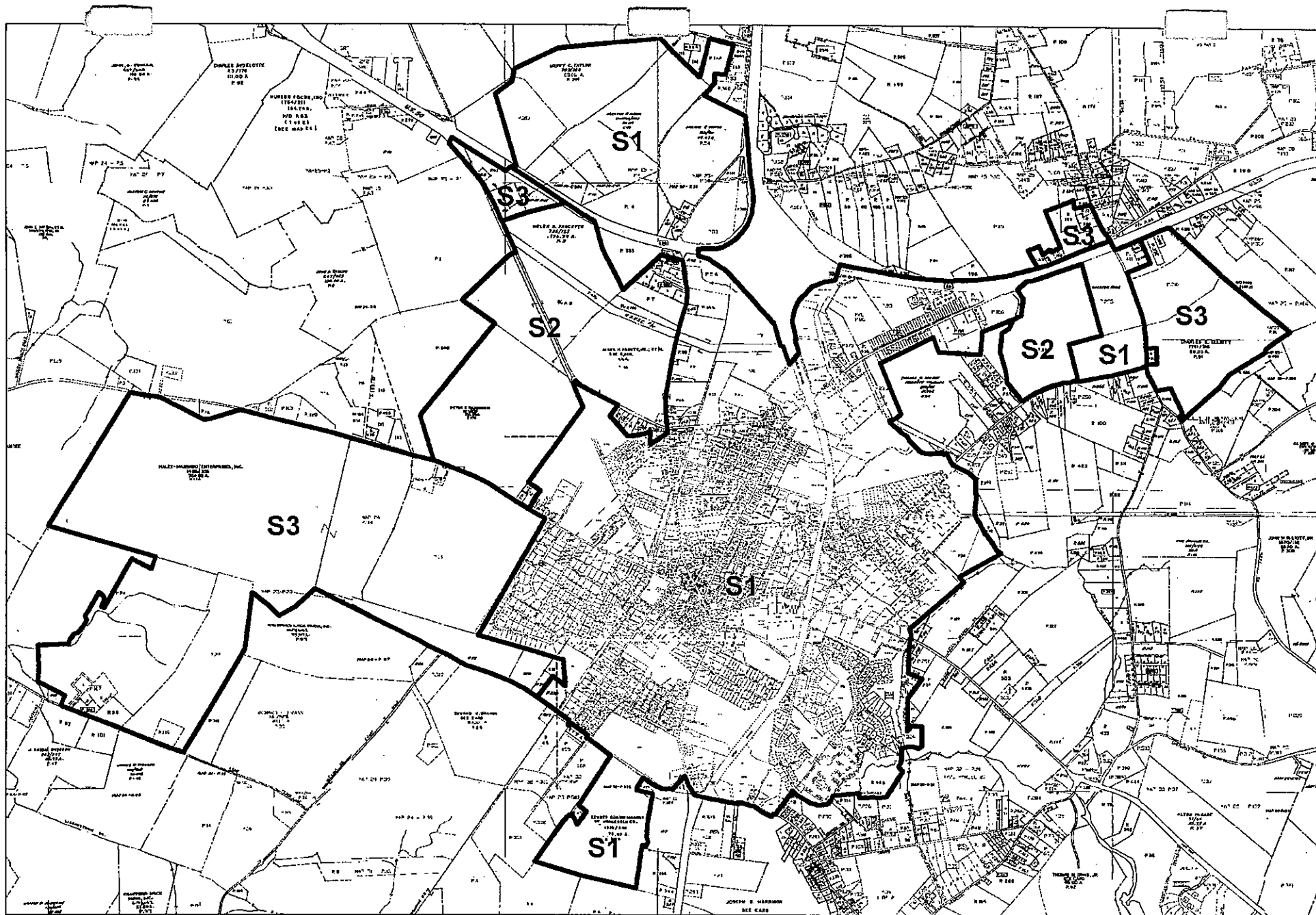

Judith O. Boggs


Linda C. Busick


James C. Church

Robert L. Cowger, Jr.


Virgil L. Shockley



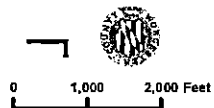
Planning Area Expansion - Town of Berlin

Resolution 07-??36

November 30, 2007

Figure 4-7

S-1: present - 2 years
 S-2: future service (3-5 years)
 S-3: future service (6-10 years)



Prepared by Worcester County Department of Comprehensive Planning, November 30, 2007
 Source: Tax Maps, Maryland Department of Planning, 2006.

RESOLUTION NO. 08 - 1

RESOLUTION AMENDING
THE COMPREHENSIVE WATER AND SEWERAGE PLAN
FOR WORCESTER COUNTY
TO INCLUDE A FOURTH PRODUCTION WELL
FOR THE TOWN OF POCOMOKE CITY

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a comprehensive water and sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of *The Annotated Code of Maryland*; and

WHEREAS, the Town of Pocomoke City has proposed to amend the *Worcester County Comprehensive Water and Sewerage Plan* as shown on the attached map entitled "Production Well-Town of Pocomoke City" to install a fourth production well to serve as a supplement to the diminishing capacity of the three existing wells. Water generated by the fourth well will be treated by the existing water treatment plant without increasing the influent flow. The properties adjacent to the waterline, which are not currently planned for public water service, will be given a water planning designation of W-6 (no planned service).

WHEREAS, the Worcester County Planning Commission, at their December 6, 2007 meeting, reviewed the amendment application to the Worcester County Water and Sewerage Plan and found the proposal consistent with the *Worcester County Comprehensive Development Plan*; and

WHEREAS, the County Commissioners held a public hearing on January 15, 2008 to hear public comment on this amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal per the provisions of Section 9-503 et. seq. of the Environmental Article of *The Annotated Code of Maryland*, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to include a fourth production well for the Town of Pocomoke City, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. *The Comprehensive Water and Sewerage Plan* for Worcester County is hereby amended as specified in the proposal of the Town of Pocomoke City, Maryland, to install a fourth production well to serve as a supplement to the diminishing capacity of the three existing wells. The properties adjacent to the waterline as shown on the attached map, which are not currently planned for public water service, will be given a water planning designation of W-6 (no planned service).

AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.

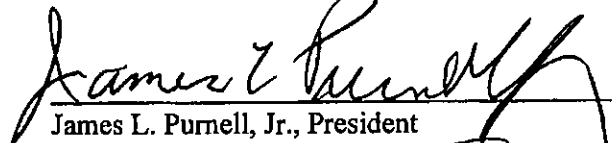
PASSED AND ADOPTED this 15th day of January 2008.

ATTEST:



Gerald T. Mason
Chief Administrative Officer

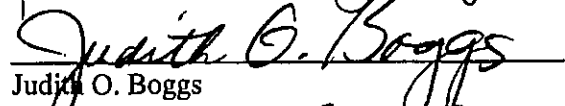
WORCESTER COUNTY COMMISSIONERS



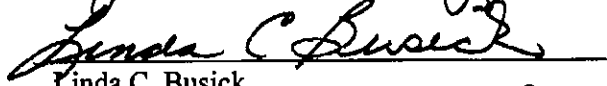
James L. Purnell, Jr., President



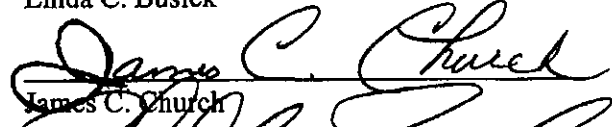
Louise L. Gulyas, Vice President



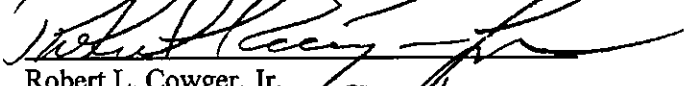
Judith O. Boggs



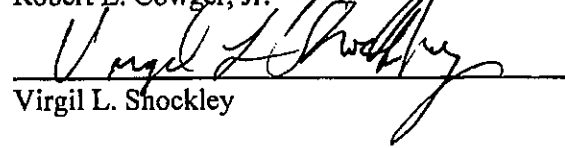
Linda C. Busick



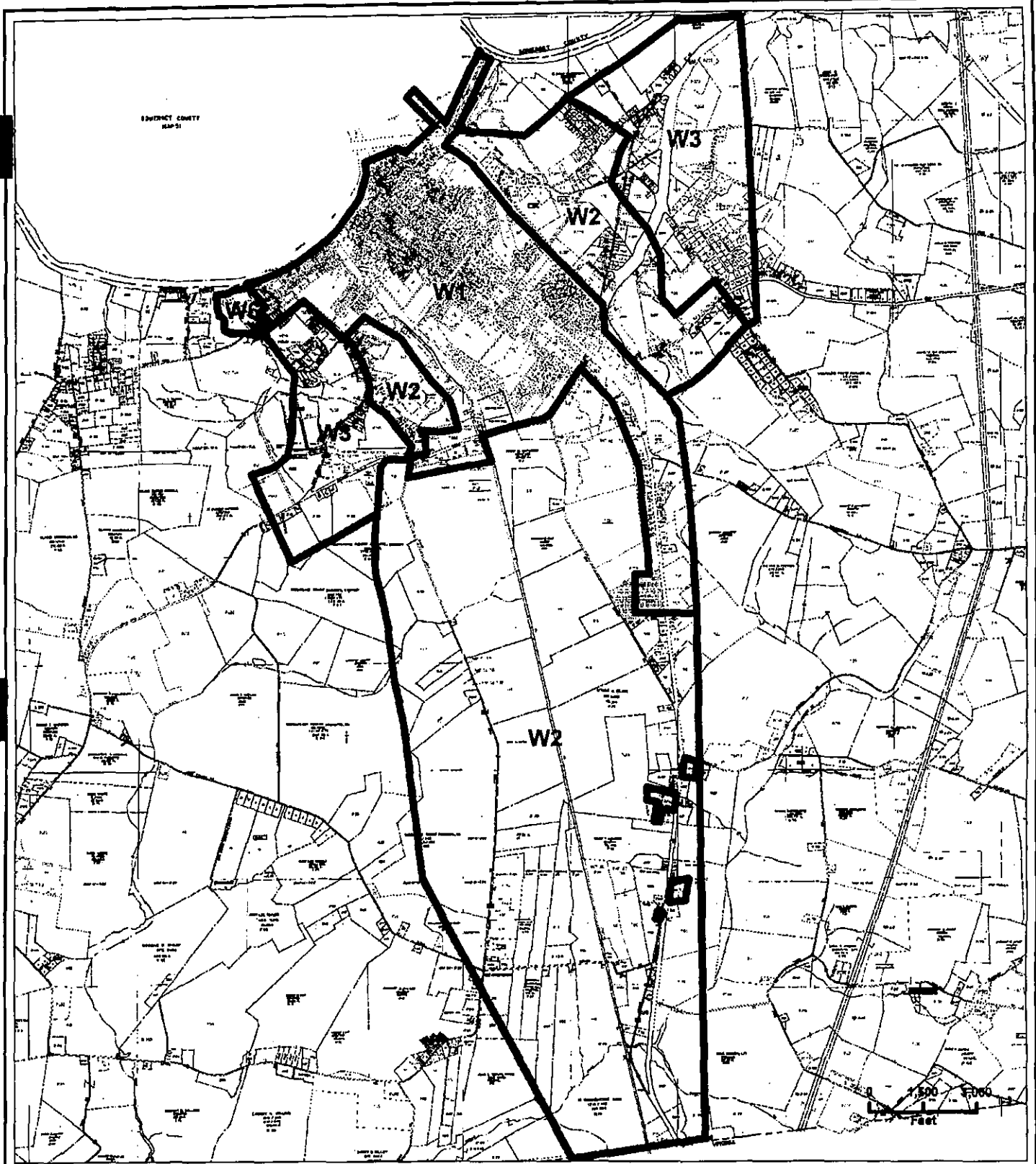
James C. Church



Robert L. Cowger, Jr.





Virgil L. Shockley



Production Well--Town of Pocomoke City

Resolution 07-??
 December ??, 2007
 Figure 3-27

-  Production Well
-  Pocomoke City Water Planning Areas



Prepared by Worcester County Department of Comprehensive Planning, December 2007
 Source: Water and Sewerage Systems, Worcester County Department of Comprehensive Planning, 1994 (as amended); Tax Maps, Maryland Department of Planning, 2006.

RESOLUTION NO. 08 - 2

**RESOLUTION AMENDING
THE COMPREHENSIVE WATER AND SEWERAGE PLAN
FOR WORCESTER COUNTY
TO EXPAND THE TOWN OF BERLIN WATER PLANNING AREA
AND PUBLIC WATER SERVICE SYSTEM**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a comprehensive water and sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of *The Annotated Code of Maryland*; and

WHEREAS, the Town of Berlin has proposed to amend the *Worcester County Comprehensive Water and Sewerage Plan* as shown on the attached map entitled "Planning Area Expansion-Town of Berlin" to expand the Town of Berlin Water System and Water Planning Area to provide public water service to areas adjacent to the town that are designated as growth areas in the *Worcester County Comprehensive Development Plan*. The Town of Berlin water system will be expanded to a total capacity of one million gallons per day to accommodate the water planning area expansion.

WHEREAS, the Worcester County Planning Commission, at their December 6, 2007 meeting, reviewed the amendment application to the Worcester County Water and Sewerage Plan and found the proposal consistent with the *Worcester County Comprehensive Development Plan*; and

WHEREAS, the County Commissioners held a public hearing on January 15, 2008 to hear public comment on this amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal per the provisions of Section 9-503 et. seq. of the Environmental Article of *The Annotated Code of Maryland*, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to expand the Town of Berlin Water System and Planning Area, is desirable.

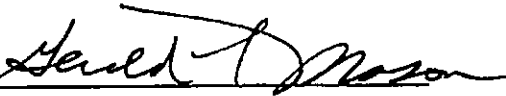
NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The Comprehensive Water and Sewerage Plan for Worcester County is hereby amended as specified in the proposal of the Town of Berlin, Maryland, to expand the Town of Berlin Water System and Planning Area to provide water service to areas adjacent to the town that are designated as growth areas in the Worcester County Comprehensive Plan as shown on the attached map.

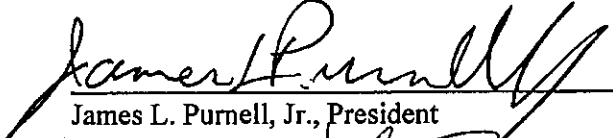
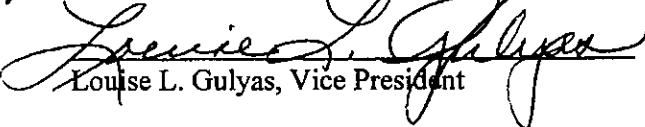
AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.

PASSED AND ADOPTED this 15th day of January 2008.


ATTEST:

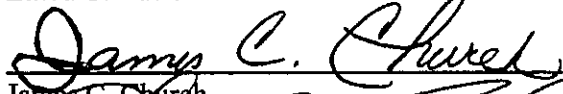

Gerald T. Mason
Chief Administrative Officer

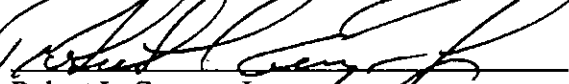
WORCESTER COUNTY COMMISSIONERS

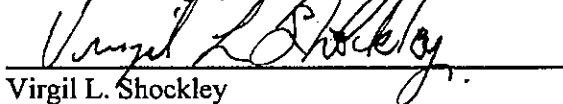

James L. Purnell, Jr., President

Louise L. Gulyas, Vice President

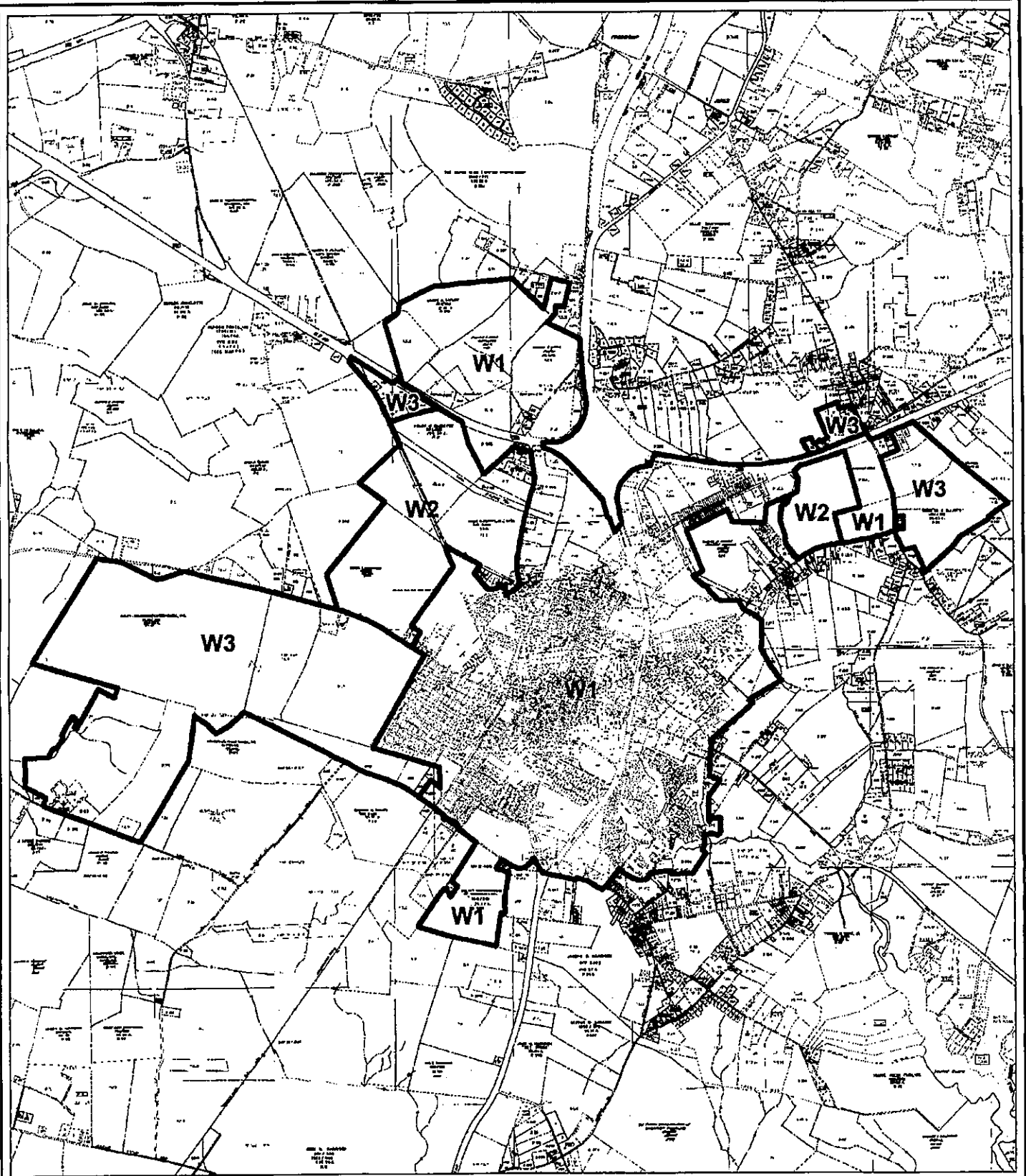
Judith O. Boggs


Linda C. Busick


James C. Church

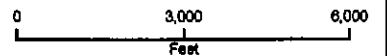

Robert L. Cowger, Jr.


Virgil L. Shockley



Planning Area Expansion--Town of Berlin

Resolution 07-??
 December ??, 2007
 Figure 3-7



Prepared by Worcester County Department of Comprehensive Planning, December 2007
 Source: Water and Sewerage Systems, Worcester County
 Department of Comprehensive Planning, 1994 (as amended);
 Tax Maps, Maryland Department of Planning, 2006.

**RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN
FOR WORCESTER COUNTY TO ADD THE
OCEAN LANDINGS II WATER AND WASTEWATER TREATMENT SYSTEM**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Mr. Richard Eisenberg on behalf of Allen & Connie, LLC, owner, and CAMBR Company, Inc., applicant, to amend the *Comprehensive Water & Sewerage Plan for Worcester County* to add the Ocean Landings II Water and Wastewater Treatment System to accommodate the commercial retail needs at Ocean Landings II as well as the adjacent Wal-Mart/Home Depot stores, all of which are located on the south side of US Route 50 (Ocean Gateway), east of Maryland Route 589 (Racetrack Road), and identified on Worcester County Tax Map 26 as Parcels 301, 302, 303, 305 and 455. The application proposes the construction of an Enhanced Nutrient Removal (ENR) sewage treatment plant with a treatment capacity of 23,000 gallons per day (gpd), with 15,000 gpd of flow to accommodate Ocean Landings II and the remaining 8,000 gpd of flow to serve Wal-Mart/Home Depot. The new sewage treatment plant will serve seventy-six (76) equivalent dwelling units (EDUs) at a rate of 300 gpd per EDU. Similarly, the application proposes that a new Water Treatment Plant (WTP) be constructed on the Cordish Property to replace the existing WTP, for the benefit of the service area with a capacity of 33,000 gpd with 17,500 gpd of flow to accommodate Ocean Landings II and the remaining 15,500 gpd of flow to serve Wal-Mart/Home Depot. The new water treatment plant will serve ninety-four (94) EDUs at a rate of 350 gpd per EDU. The applicant proposes that the subject properties be designated W-1 and S-1 which implies that sanitary services would be provided within the next two years; and

WHEREAS, the Worcester County Planning Commission, at their meeting on June 5, 2008 reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that in order for the application to be consistent with the *Worcester County Comprehensive Development Plan*, the amendment must be revised as follows: designate the agriculturally zoned portion of the proposed planning area for no service (W-6 and S-6); petition and provide documentation for establishment of the sanitary service area; execute appropriate public works agreement; and provide that the plantings for spray irrigation fields shall be native species rather than reed canary grass; and

WHEREAS, the County Commissioners held a public hearing on August 19, 2008 to hear public comment on the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add the Ocean Landings II Water and Wastewater Treatment System with amendments as recommended by the Planning Commission, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

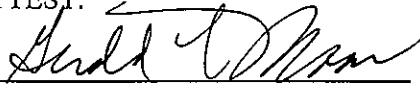
1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the application of Mr. Richard Eisenberg on behalf of Allen & Connie, LLC, owner, and CAMBR Company, Inc., applicant, to add the Ocean Landings II Water and Wastewater Treatment System to accommodate the commercial retail needs at Ocean Landings II as well as the adjacent Wal-Mart/Home Depot stores and other improvements in the proposed service area, all of which are located on the south side of US Route 50 (Ocean Gateway), east of Maryland Route 589 (Racetrack Road), and identified on Worcester County Tax Map 26 as Parcels 301, 302, 303, 305 and 455 as follows:

- a. An Enhanced Nutrient Removal (ENR) sewage treatment system will be constructed with a treatment capacity of 23,000 gallons per day (gpd), with 15,000 gpd of flow to accommodate Ocean Landings II and the remaining 8,000 gpd of flow to serve Wal-Mart/Home Depot. The new treatment plant will serve seventy-six (76) equivalent dwelling units (EDUs) at a rate of 300 gpd per EDU. The capacity of the plant may be expanded to 23,100 gpd in which case it will serve 77 EDUs.
- b. A new Water Treatment Plant (WTP) will be constructed on the Cordish Property to replace the existing WTP, for the benefit of the service area with a capacity of 33,000 gpd with 17,500 gpd of flow to accommodate Ocean Landings II and the remaining 15,500 gpd of flow to serve Wal-Mart/Home Depot. The new water treatment plant will serve ninety-four (94) EDUs at a rate of 350 gpd per EDU.
- c. The subject properties will be designated W-1 and S-1 which implies that sanitary services will be provided within the next two years, while the agriculturally zoned portion of the proposed planning area will be designated W-6 and S-6 which implies that no service will be provided. The proposed Water and Sewer Planning Areas shall be as shown on the map attached hereto entitled "Exhibit 1: Water and Sewer Planning Areas - Ocean Landings II".
- d. The applicant agrees to petition and provide documentation for establishment of the sanitary service area and execute appropriate public works agreement for construction and operation of the facilities. Once constructed, the water and sewer facilities will be owned and operated by the County.
- e. Provide that the plantings for spray irrigation fields shall be native species rather than reed canary grass.

AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.

PASSED AND ADOPTED this 19th day of August, 2008.

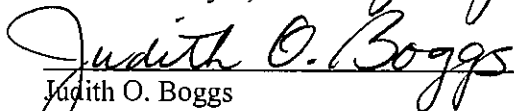
ATTEST:



 Gerald T. Mason
 Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS



 Virgil L. Shockley, President

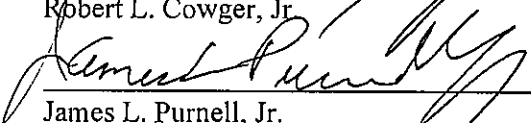

 Louise L. Gulyas, Vice President

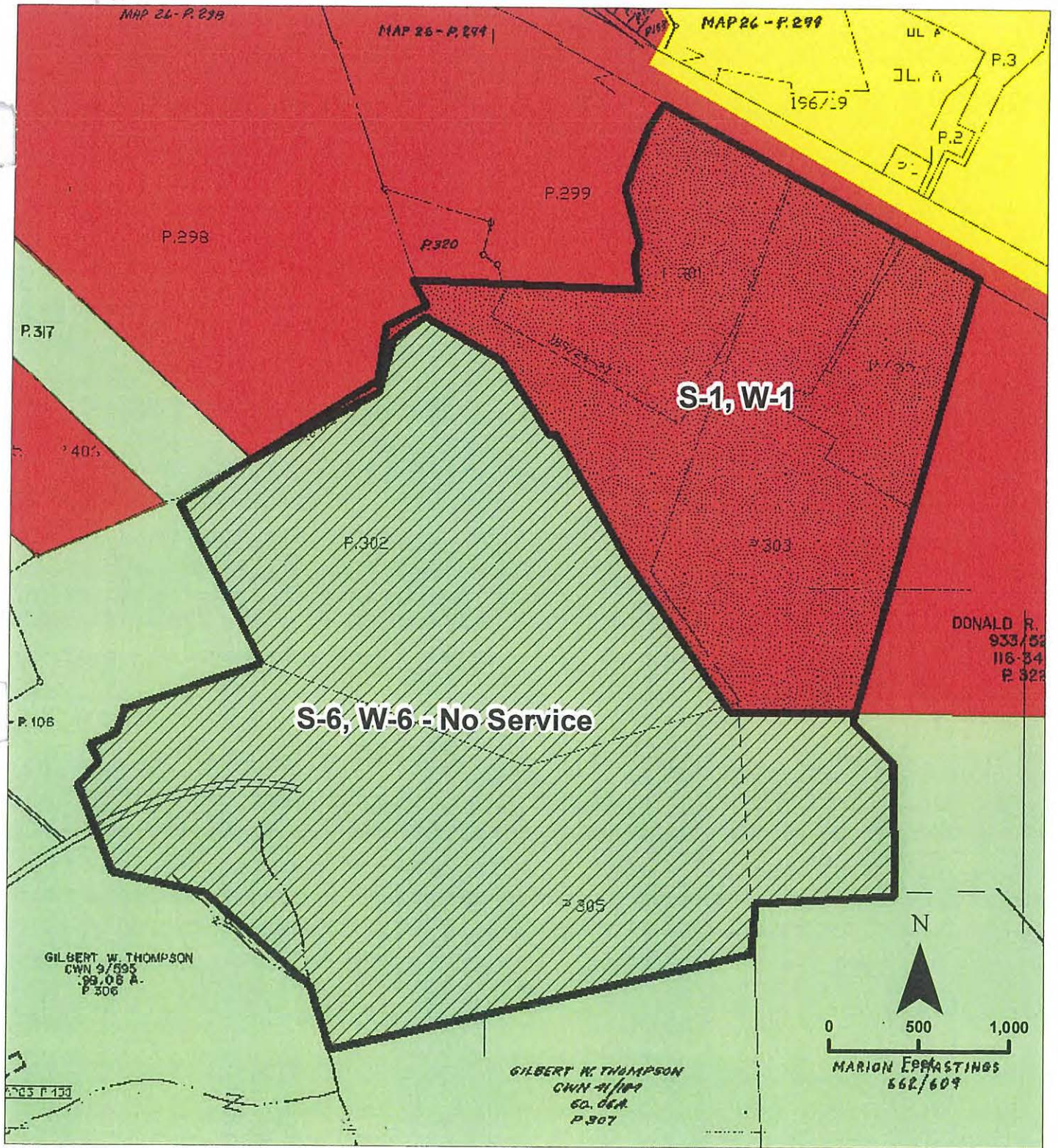

 Judith O. Boggs


 Linda C. Busick




 James C. Church


 Robert L. Cowger, Jr


 James L. Purnell, Jr.



Proposed Planning Areas

-  S-1, W-1 Proposed: Service within 2 years
-  S-6, W-6 Proposed: No future service

Zoning Districts

-  (A1) Agriculture
-  (R1) Rural Residential
-  (B2) General Business

Exhibit 1: Water and Sewer Planning Areas



Ocean Landings II
Case 2008-2

RESOLUTION NO. 08 - 23

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY TO REFLECT THE REPLACEMENT AND EXPANSION OF THE MYSTIC HARBOUR WASTEWATER TREATMENT PLANT

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have proposed to amend the *Comprehensive Water & Sewerage Plan for Worcester County* to reflect the replacement and expansion of the deteriorating Mystic Harbour Wastewater Treatment Plant (WWTP) with a new WWTP which will treat to enhanced nutrient removal (ENR) standards and serve an additional six hundred sixty-six (666) equivalent dwelling units (EDUs), for a total system capacity of 1,666 EDUs, including customers in Mystic Harbour as well as the West Ocean City sewer planning areas and the West Ocean City Priority Funding Area, all of which are generally located east of Herring Creek, west of the Town of Ocean City, south of Isle of Wight Bay and north of MD Route 376 (Assateague Road). The new WWTP will be constructed at the current site, which is located east of MD Route 611 (Stephen Decatur Highway) approximately 280 feet south of its intersection with Sunset Avenue and identified on Worcester County Tax Map 27 as Parcel 629. The application proposes the construction of a new WWTP using biological treatment followed by membrane filtration to achieve enhanced nutrient removal and reusing the existing groundwater injection discharge with a treatment capacity of 450,000 gallons per day (gpd) which will increase the existing capacity by 200,000 gpd and serve an additional 666 EDUs at a rate of 300 gpd/EDU with the initial 250,000 gpd to serve the existing 1,000 EDUs at a rate of 250 gpd/EDU as originally approved. The County proposes that the subject properties be designated W-1 and S-1 which implies that sanitary services would be provided within the next two years; and

WHEREAS, the Worcester County Planning Commission, at their meeting on July 3, 2008 reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found the application to be consistent with the *Worcester County Comprehensive Development Plan*; and

WHEREAS, the County Commissioners held a public hearing on September 2, 2008 to hear public comment on the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to reflect the replacement and expansion of the deteriorating Mystic Harbour Wastewater Treatment Plant (WWTP) with a new WWTP, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

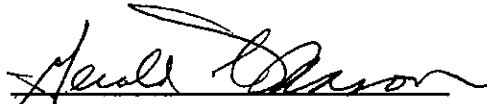
1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the proposal of the County Commissioners of Worcester County, Maryland to reflect the replacement and expansion of the deteriorating Mystic Harbour Wastewater Treatment Plant (WWTP) with a new WWTP which will treat to enhanced nutrient removal (ENR) standards and serve an additional six hundred sixty-six (666) equivalent dwelling units (EDUs), for a total system capacity of 1,666 EDUs, including customers in Mystic Harbour as well as the West Ocean City sewer planning areas and the West Ocean City Priority Funding Area, all of which are generally located east of Herring Creek, west of the Town of Ocean City, south of Isle of Wight Bay and north of MD Route 376 (Assateague Road). The new WWTP will be constructed at the current site, which is located east of MD Route 611 (Stephen Decatur

Highway) approximately 280 feet south of its intersection with Sunset Avenue and identified on Worcester County Tax Map 27 as Parcel 629. The new WWTP will be constructed to use biological treatment followed by membrane filtration to achieve enhanced nutrient removal and will reuse the existing groundwater injection discharge. The new treatment capacity will be 450,000 gallons per day (gpd) which will increase the existing capacity by 200,000 gpd and serve an additional 666 EDUs at a rate of 300 gpd/EDU with the initial 250,000 gpd to serve the existing 1,000 EDUs at a rate of 250 gpd/EDU as originally approved. The subject properties are designated W-1 and S-1 which implies that sanitary services will be provided within the next two years.

AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.


PASSED AND ADOPTED this 2nd day of September, 2008.

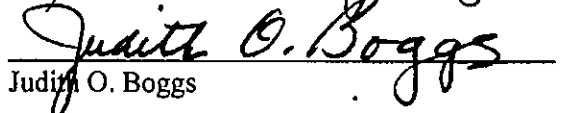
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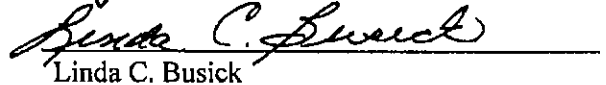

Gerald T. Mason
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS


Virgil L. Shockley, President

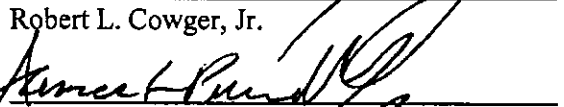

Louise L. Gulyas, Vice President


Judith O. Boggs


Linda C. Busick

James C. Church


Robert L. Cowger, Jr.


James L. Purnell, Jr.

RESOLUTION NO. 08 - 24

**RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN
FOR WORCESTER COUNTY TO ADD THE
DEER RUN WATER AND WASTEWATER TREATMENT SYSTEM**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Mr. Lawrence T. Whitlock on behalf of Edward C. Colbert, Logtown Road LLC and Greenfields, Inc., owner, and Daft McCune Walker, Inc., applicant, to add the Deer Run Golf Course Water and Wastewater Treatment System to the Plan. The proposed Plan amendment will accommodate the needs of the Deer Run Golf Course and a proposed seasonal campground and recreation center. The golf course is located on 170 acres on the south side of Logtown Road just west of its intersection with US Route 50 (Ocean Gateway) and identified on Worcester County Tax Map 19 as Parcel 58. The new campground will encompass 113 acres adjacent to US Route 50 on the north side of Logtown Road across from the golf course on property identified on Worcester County Tax Map 19 as Parcel 133. The campground proposal includes approximately 270 campsites and amenities such as a general store, retail, and deli area and a recreation center including a pool, tennis courts, and ball fields; and

WHEREAS, the application is more specifically defined as follows: proposed construction of a sequencing batch reactor (SBR) wastewater treatment plant with the capacity to treat 80,000 gallons per day (gpd) to accommodate the needs of the Deer Run Golf Course and the proposed campground and recreation center; and proposed establishment of the Deer Run Golf Course water system and expansion of the existing water treatment system's capacity from 73,000 gpd to a new capacity of 100,000 gpd to meet the potable water and fire protection needs of the golf course, campground, and recreation center; and the subject properties are to be designated W-1 and S-1 which implies that sanitary services would be provided within the next two years; and

WHEREAS, the Worcester County Planning Commission, at their meeting on July 3, 2008 reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that in order for the application to be and remain consistent with the *Worcester County Comprehensive Development Plan*, the following conditions should apply: the campground will not operate from November through March, and the campsites' sanitary service will be turned off during the winter to prevent anyone from residing there year-round; the campground shall not be converted into permanent housing; the recreation facility will be accessible year-round to members only; the general public may purchase a year-round membership; the landscaping and berm along US Route 50 shall completely screen the site from view along US Route 50; only kayaks and canoes may be stored on the campground; and permanent structures shall not be permitted on the campsites and the proposed cabins will remain mounted on wheels, so they are not considered permanent structures; and

WHEREAS, the County Commissioners held a public hearing on September 2, 2008 to hear public comment on the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add the Deer Run Golf Course Water and Wastewater Treatment System to the Plan with conditions as recommended by the Planning Commission, is desirable.

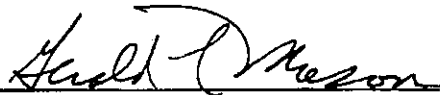
NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the application of Mr. Lawrence T. Whitlock on behalf of Edward C. Colbert, Logtown Road LLC and Greenfields, Inc., owner, and Daft McCune Walker, Inc., applicant, to add the Deer Run Golf Course Water and Wastewater Treatment System to the Plan. The proposed Plan amendment will accommodate the needs of the Deer Run Golf Course and a proposed seasonal campground and recreation center. The golf course is located on 170 acres on the south side of Logtown Road just west of its intersection with US Route 50 (Ocean Gateway) and identified on Worcester County Tax Map 19 as Parcel 58 as follows:
 - a. The new campground will encompass 113 acres adjacent to US Route 50 on the north side of Logtown Road across from the golf course on property identified on Worcester County Tax Map 19 as Parcel 133. The campground proposal includes approximately 270 campsites and amenities such as a general store, retail, and deli area and a recreation center including a pool, tennis courts, and ball fields; and
 - b. A sequencing batch reactor (SBR) wastewater treatment plant will be constructed with capacity to treat 80,000 gallons per day (gpd) to accommodate the needs of the Deer Run Golf Course and the proposed campground and recreation center; and
 - c. The existing water treatment system for the Deer Run Golf Course will be expanded from a current capacity of 73,000 gpd to a new capacity of 100,000 gpd to meet the potable water and fire protection needs of the golf course, campground, and recreation center; and
 - d. The subject properties will be designated W-1 and S-1 which implies that sanitary services would be provided within the next two years.
 - e. The following conditions shall apply:
 - 1) The campground will not operate from November through March, and the campsites' sanitary service will be turned off during the winter to prevent anyone from residing there year-round; and
 - 2) The campground shall not be converted into permanent housing; and
 - 3) The water and sewer services developed for the above referenced project will not be extended to any other property outside the project area without further amendment to the *Comprehensive Water and Sewerage Plan*.

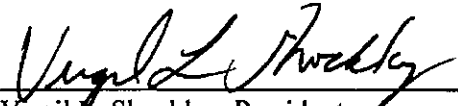
AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.

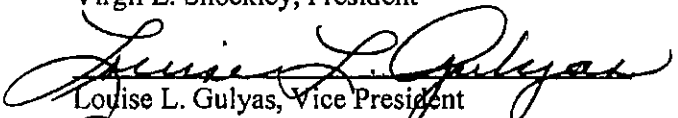
PASSED AND ADOPTED this 2nd day of September, 2008.

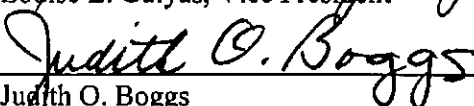
ATTEST:

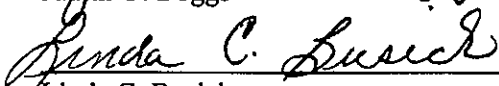

Gerald T. Mason
Chief Administrative Officer

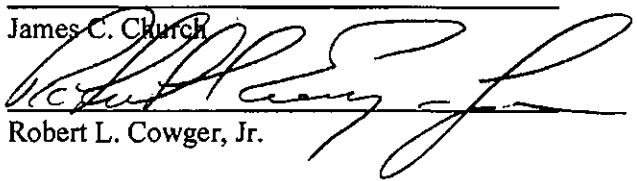
WORCESTER COUNTY COMMISSIONERS


Virgil L. Shockley, President


Louise L. Gulyas, Vice President


Judith O. Boggs


Linda C. Busick


Robert L. Cowger, Jr.

James L. Purnell, Jr.

RESOLUTION NO. 08 - 36

**RESOLUTION AMENDING THE
WORCESTER COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN TO ADD A
POLICY REQUIRING NUTRIENT REMOVAL FOR NEW SEPTIC SYSTEMS IN THE
CRITICAL AREA OF THE ATLANTIC COASTAL BAYS AND CHESAPEAKE BAY
IN WORCESTER COUNTY, MARYLAND**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners propose to amend the Worcester County Water and Sewerage Plan to add a policy requiring septic systems constructed for new uses in the Atlantic Coastal Bays Critical Area and the Chesapeake Bay Critical Area to be capable of nutrient removal with total nitrogen concentration of less than 20 milligrams per liter (mg/l) or at least a 50% reduction in total nitrogen and requiring the property owner to execute an agreement to provide for the maintenance and inspection of the system; and

WHEREAS, the Worcester County Planning Commission, at their meeting of November 6, 2008, reviewed the proposed amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the Comprehensive Development Plan for Worcester County; and

WHEREAS, the County Commissioners held a public hearing on December 16, 2008 to hear public comment on the requested amendment to the Worcester County Water and Sewerage Plan.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that a new paragraph H. (Nutrient Removal Requirement for new Septic Systems in the Critical Area) is hereby added to Subsection 2.4.7 (Background Information and Policies - Other Related Policies and Plans) of the Comprehensive Water and Sewerage Plan for Worcester County, Maryland to read as follows:

H. Nutrient Removal Requirement for new Septic Systems in the Critical Area

Septic systems being constructed for new uses (i.e. not the replacement of, or any repairs to, septic systems serving existing improvements) located within the 1,000 ft Atlantic Coastal Bays Critical Area or Chesapeake Bay Critical Area (as defined in Section NR 3-101(f) and Section NR 3-201(f) of the Code of Public Local Laws of Worcester County, Maryland, as from time to time amended), must be capable of Nutrient Removal (defined as producing an effluent total nitrogen concentration of less than 20 milligrams per liter (mg/l) or at least a 50 percent reduction in total nitrogen). The nutrient reduction systems' manufacturer must be approved by the Maryland Department of the Environment (MDE) Best Available Technology Review Team.

At the time the permit is issued, the property owner installing such a system must execute and record in the land records of Worcester County, Maryland, a Nutrient Removal Septic System Agreement and Easement document (the "agreement"). The agreement is to be the version


approved and provided by Worcester County. The agreement will document that the property owner agrees to provide for the maintenance of the system, by an agent approved by the system's manufacturer, for the life of the system, and will allow access for inspection by MDE and the Worcester County Environmental Programs Department, or such other department designated by the County Commissioners.

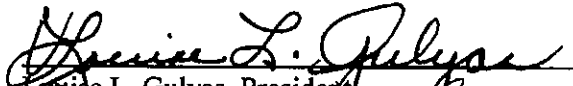
AND BE IT FURTHER RESOLVED that the proposed amendment to the Worcester County Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Environment Article of the Annotated Code of Maryland and that said amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.

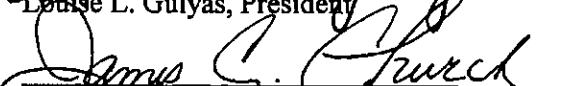
PASSED AND ENACTED this 16th day of December, 2008.

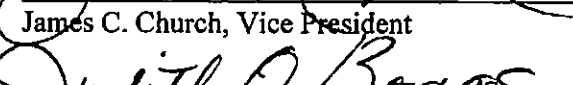
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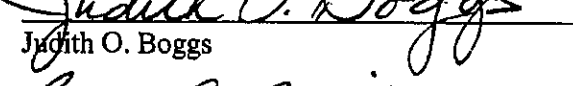
WORCESTER COUNTY COMMISSIONERS

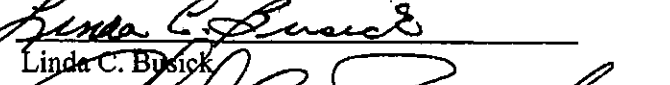

Gerald T. Mason
Chief Administrative Officer

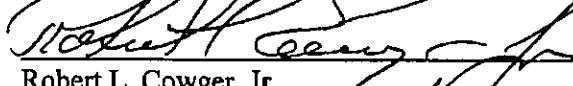

Louise L. Gulyas, President

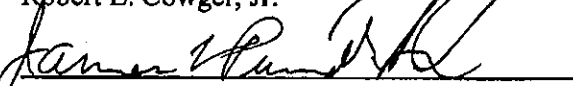

James C. Church, Vice President


Judith O. Boggs


Linda C. Busick


Robert L. Cowger, Jr.


James L. Purnell, Jr.


Virgil E. Shockley

RESOLUTION NO. 08 - 37

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY TO REFLECT THE UPGRADING AND EXPANDING OF THE ASSATEAGUE ISLAND NATIONAL SEASHORE WASTEWATER TREATMENT PLANT

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Assateague Island National Seashore to amend the *Comprehensive Water & Sewerage Plan for Worcester County* to reflect the upgrading and expanding of the Assateague Island National Seashore Wastewater Treatment Plant which serves the headquarters complex located on the southwest side of Maryland Route 611 prior to the Verrazano Bridge crossing Sinepuxent Bay and identified on Worcester County Tax Map 42 as Parcels 8, 23, 28, 35 and 40; and

WHEREAS, the Worcester County Planning Commission, at their meeting on November 6, 2008 reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found the application to be consistent with the *Worcester County Comprehensive Development Plan*; and

WHEREAS, the County Commissioners held a public hearing on December 16, 2008 to hear public comment on the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to reflect the upgrading and expanding of the Assateague Island National Seashore Wastewater Treatment Plant, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that the *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the application of Assateague Island National Seashore to reflect the upgrading and expanding of the Assateague Island National Seashore Wastewater Treatment Plant which serves the headquarters complex located on the southwest side of Maryland Route 611 prior to the Verrazano Bridge crossing Sinepuxent Bay and identified on Worcester County Tax Map 42 as Parcels 8, 23, 28, 35 and 40, as follows:

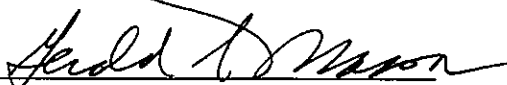
1. Modifying the Assateague Island National Seashore (ASIS) wastewater treatment plant (WWTP) from a sequencing batch reactor system to a membrane bio-reactor system to reduce nutrient concentrations in the effluent; and
2. Expansion of the existing ASIS WWTP from a treatment capacity of 12,000 gallons per day (gpd) serving 40 equivalent dwelling units (EDUs) to a treatment capacity of 20,000 gpd serving 66 EDUs to serve the National Park Service headquarters and visitor center, state and federal public use facilities, and the University of Maryland Eastern Shore Coastal Ecology Research Laboratory; and

3. Eliminating the effluent discharge to the Sinepuxent Bay and instead directing effluent into an adjacent created wastewater treatment wetland owned by the Maryland Department of Natural Resources; and
4. Designating portions of the subject properties S-1, which implies that sanitary sewer services will be provided within the next two years, and designating the remainder of the subject properties S-6, which implies that no future sanitary sewer services will be provided, all of which is shown on the attached map entitled "Assateague Island National Seashore – Figure 4-19". Sanitary sewer services shall not be extended to any other property or user outside of this private service area."

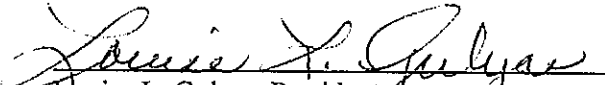
AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.

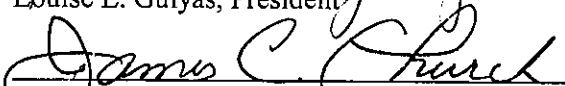
PASSED AND ADOPTED this 16th day of December, 2008.

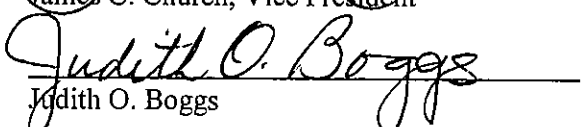
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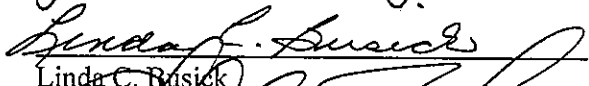

 Gerald T. Mason
 Chief Administrative Officer

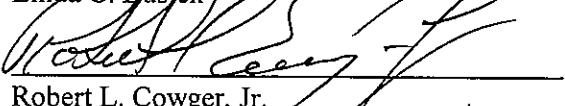
WORCESTER COUNTY COMMISSIONERS

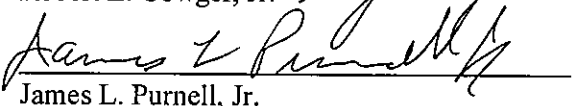

 Louise L. Gulyas, President

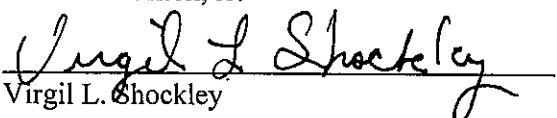

 James C. Church, Vice President

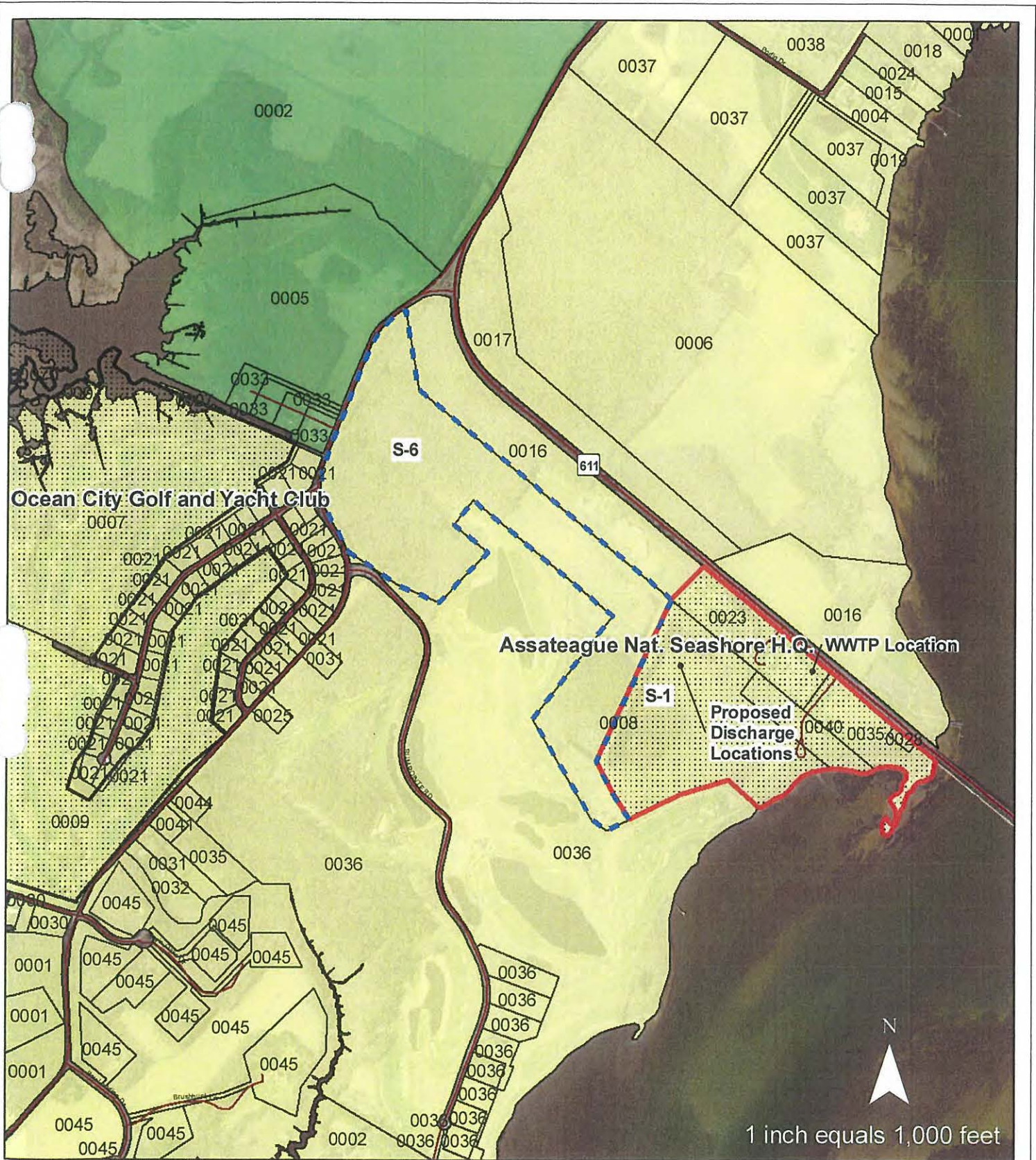

 Judith O. Boggs





 Linda C. Busick


 Robert L. Cowger, Jr.




 James L. Purnell, Jr.


 Virgil L. Shockley



-  S-1: Service within 2 years
-  S-6: No future service
-  Existing Private Systems

Zoning District

-  E1, Estate
-  A1, Agriculture

Assateague Island National Seashore



Resolution 08-
December 16, 2008

Figure 4-19

Prepared by Worcester County Department of Comprehensive Planning, December 19, 2008.
Source: Aerial Imagery, Maryland Department of Natural Resources, March 2004;
Zoning, Worcester County Commissioners; Tax Maps, Maryland Department of Planning, 2007.

RESOLUTION NO. 09 - 6

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY TO ADD THE FORT WHALEY CAMPGROUND SEWER SYSTEM

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Parker Family, LLC, applicant, to amend the Comprehensive Water & Sewerage Plan for Worcester County to add the Fort Whaley Campground Sewer System to the Plan. Fort Whaley Campground is located on a 72.5 acre parcel at the southeast corner of US Route 50 (Ocean Gateway) and Dale Road near Whaleyville and identified on Worcester County Tax Map 18 as Parcel 20, Lot A. The proposed Plan amendment reflects sanitary services to be provided by existing septic systems, which currently serve 177 campsites and have the capacity to serve 210 campsites at 150 gallons per day per campsite with a total capacity of 31,500 gallons per day. The proposal calls for construction of a gravity collection system including pump stations and force mains to the treatment plant, thereafter discharging into five individual drainfields. Portions of the proposed planning area will be designated S-1 which implies that sanitary services would be provided within the next two years, while some portions comprising wetlands and forested areas will be designated S-6 which implies that no sanitary services will be provided (see attached map); and

WHEREAS, the Worcester County Planning Commission, at their meeting on March 5, 2009 reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found the proposal to be consistent with the Worcester County Comprehensive Development Plan; and

WHEREAS, the County Commissioners held a public hearing on April 21, 2009 to hear public comment on the proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan to add the Fort Whaley Campground sewer system is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The Comprehensive Water and Sewerage Plan for Worcester County is hereby amended as specified in the application of Parker Family, LLC, to add the Fort Whaley Campground Sewer System, located on a 72.5 acre parcel at the southeast corner of US Route 50 (Ocean Gateway) and Dale Road near Whaleyville and identified on Worcester County Tax Map 18 as Parcel 20, Lot A.
2. The Plan amendment reflects sanitary services to be provided by existing septic systems, which currently serve 177 campsites and have the capacity to serve 210 campsites at 150 gallons per day per campsite with a total capacity of 31,500 gallons per day (gpd) which will serve 105

equivalent dwelling units (EDUs) at a rate of 300 gpd per EDU. The proposal calls for construction of a gravity collection system including pump stations and force mains to the treatment plant, thereafter discharging into five individual drainfields.

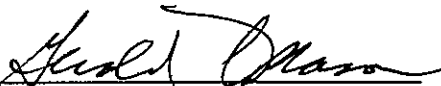
3. Portions of the planning area will be designated S-1 which implies that sanitary services will be provided within the next two years, while some portions comprising wetlands and forested areas will be designated S-6 which implies that no sanitary services will be provided (see attached map).

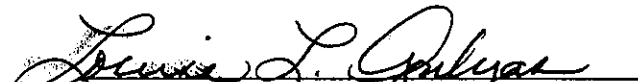
AND BE IT FURTHER RESOLVED that this proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon approval by MDE.

PASSED AND ADOPTED this 21st day of April, 2009.


ATTEST:

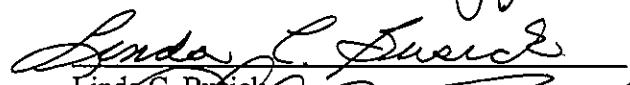
WORCESTER COUNTY COMMISSIONERS

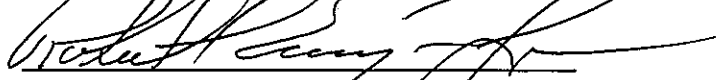

Gerald T. Mason
Chief Administrative Officer

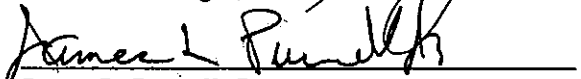

Louise L. Gulyas, President

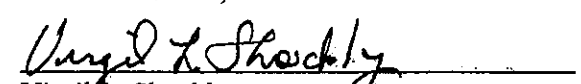

James C. Church, Vice President

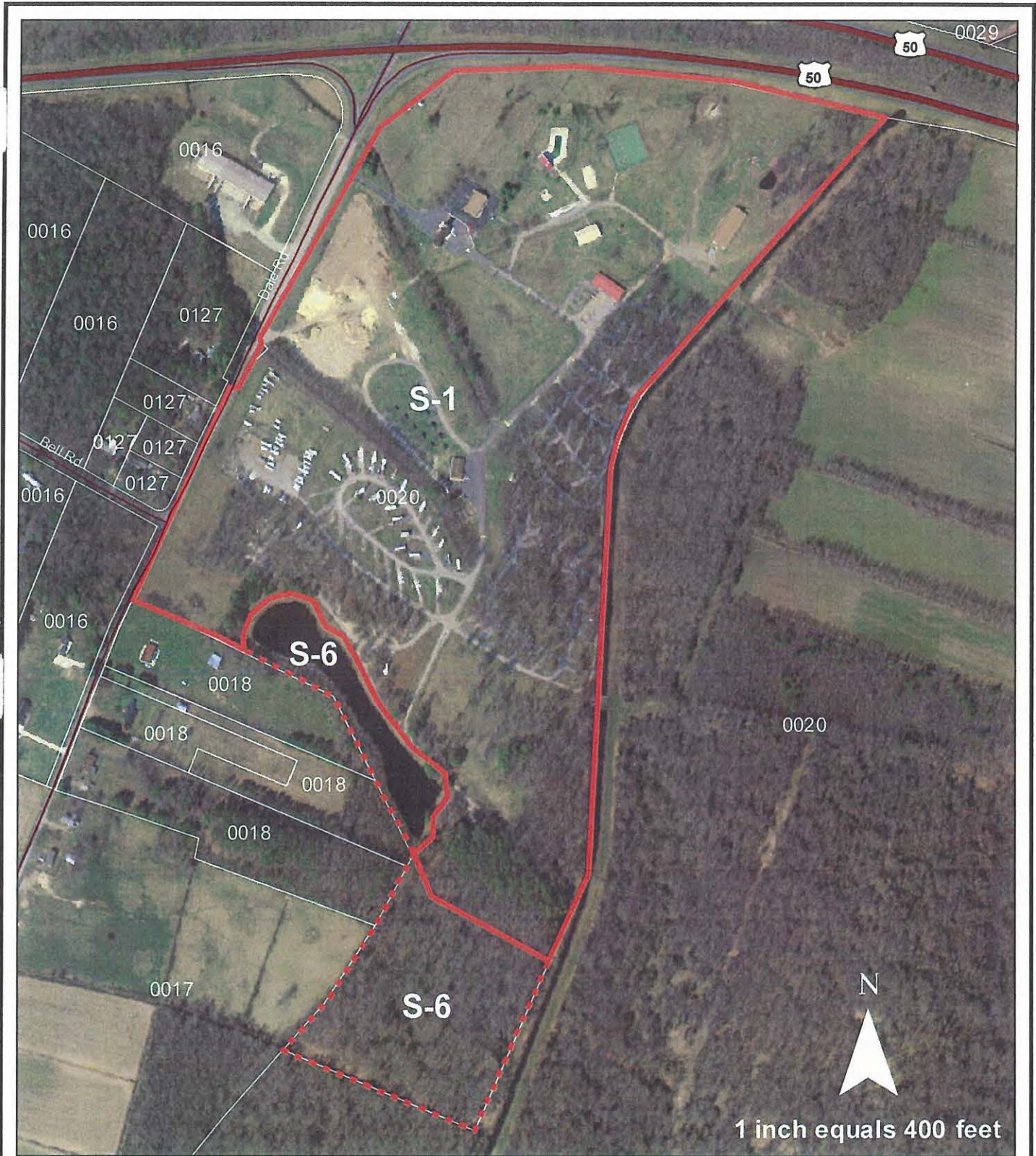

Judith O. Boggs


Linda C. Busick


Robert L. Cowger, Jr.


James L. Purnell, Jr.


Virgil L. Shockley



- S-1 - Service within 2 years
- S-6 - No planned service



Aerial Image
 Fort Whaley Campground
 S-1 Proposed
 Case 2009-1

Prepared by Worcester County Department of Comprehensive Planning, January 28, 2009.
 Source: Aerial Imagery, Maryland Department of Natural Resources, March 2004;
 Tax maps, Maryland Department of Planning, 2007.

RESOLUTION NO. 09 - 16

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY TO REFLECT THE REPLACEMENT AND EXPANSION OF THE MYSTIC HARBOUR WASTEWATER TREATMENT PLANT

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have proposed to amend the Comprehensive Water & Sewerage Plan for Worcester County to reflect the replacement and expansion of the deteriorating Mystic Harbour Wastewater Treatment Plant (WWTP) with a new WWTP which will treat to enhanced nutrient removal (ENR) standards and serve an additional six hundred sixty-six (666) equivalent dwelling units (EDUs), for a total system capacity of 1,666 EDUs, including customers in Mystic Harbour as well as the West Ocean City sewer planning areas and the West Ocean City Priority Funding Area, all of which are generally located east of Herring Creek, west of the Town of Ocean City, south of Isle of Wight Bay and north of MD Route 376 (Assateague Road). The new WWTP will be constructed at the current site, which is located east of MD Route 611 (Stephen Decatur Highway) approximately 280 feet south of its intersection with Sunset Avenue and identified on Worcester County Tax Map 27 as Parcel 629. The application proposes the construction of a new WWTP using biological treatment followed by membrane filtration to achieve enhanced nutrient removal. Effluent discharge will use the existing groundwater injection and land application in the future. This construction will result in a total treatment capacity of 450,000 gallons per day (gpd) increasing the existing capacity by 200,000 gpd and serving an additional 666 EDUs at a rate of 300 gpd/EDU with the initial 250,000 gpd to serve the existing 1,000 EDUs at a rate of 250 gpd/EDU as originally approved. The County proposes that portions of the proposed sewer planning areas will be designated S-1 which implies that sanitary services would be provided within the next two years, while the remaining portions planned for agriculture and green infrastructure will be designated S-3 which implies that sanitary services may be provided within 5 to 10 years; and

WHEREAS, the Worcester County Planning Commission, at their meeting on May 14, 2009 reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found the application to be consistent with the Worcester County Comprehensive Development Plan; and

WHEREAS, the County Commissioners held a public hearing on July 7, 2009 to hear public comment on the proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environmental Article of the Annotated Code of Maryland, the Commissioners have determined that the proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan to reflect the replacement and expansion of the deteriorating Mystic Harbour Wastewater Treatment Plant (WWTP) with a new WWTP, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The Comprehensive Water and Sewerage Plan for Worcester County is hereby amended as specified in the proposal of the County Commissioners of Worcester County, Maryland to reflect the replacement and expansion of the deteriorating Mystic Harbour Wastewater Treatment Plant (WWTP) with a new WWTP which will treat to enhanced nutrient removal (ENR) standards and serve an additional six hundred sixty-six (666) equivalent dwelling units (EDUs), for a total system capacity of 1,666 EDUs, including customers in Mystic Harbour as well as the West Ocean City sewer planning areas and the West Ocean City Priority Funding Area, all of which are generally located east of Herring Creek, west of

the Town of Ocean City, south of Isle of Wight Bay and north of MD Route 376 (Assateague Road). The new WWTP will be constructed at the current site, which is located east of MD Route 611 (Stephen Decatur Highway) approximately 280 feet south of its intersection with Sunset Avenue and identified on Worcester County Tax Map 27 as Parcel 629. The new WWTP will be constructed to use biological treatment followed by membrane filtration to achieve enhanced nutrient removal. Effluent discharge will use the existing groundwater injection and land application in the future. This construction will result in a total treatment capacity of 450,000 gallons per day (gpd) increasing the existing capacity by 200,000 gpd and serving an additional 666 EDUs at a rate of 300 gpd/EDU with the initial 250,000 gpd to serve the existing 1,000 EDUs at a rate of 250 gpd/EDU as originally approved. Portions of the proposed sewer planning areas sewer planning areas are hereby designated S-1 which implies that sanitary services will be provided within the next two years, while the remaining portions planned for agriculture and green infrastructure are hereby designated S-3 which implies that sanitary services may be provided within 5 to 10 years.

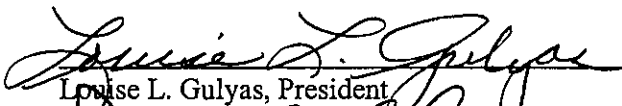
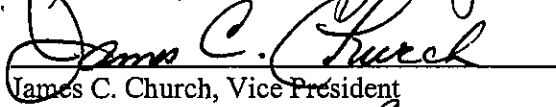
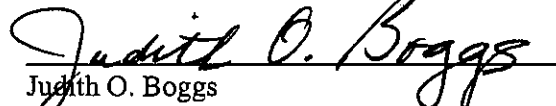
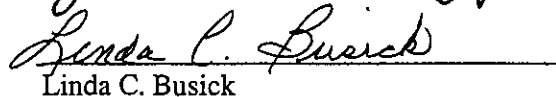
AND BE IT FURTHER RESOLVED that this proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon approval by MDE.

PASSED AND ADOPTED this 7th day of July, 2009.

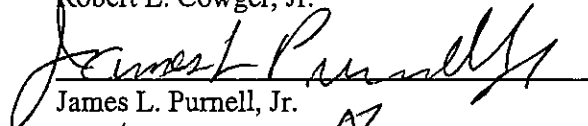
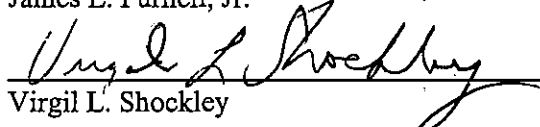
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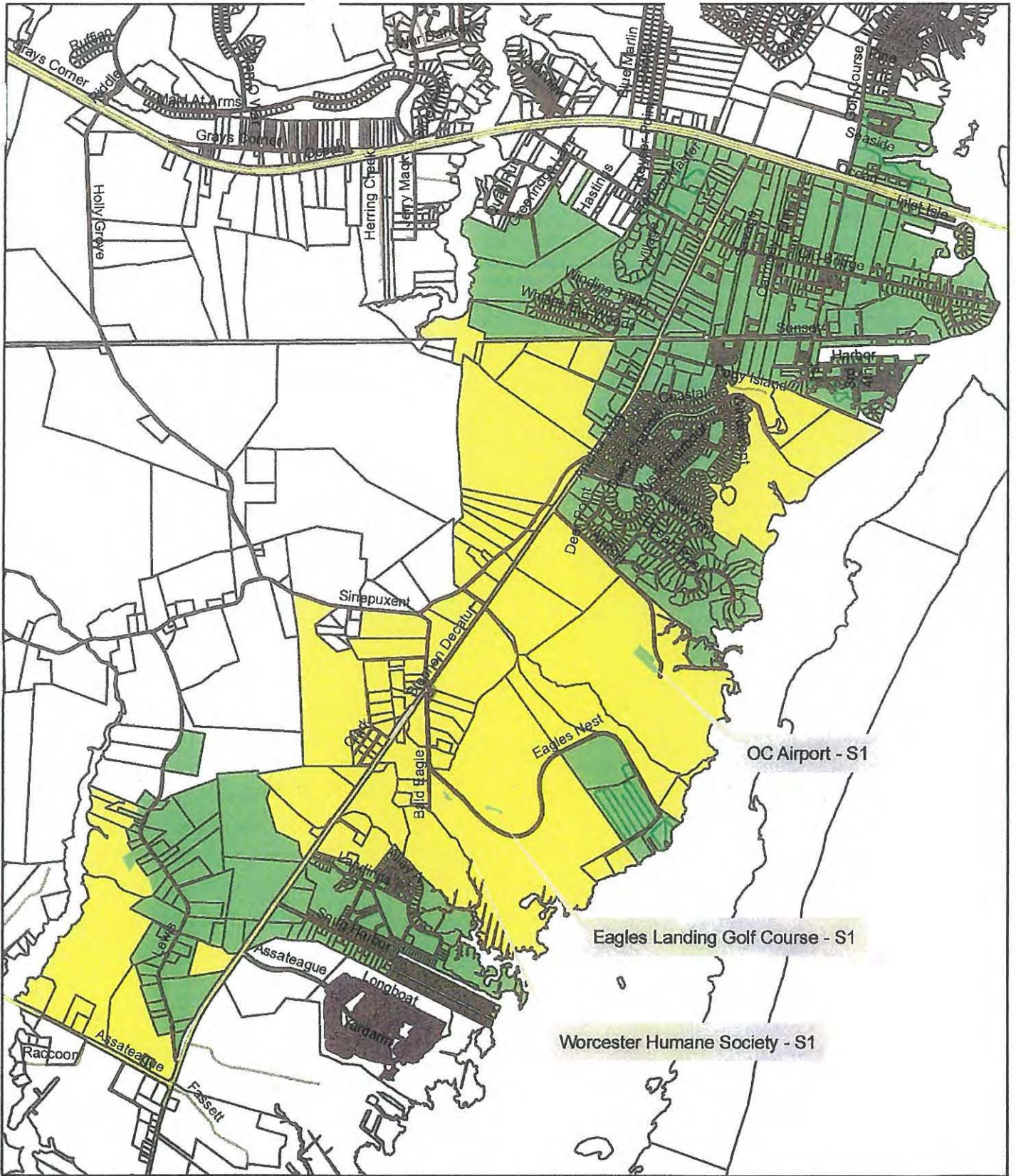

Gerald T. Mason
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS


Louise L. Gulyas, President

James C. Church, Vice President

Judith O. Boggs

Linda C. Busick

Robert L. Cowger, Jr.


James L. Purnell, Jr.

Virgil L. Shockley



- Mystic Harbour Service Area - S1
- Mystic Harbour Service Area - S3

Revised Planning Area



Mystic Harbour WWTP
Replacement and Expansion
Case 2008-1

Prepared by the Worcester County Department of
Comprehensive Planning, May 27, 2009.

RESOLUTION NO. 09 - 27

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY TO PROVIDE FOR THE CONSTRUCTION OF AN ELEVATED WATER STORAGE TANK IN THE MYSTIC HARBOUR WATER SANITARY SERVICE SUB-AREA

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have determined that it is desirable for the health and safety of the residents and visitors to the County to provide for additional potable water storage in the West Ocean City area; and

WHEREAS, the County Commissioners have determined that certain property within the Mystic Harbour Water Sanitary Service Sub-Area and currently under lease to the County is an appropriate location for an elevated water storage tank; and

WHEREAS, the County Commissioners on October 6, 2009 held a duly advertised public hearing to consider public comment on the financing details of the proposed water tower project; and

WHEREAS, the Worcester County Planning Commission discussed the proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan at their meeting of October 1, 2009 and found it to be consistent with the Worcester County Comprehensive Development Plan and existing zoning designations in the area; and

WHEREAS, the County Commissioners reviewed the recommendations of the Planning Commission and staff reports and as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, determined that the proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan to provide for the construction of an elevated water storage tank in the Mystic Harbour Water Sanitary Service Sub-Area was indeed minor in nature and is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County Maryland that:

1. The Comprehensive Water and Sewerage Plan for Worcester County is hereby amended to include provisions for the construction of an approximate 500,000 gallon elevated potable water storage tank on the property shown on Worcester County Tax Map 27 as Parcel 11, Lot F, Tax Account I.D. 10-373913, on the north side of US Route 50 at its intersection with Maryland Route 611, to provide for additional potable water storage in the West Ocean City area as provided in the Mystic Harbour Water Sanitary Service Sub-Area .


AND BE IT FURTHER RESOLVED that this proposed minor amendment to the Worcester County Comprehensive Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of

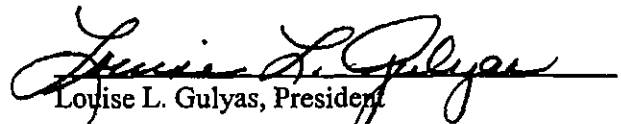
the Environment Article of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon approval by MDE.

PASSED AND ADOPTED this 17th day of November, 2009.

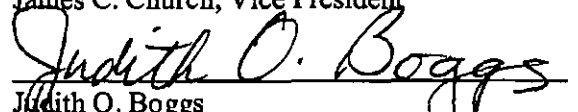
ATTEST:


WORCESTER COUNTY COMMISSIONERS

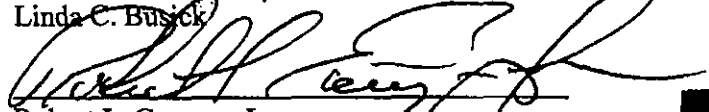

Gerald T. Mason
Chief Administrative Officer

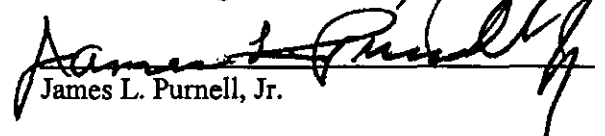

Louise L. Gulyas, President

James C. Church, Vice President


Judith O. Boggs


Linda C. Busick


Robert L. Cowger, Jr.


James L. Purnell, Jr.

Virgil L. Shockley

RESOLUTION NO. 09 - 28

**RESOLUTION AMENDING THE COMPREHENSIVE WATER AND
SEWERAGE PLAN FOR WORCESTER COUNTY TO
MODIFY THE FORM OF OWNERSHIP AND OPERATION OF THE
OCEAN LANDINGS II WATER AND WASTEWATER TREATMENT SYSTEM**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners passed Resolution No. 08-21 on August 19, 2008 for the purpose of amending the Water and Sewerage Plan to include the Ocean Landings II Water and Wastewater Treatment System subject to certain conditions and limitations, including but not limited to County ownership and operation of the facilities pursuant to Public Local Law; and

WHEREAS, the County Commissioners on October 20, 2009 passed Bill 09-7 (Public Works-Sanitary Service Areas for Shopping Centers) to add an exception for certain shopping centers, planned commercial developments and unified developments from the requirement that they be County owned and operated; and

WHEREAS, the County Commissioners received a request from Mr. Dane Bauer on behalf of Allen and Connie, LLC, owner, and CAMBR Company, Inc., applicant, to amend the Comprehensive Water and Sewerage Plan for Worcester County to provide for private ownership of the sanitary facilities previously approved by Resolution No. 08-21 with all other terms and conditions of the original approval to remain unchanged; and

WHEREAS, the Worcester County Planning Commission, at its meeting of November 5, 2009, reviewed the application for amendment to the Worcester County Comprehensive Water and Sewerage Plan providing for private ownership of the previously approved sanitary facilities serving the Ocean Landing II development subject to all other previous conditions and limitations and found it to be a minor amendment consistent with the Worcester County Comprehensive Development Plan and the existing zoning designations for the subject property; and


WHEREAS, the County Commissioners reviewed the recommendations of the Planning Commission, staff reports and the application and as a result of their investigation, conducted in accordance with the provisions of Section 9-503 et. Seq. of the Environment Article of the Annotated Code of Maryland, concluded that the proposed amendment was indeed minor in nature and was desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County Maryland that the Comprehensive Water and Sewerage Plan for Worcester County is hereby amended as specified in the application at hand to provide for the private ownership and operation of the sanitary facilities known as the Ocean Landings II Water and Wastewater Treatment System serving all improvements in the service area subject to all other conditions, limitations and requirements as contained in Resolution No. 08-21 other than those found in Section 1.d. pertaining to ownership and operation of the facilities.


AND BE IT FURTHER RESOLVED that this proposed minor amendment to the Worcester County Comprehensive Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Environment Article of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon approval by MDE.

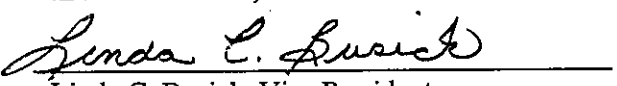
PASSED AND ADOPTED this 15th day of December, 2009.

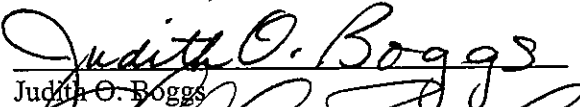
ATTEST:

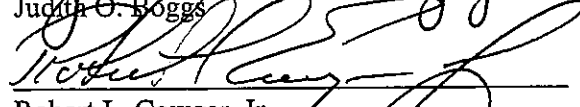

Gerald T. Mason
Chief Administrative Officer

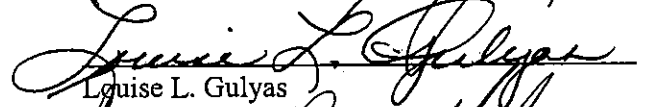
WORCESTER COUNTY COMMISSIONERS

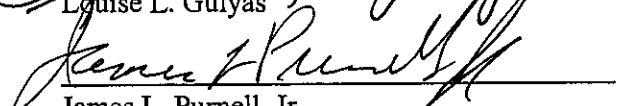

James C. Church, President

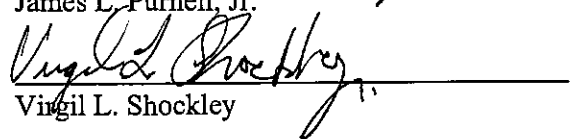

Linda C. Busick, Vice President


Judith O. Boggs


Robert L. Cowger, Jr.


Louise L. Gulyas


James L. Purnell, Jr.


Virgil L. Shockley

RESOLUTION NO. 10 - 11

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY FOR ADDITION OF VDOT NEW CHURCH (VA) REST AREA STATION AND SEWER MAIN ENLARGEMENTS - POCOMOKE SERVICE AREA

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from the Town of Pocomoke City to amend the *Worcester County Comprehensive Water and Sewerage Plan* as shown on the map attached hereto entitled "Virginia Visitor's Center" to add service to this facility from the Pocomoke Wastewater Treatment Plant Sewer Planning Area to provide public sewer service to the VDOT Visitor's Center on US RT 13 in New Church, Virginia, and to enlarge several sewer mains within the Town's municipal boundaries. The portion of the sewer planning expansion area occupied by the Virginia Visitor's Center will be designated S-1 (immediate service), while the transmission force main that connects with the Maryland portion of the Pocomoke sewer collection system will be designated as S-6 (no planned service). The Pocomoke Wastewater Treatment Plant will not have to be expanded to accommodate this addition to the sewer planning area; and

WHEREAS, the Worcester County Planning Commission discussed the proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan at their meeting of February 4, 2010 and found it to be consistent with the Worcester County Comprehensive Development Plan; and

WHEREAS, the County Commissioners on March 16, 2010 held a duly advertised public hearing to consider public comment on this amendment to the Worcester County Comprehensive Water and Sewerage Plan; and

WHEREAS, the County Commissioners reviewed the recommendations of the Planning Commission and staff reports and as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add the VDOT New Church (VA) Tourist Facility to the Pocomoke Sewer Planning Area and the Construction of Several Sewer Main Widening Projects within Town Limits, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the application of the Town of Pocomoke City and the proposal of the County Commissioners of Worcester County, Maryland, to add service to this facility from the Pocomoke Wastewater Treatment Plant Sewer Planning Area to provide public sewer service to the VDOT Visitor's Center on US RT 13 in New Church, Virginia, and to enlarge several sewer mains within the Town's municipal boundaries. The portion of

the sewer planning expansion area designated Commercial Center by the *Worcester County Comprehensive Development Plan* will be designated S-1 (immediate service), while the transmission force main that connects with the Maryland portion of the Pocomoke sewer collection system will be designated as S-6 (no planned service). The Pocomoke Wastewater Treatment Plant will not have to be expanded to accommodate this addition to the sewer planning area.

AND BE IT FURTHER RESOLVED that this proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Environment Article of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon approval by MDE.

PASSED AND ADOPTED this 16th day of March, 2010.

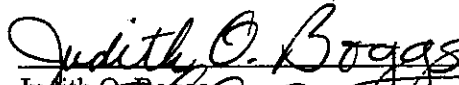
ATTEST:



Gerald T. Mason
Chief Administrative Officer

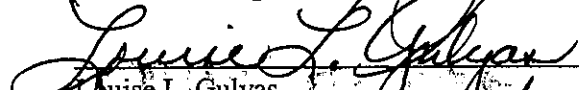
WORCESTER COUNTY COMMISSIONERS

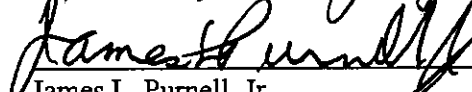

James C. Church, President

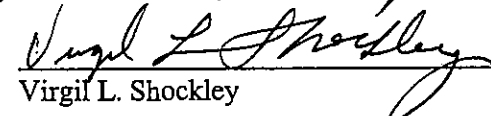

Linda C. Busick, Vice President


Judith O. Boggs


Robert L. Cowger, Jr.


Louise L. Gulyas


James L. Purnell, Jr.


Virgil L. Shockley

RESOLUTION NO. 10 - 12

**RESOLUTION AMENDING THE COMPREHENSIVE WATER AND
SEWERAGE PLAN FOR WORCESTER COUNTY FOR ADDITION OF SPRAY
IRRIGATION PROPERTY - BERLIN SERVICE AREA**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from the Town of Berlin to amend the *Worcester County Comprehensive Water and Sewerage Plan* as shown on the map attached hereto entitled "Five Mile Branch Spray Area" to add this additional spray irrigation facility, for land application of treated wastewater effluent from the Town of Berlin, on property on Five Mile Branch Road, more specifically identified on Worcester County Tax Map 48, as Parcel 23, and

WHEREAS, the Worcester County Planning Commission discussed the proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan at their meeting of February 4, 2010 and found it to be consistent with the Worcester County Comprehensive Development Plan; and

WHEREAS, the County Commissioners on March 16, 2010 held a duly advertised public hearing to consider public comment on this amendment to the Worcester County Comprehensive Water and Sewerage Plan; and

WHEREAS, the County Commissioners reviewed the recommendations of the Planning Commission and staff reports and as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add a spray irrigation facility for land application disposal of treated wastewater from the Town of Berlin, is desirable.


NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the application of the Town of Berlin, to add an additional spray irrigation facility located on Five Mile Branch Road, more specifically identified on Worcester County Tax Map 56, as Parcel 23, as shown on the map attached hereto entitled "Five Mile Branch Spry Area", for land application disposal of treated wastewater effluent from the Town of Berlin.

AND BE IT FURTHER RESOLVED that this proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Environment Article of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon approval by MDE.


PASSED AND ADOPTED this 16th day of March, 2010.

ATTEST:



Gerald T. Mason
Chief Administrative Officer

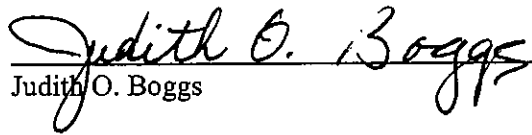
WORCESTER COUNTY COMMISSIONERS



James C. Church, President

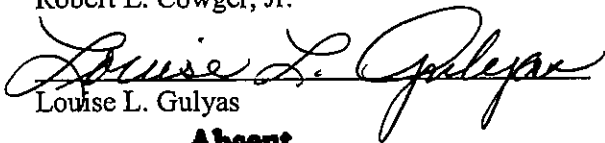


Linda C. Busick, Vice President



Judith O. Boggs

Robert L. Cowger, Jr.



Louise L. Gulyas
Absent

James L. Purnell, Jr.

Virgil L. Shockley

RESOLUTION NO. 10 - 15

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
AND EXPANDING THE OCEAN PINES SERVICE AREA FOR THE
STEEN ASSOCIATES, INC. PROPERTY**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners established the Ocean Pines Service Area in which all public water and sewer facilities serving the Ocean Pines community are owned and operated by the County Commissioners; and

WHEREAS, the County Commissioners have received an application filed by Soulé and Associates, engineer, and Mark Cropper, attorney, on behalf of Steen Associates Inc. requesting a proposed amendment to the *Worcester County Water and Sewerage Plan* and an expansion of the Ocean Pines Service Area. The application for amendment to the Water and Sewerage Plan seeks to add the water and sewerage systems for a proposed 60 lot subdivision on a portion of the properties shown as Parcels 67 and 74 on Worcester County Tax Map 21, located north of Gum Point Road and south of the current boundary of the Ocean Pines Sanitary Service Area.. The applicant also proposes the sanitary services area for the project be re-designated from categories S-3 and W-3 (future service in 6 to 10 years) to S-1 and W-1 (Present to 2-years). The application also seeks the expansion of the Ocean Pines Sanitary Service Area to include the proposed subdivision. The applicant is proposing that the sanitary services for the expanded service area be provided by a re-assignment of sixty (60) equivalent dwelling units (EDUs) of potable water and sewerage treatment capacity from the Ocean Pines Service Area currently allocated to the Ocean Pines Association, pursuant to a previous agreement between the Ocean Pines Association, Steen Associates Inc. and the Committee To Bring A YMCA To Northern Worcester County dated July 10, 2002; and

WHEREAS, the request specifies that the construction of the facilities will begin in the Spring of April 2011 and be completed by the Spring of 2012; and

WHEREAS, the Worcester County Planning Commission, at their meeting of March 4, 2010, reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the Worcester County Comprehensive Plan and the zoning category for the subject property; and

WHEREAS, the County Commissioners held a joint public hearing on April 20, 2010 to hear public comment on the requested amendments to the Worcester County Water and Sewerage Plan and expansion of the Ocean Pines Service Area; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section PW 5-305 (Sanitary service areas, sub-areas and amendments) of the Code of Public Local Laws of Worcester County, Maryland the Commissioners have determined that the proposed expansion of the service area is desirable and in the best interests of the comfort, convenience, health, safety and general welfare of the people who will be served by the facility as well as the best interests of public health, safety and welfare of the residents of the County in general, and that the facilities do not appear to be unduly detrimental to the environment of the County, and that the construction, operation, and design of the facilities are in accordance with all required permits and applicable standards, and are feasible from both an engineering and economic standpoint.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the application of Soulé and Associates, engineer, and Mark Cropper, attorney, on behalf of Steen Associates Inc. to add the water and sewerage systems for a proposed 60 lot subdivision (the "Steen Subdivision") on a portion of the properties shown as Parcels 67 and 74 on Worcester County Tax Map 21, located north of Gum Point Road and south of the current boundary of the Ocean Pines Service Area, and to re-designate the subdivision areas from categories S-3 and W-3 (future service in 6 to 10 years) to S-1 and W-1 (Present to 2-years), and subject to the following condition:
 - A. The proposed sewage collection system shall be a gravity system in accordance with County standards, as opposed to the individual grinder pump stations on each lot and force main as proposed in the application.
2. The Ocean Pines Service Area is hereby expanded to include the Steen Subdivision whereby sanitary services for the expanded service area will be provided by a re-assignment of sixty (60) equivalent dwelling units (EDUs) of potable water and sewerage treatment capacity from the Ocean Pines Service Area currently allocated to the Ocean Pines Association, pursuant to a previous agreement between the Ocean Pines Association, Steen Associates Inc. and the Committee To Bring A YMCA To Northern Worcester County dated July 10, 2002.

AND BE IT FURTHER RESOLVED that these proposed amendments to the Worcester County Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.

PASSED AND ADOPTED this 20th day of April, 2010.


ATTEST:

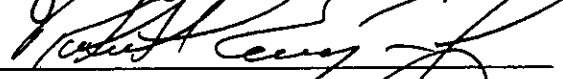

Gerald T. Mason
Chief Administrative Officer

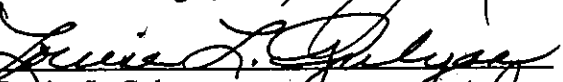
WORCESTER COUNTY COMMISSIONERS

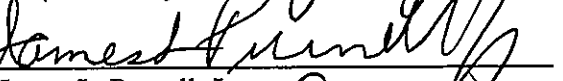

James C. Church, President


Linda C. Busick, Vice President

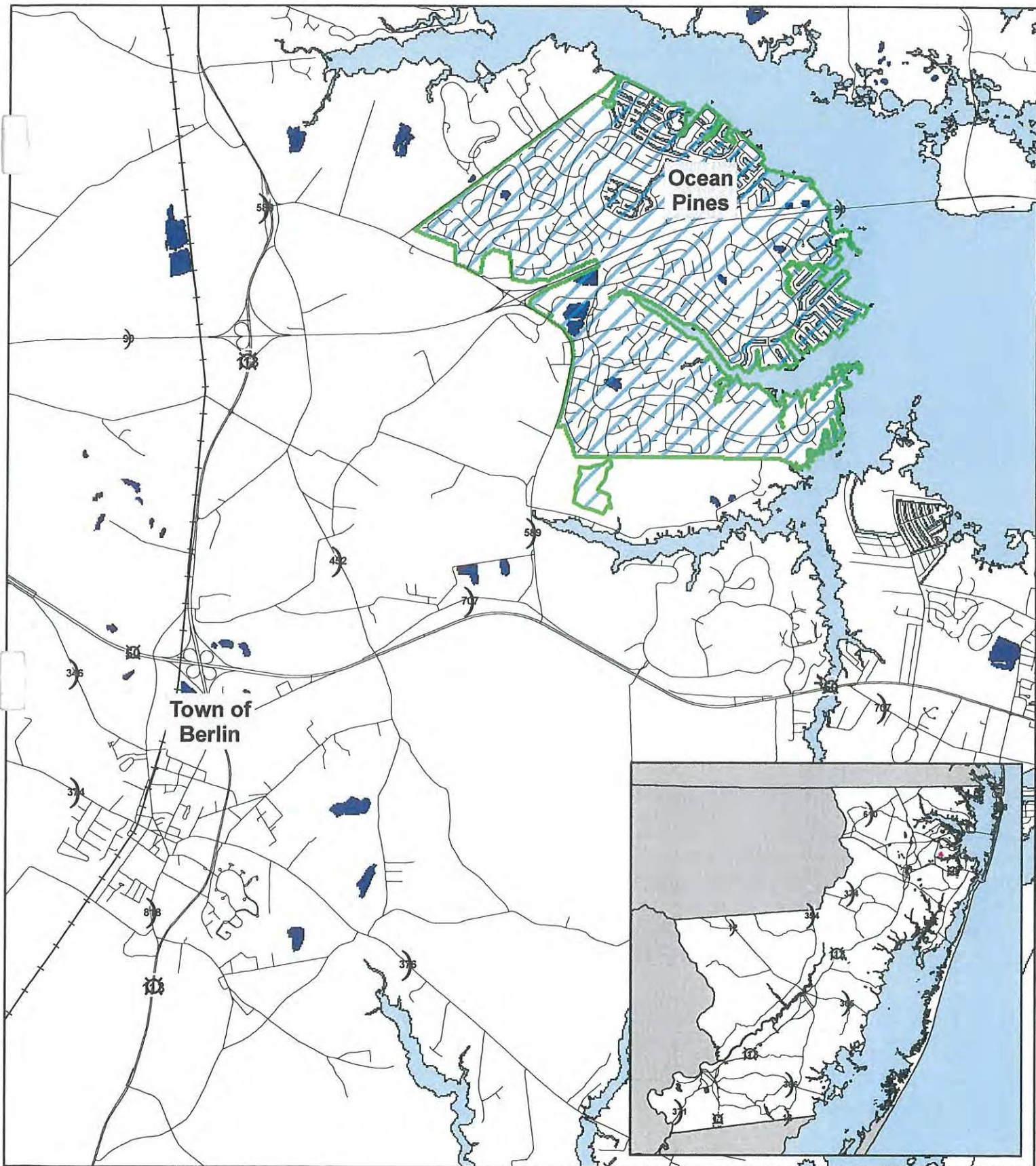

Judith O. Boggs




Robert L. Cowger, Jr.


Louise L. Gulyas


James L. Purnell, Jr.


Virgil L. Shockley



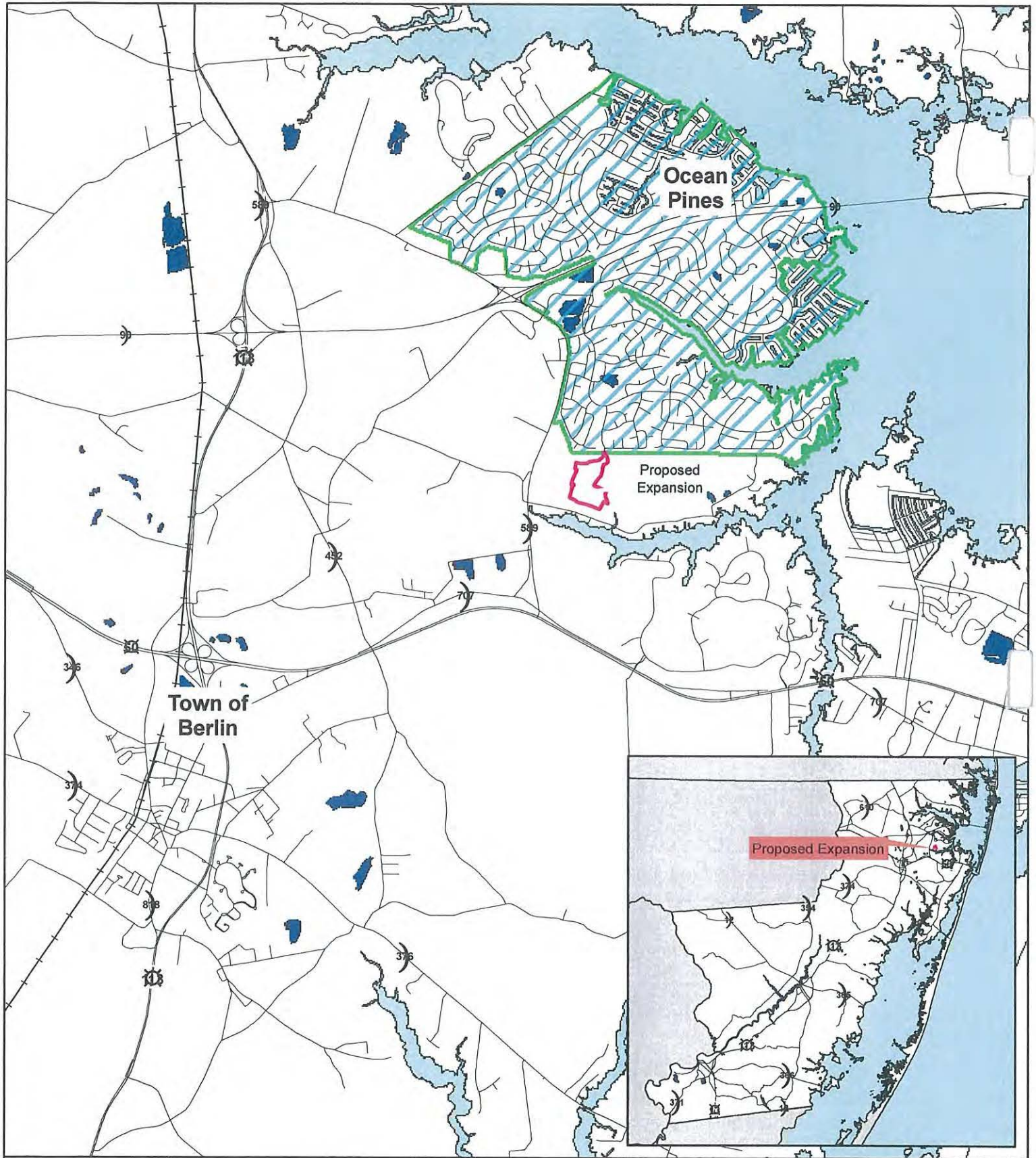
-  W1, Ocean Pines
-  S1, Ocean Pines






1 inch = 5,000 feet

Ocean Pines W&S Sanitary Area

Steen Subdivision of Ocean Pines
S-1 Proposed
Case 2010-01



-  Proposed Expansion
-  W1, Ocean Pines
-  S1, Ocean Pines



1 inch = 5,000 feet

Ocean Pines W&S Sanitary Area

Steen Subdivision of Ocean Pines
S-1 Proposed
Case 2010-01

RESOLUTION NO. 10 - 37

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND
SEWERAGE PLAN FOR WORCESTER COUNTY FOR
ADDITION OF CAPITAL IMPROVEMENTS PLAN AND REVISION OF
WATER AND SEWER PLANNING AREAS - SNOW HILL SERVICE AREA

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from the Town of Snow Hill to amend the *Worcester County Comprehensive Water and Sewerage Plan* to reflect the water and sewer planning areas as shown on the maps attached hereto and made a part hereof entitled "Proposed Water Planning Areas" and "Proposed Sewer Planning Areas" and to include a Water and Wastewater Capital Improvements Program Projects list for years 2010-2016 as shown on Appendix A, all to ensure consistency with the town's recently adopted Comprehensive Development Plan; and

WHEREAS, the Worcester County Planning Commission discussed the proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan at their meeting of October 7, 2010 and found it to be consistent with the Worcester County Comprehensive Development Plan; and

WHEREAS, the County Commissioners held a duly advertised public hearing on December 21, 2010 to consider public comment on this amendment to the Worcester County Comprehensive Water and Sewerage Plan; and

WHEREAS, the County Commissioners reviewed the recommendations of the Planning Commission and staff reports and as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add the Snow Hill Water and Wastewater Capital Improvements Program Projects list for years 2010-2016 and revision of the water and sewer planning areas, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:


1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the application of the Town of Snow Hill to reflect the water and sewer planning areas as shown on the maps attached hereto and made a part hereof entitled "Proposed Water Planning Areas" and "Proposed Sewer Planning Areas" and to add Appendix A, Snow Hill Water and Wastewater Capital Improvements Program Projects 2010-2016, to their system profile on revised page 4-35.3 in the *Comprehensive Water and Sewerage Plan for Worcester County*.

AND BE IT FURTHER RESOLVED that this proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Environment Article of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon approval by MDE.

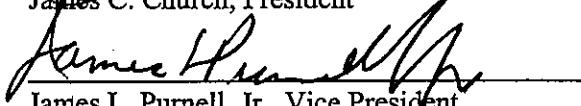
PASSED AND ADOPTED this 21st day of December, 2010.


ATTEST:

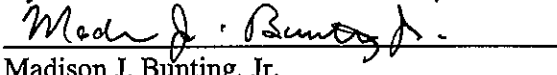
WORCESTER COUNTY COMMISSIONERS

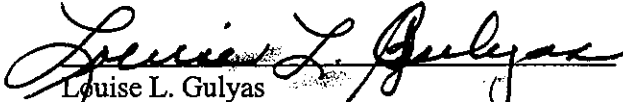

Gerald T. Mason
Chief Administrative Officer

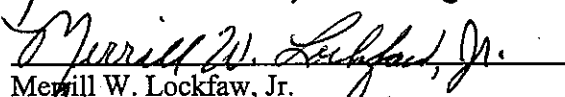

James C. Church, President

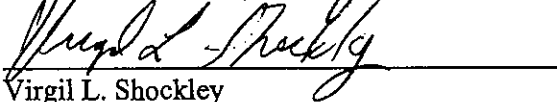

James L. Purnell, Jr., Vice President

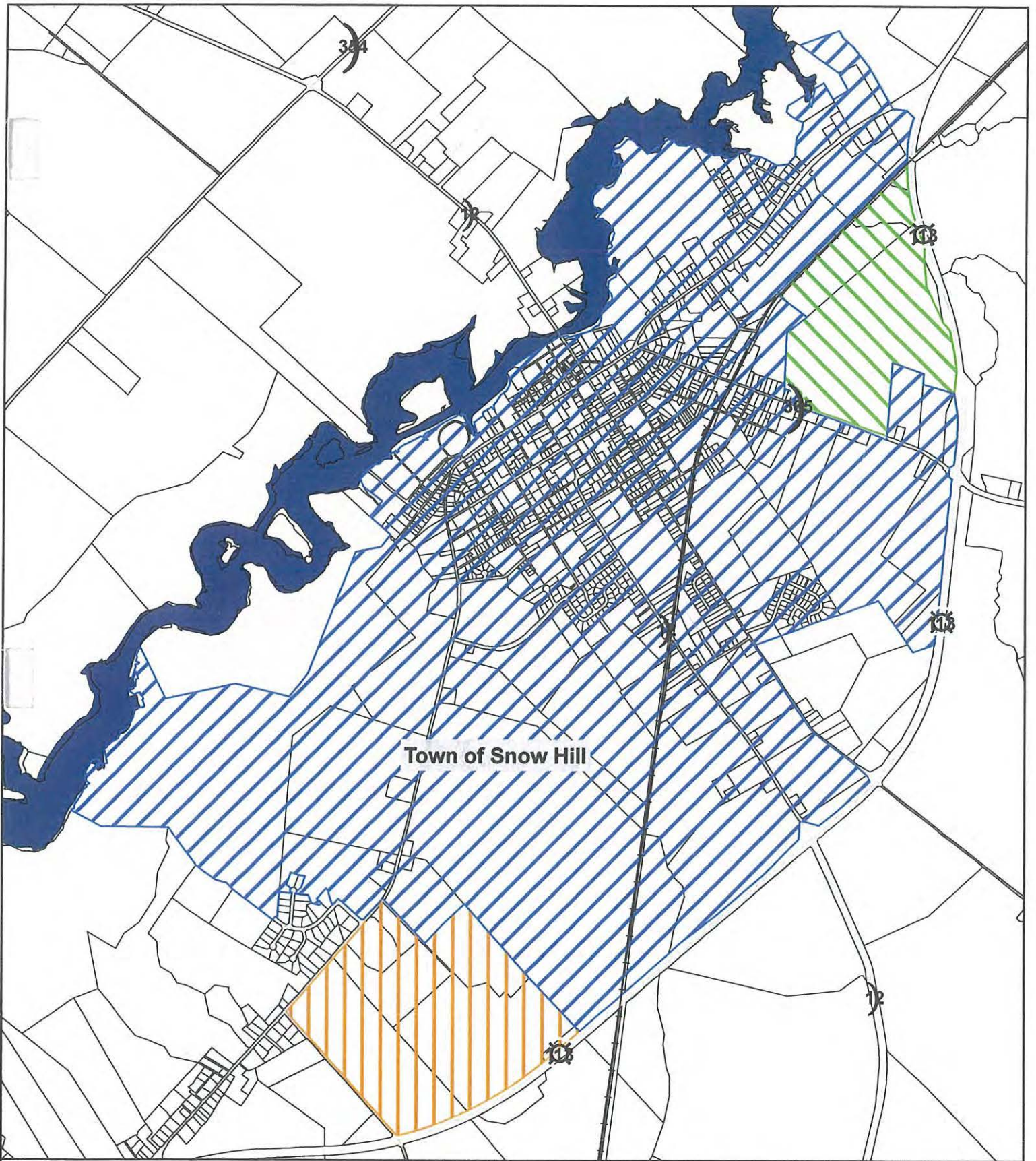

Judith O. Boggs


Madison J. Bunting, Jr.


Louise L. Gulyas


Merrill W. Lockfaw, Jr.


Virgil L. Shockley



-  W1, Town of Snow Hill
-  W2, Town of Snow Hill
-  W3, Town of Snow Hill

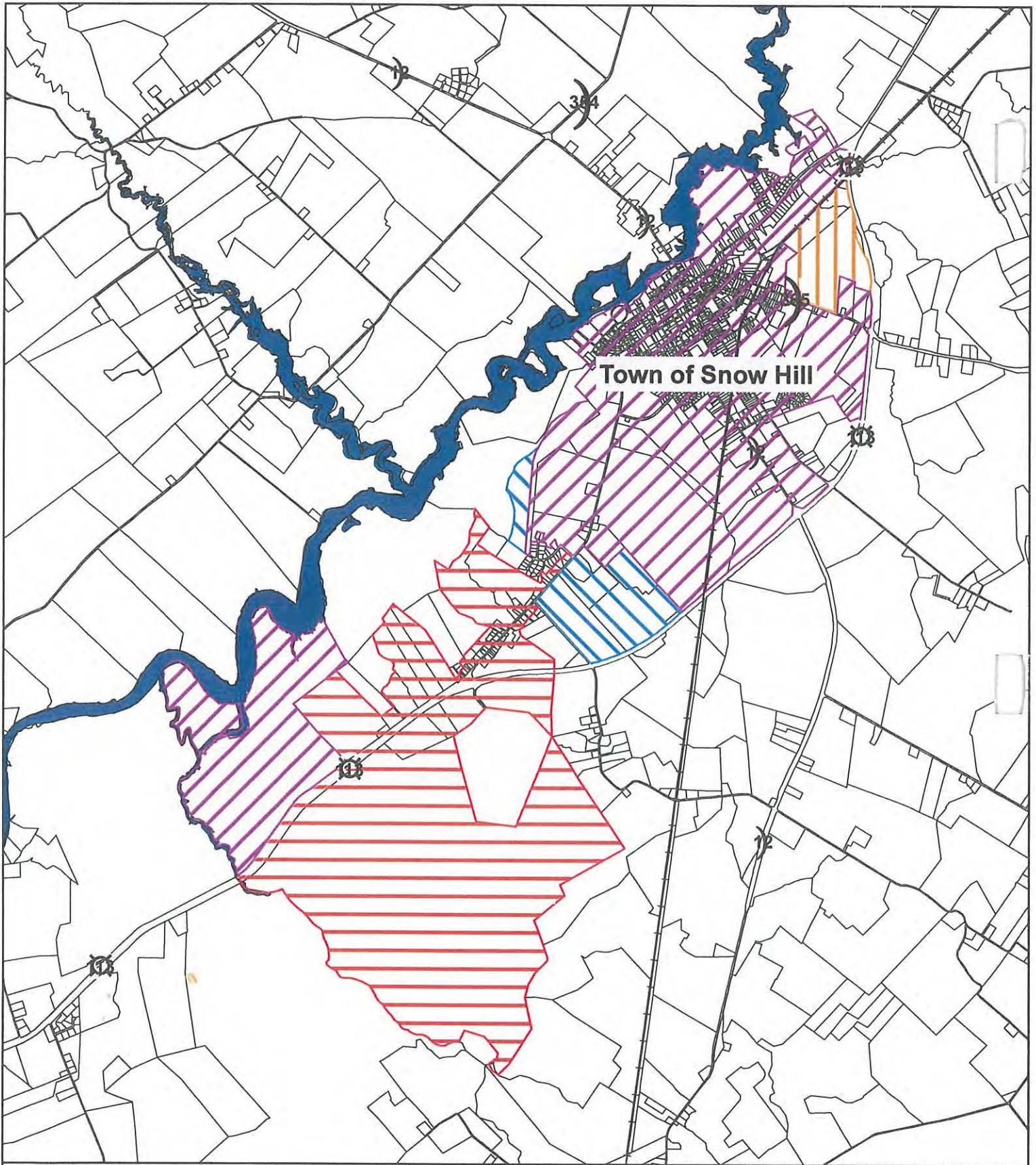
Proposed Water Planning Areas

Snow Hill and Environs







1 inch = 2,000 feet

Prepared by Worcester County Department of Development Review and Permitting, October 01, 2010.
 Source: 1994 Comprehensive Water and Sewerage Plan, Worcester County, 1994 (as amended).



Town of Snow Hill

-  S1, Town of Snow Hill
-  S2, Town of Snow Hill
-  S3, Town of Snow Hill
-  S6 - No Future Service

Proposed Sewer Planning Area

Snow Hill and Environs



1 inch = 4,000 feet

Prepared by Worcester County Department of Development Review and Permitting, October 01, 2010.
 Source: 1994 Comprehensive Water and Sewerage Plan, Worcester County, 1994 (as amended).

RESOLUTION NO. 11 - 1

**RESOLUTION AMENDING THE COMPREHENSIVE
WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY
TO EXPAND THE OCEAN PINES SANITARY SERVICE AREA TO ADD THE
OCEAN PINES MEDICAL OFFICE COMPLEX PROPERTY**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners established the Ocean Pines Sanitary Service Area in which all public water and sewer facilities serving the Ocean Pines community are owned and operated by the County Commissioners; and

WHEREAS, pursuant to Section PW 5-305 of the Public Works Article of the Code of Public Local Laws of Worcester County, Maryland, at least sixty-seven percent (67%) of the current property owners for the proposed Ocean Pines Medical Office Complex of Ocean Pines petitioned the County Commissioners to establish an expansion of the existing Ocean Pines Sanitary Service Area for the purposes of providing public water & sewer service to accommodate the proposed uses for this planned commercial development on the border of Ocean Pines, which will be located on the northwestern side of the Ocean Pines Community, and includes property identified on Worcester County Tax Map 16, Parcel 24; and

WHEREAS, the request specifies that the construction of Phase I of the facilities will begin on May 1, 2011 and be completed by May 1, 2012; and

WHEREAS, the cost of the Construction of the water and sewer infrastructure and connection of the planned subdivision will be the sole responsibility of the property owners served by the facilities; and

WHEREAS, the Worcester County Planning Commission, at their meeting of October 7, 2010, reviewed the application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the Worcester County Comprehensive Plan and the zoning category for the subject property; and

WHEREAS, the County Commissioners held a duly advertised public hearing on January 18, 2011 to hear public comment on the requested amendments to the Worcester County Water and Sewerage Plan and expansion of the Ocean Pines Sanitary Service Area; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section PW 5-305 (Sanitary service areas, sub-areas and amendments) of the Code of Public Local Laws of Worcester County, Maryland the Commissioners have determined that the proposed expansion of the service area is desirable and in the best interests of the comfort, convenience, health, safety and general welfare of the people who will be served by the facility as well as the best interests of public health, safety and welfare of the residents of the County in general, and that the facilities do not appear to be unduly detrimental to the environment of the County, and that the construction, operation, and design of the facilities are in accordance with all required permits and applicable standards, and are feasible from both an engineering and economic standpoint.


NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the application of Coastal Venture Properties, LLC to add the water and sewerage systems for the proposed Ocean Pines Medical Office Complex, identified on Worcester County Tax Map 16, Parcel 24. The above referenced expansion of the existing Ocean Pines Sanitary Service Area is shown on the map entitled "Ocean Pines W&S Sanitary Area – Ocean Pines Medical Office Complex", dated October 27, 2010, attached hereto.
2. The expansion of the existing Ocean Pines Sanitary Service Area is approved for the land described herein to provide public water and sewer to accommodate the proposed sanitary needs of the planned commercial development.
3. Once constructed, the public water and sewer infrastructure will be owned and operated by the County.

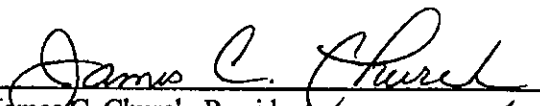
AND BE IT FURTHER RESOLVED that these proposed amendments to the Worcester County Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.

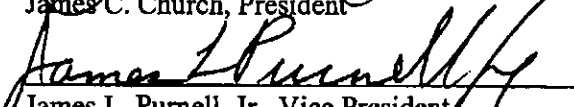
PASSED AND ADOPTED this 18th day of January, 2011.

ATTEST:

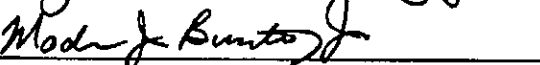

Gerald T. Mason
Chief Administrative Officer

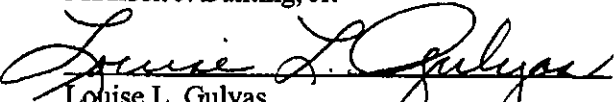
WORCESTER COUNTY COMMISSIONERS

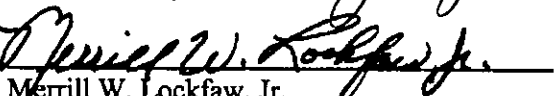

James C. Church, President


James L. Purnell, Jr., Vice President

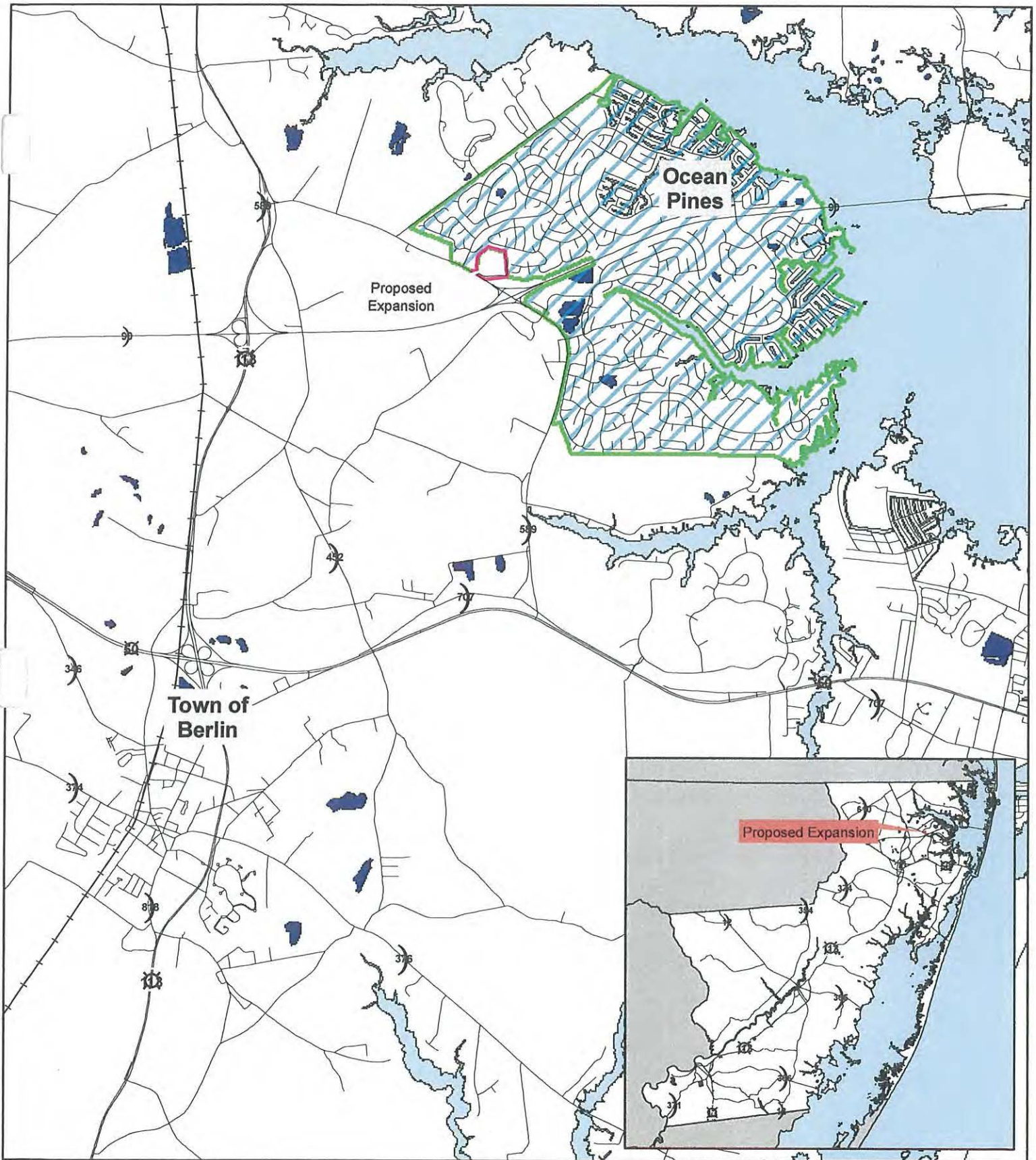

Judith O. Boggs





Madison J. Bunting, Jr.


Louise L. Gulyas


Merrill W. Lockfaw, Jr.


Virgil L. Shockley



-  Proposed Expansion
-  W1, Ocean Pines
-  S1, Ocean Pines

Ocean Pines W&S Sanitary Area



Ocean Pines Medical Office Complex
S-1 & W-1 Proposed
Case 2010-4

1 inch = 5,000 feet

RESOLUTION NO. 11 - 2

**RESOLUTION AMENDING THE COMPREHENSIVE WATER AND
SEWERAGE PLAN FOR WORCESTER COUNTY FOR
ADDITION OF OCEAN PINES MEDICAL OFFICE COMPLEX TO
OCEAN PINES SANITARY SERVICE AREA**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Palmer Gillis, owner, on behalf of Coastal Venture Properties, LLC, to amend the *Worcester County Comprehensive Water and Sewerage Plan* as shown on the map attached hereto entitled "Ocean Pines Medical Office Complex" to expand the Ocean Pines Sanitary Service Area to add service to this proposed commercial development from the Ocean Pines Wastewater and Water Treatment Plant to provide public sewer and water service to the property shown as Parcel 24 on Worcester County Tax Map 16, Tax Account I.D. #03-006050 (the "subject property"). The portion of the sewer and water planning expansion areas occupied by the proposed development will be designated W-1/S-1 (immediate service), revising the current designation of W-6/S-6 (no planned public service). There is sufficient treatment capacity in the Ocean Pines Wastewater Treatment and Water Treatment Plants to serve the subject property as proposed since the applicant proposes to purchase up to twelve (12) equivalent dwelling units (EDUs) of potable water and wastewater treatment capacity from the Ocean Pines Sanitary Service Area previously determined to be excess EDUs by the County Commissioners under Resolution No. 10-23 adopted on June 15, 2010; and

WHEREAS, the Worcester County Planning Commission discussed the proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan at their meeting of October 7, 2010 and found it to be consistent with the Worcester County Comprehensive Development Plan; and

WHEREAS, the County Commissioners held a duly advertised public hearing on January 18, 2011 to consider public comment on this amendment to the Worcester County Comprehensive Water and Sewerage Plan; and

WHEREAS, the County Commissioners reviewed the recommendations of the Planning Commission and staff reports and as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add the Ocean Pines Medical Office Complex as an expansion of the Ocean Pines water and sewer planning areas, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the application of Palmer Gillis, owner, on behalf of


Coastal Venture Properties, LLC, to add service to the subject property shown on the map attached hereto entitled "Ocean Pines Medical Office Complex" from the Ocean Pines Wastewater Treatment and Water Treatment Plant and to expand the Sewer and Water Planning Areas to reflect the provision of public sewer and water service to the Ocean Pines Medical Office Complex.

2. The subject property will be designated W-1/S-1 (immediate service), revising the current designation of W-6/S-6 (no planned public service).
3. There is sufficient treatment capacity in the Ocean Pines Wastewater Treatment Plant and Water Treatment Plant to serve the subject property as proposed since the applicant proposes to purchase up to twelve (12) equivalent dwelling units (EDUs) of potable water and wastewater treatment capacity from the Ocean Pines Sanitary Service Area previously determined to be excess EDUs by the County Commissioners under Resolution No. 10-23 adopted on June 15, 2010.


AND BE IT FURTHER RESOLVED that this proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Environment Article of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon approval by MDE.

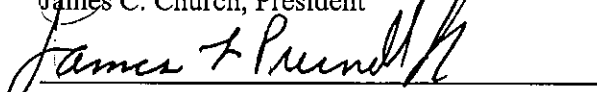
PASSED AND ADOPTED this 18th day of January, 2011.

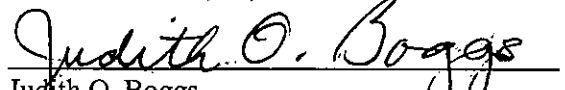
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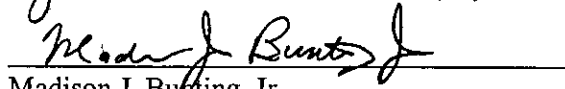

Gerald T. Mason
Chief Administrative Officer

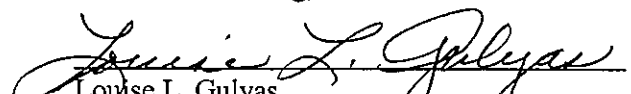
WORCESTER COUNTY COMMISSIONERS

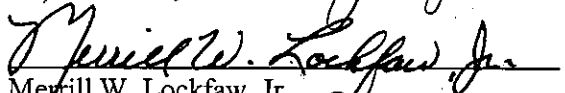

James C. Church, President

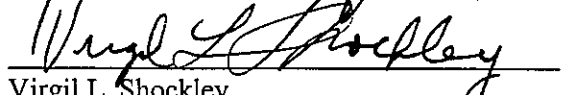

James L. Purnell, Jr., Vice President

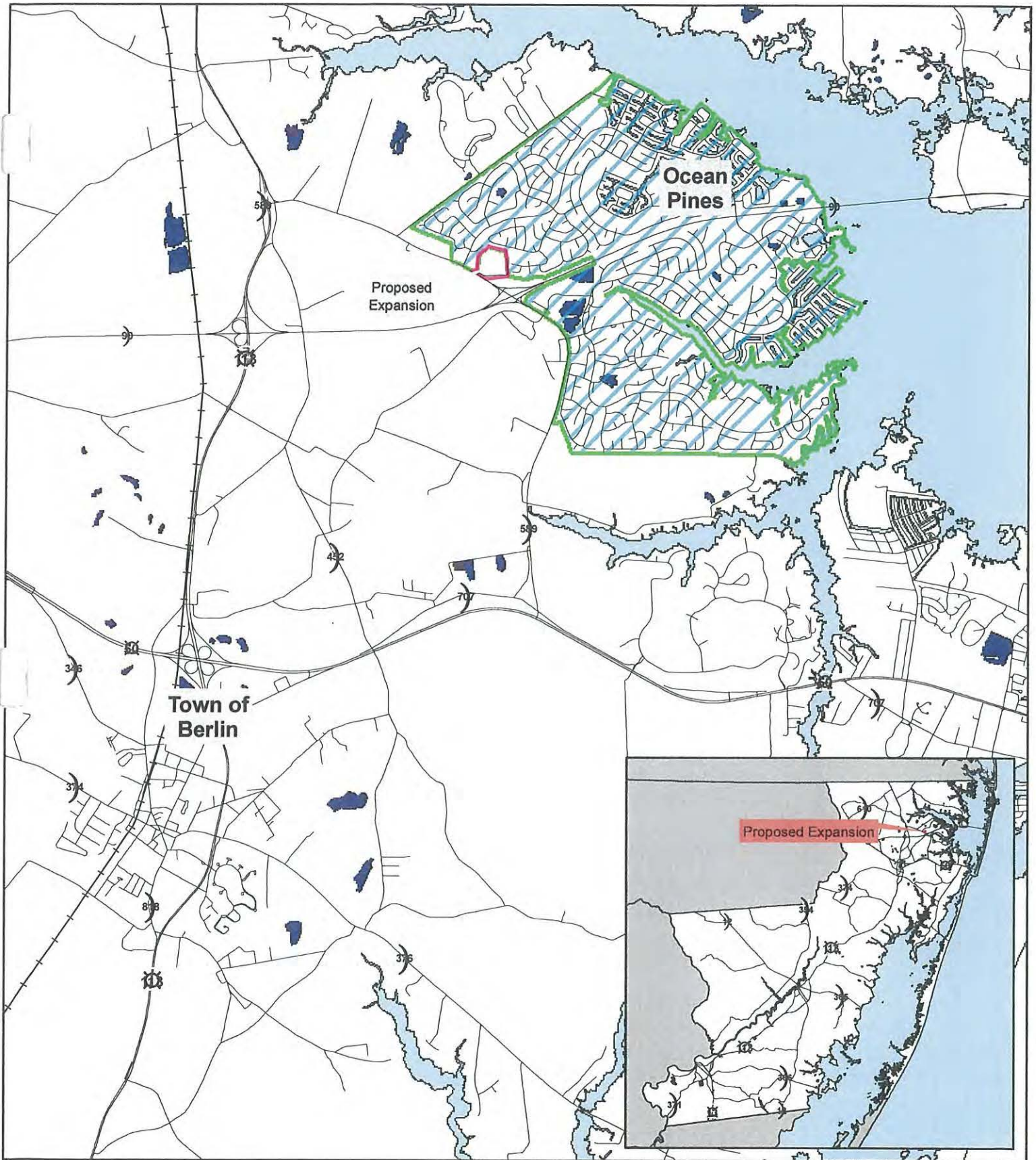

Judith O. Boggs





Madison J. Bunting, Jr.


Louise L. Gulyas


Merrill W. Lockfaw, Jr.


Virgil L. Shockley



-  Proposed Expansion
-  W1, Ocean Pines
-  S1, Ocean Pines

Ocean Pines W&S Sanitary Area



Ocean Pines Medical Office Complex
S-1 & W-1 Proposed
Case 2010-4

1 inch = 5,000 feet

Prepared by Worcester County Department of Development Review and Permitting, October 27, 2010.

RESOLUTION NO. 11 - 5

**RESOLUTION AMENDING THE COMPREHENSIVE WATER AND
SEWERAGE PLAN FOR WORCESTER COUNTY TO EXPAND
THE LIGHTHOUSE SOUND SANITARY SERVICE AREA
TO ADD THE OCEAN EXCHANGE XXXI, LLC PROPERTY**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners established the Lighthouse Sound Sanitary Area in which all public sewer facilities serving the Lighthouse Sound community are owned and operated by the County Commissioners; and

WHEREAS, the County Commissioners have received a request from Hugh Cropper IV on behalf of the property owners of the lands of Ocean Exchange XXXI, LLC, to amend the *Worcester County Comprehensive Water and Sewerage Plan* as shown on the map attached hereto entitled "Expanded Sanitary Area - Lighthouse Sound" to expand the Lighthouse Sound Sanitary Service Area to add sewer service to this proposed residential development from the Lighthouse Sound Wastewater Treatment Plant to provide public sewer service to the property shown as Parcel 37 on Worcester County Tax Map 10 (the "subject property"). The portion of the sewer planning expansion area occupied by the proposed development will be designated S-1 (immediate service). There is sufficient treatment capacity in the Lighthouse Sound Wastewater Treatment Plant to serve the subject property as proposed since the applicant proposes to transfer two (2) equivalent dwelling units (EDUs) of wastewater treatment capacity from the Lighthouse Sound Sanitary Service Area previously assigned to the Salt Grass Point Farm subdivision, by separate agreement; and

WHEREAS, pursuant to Section PW-305 of the Public Works article of the Code of Public Local Laws of Worcester County, Maryland, at least sixty-seven percent (67%) of the current property owners for the proposed subdivision of the property of Ocean Exchange XXXI, LLC, petitioned the County Commissioners to establish an expansion of the existing Lighthouse Sound Sanitary Service Area to add the subject property for purposes of providing public sewer service to accommodate the proposed uses for this planned residential subdivision on the border of the Lighthouse Sound, which will be located to the northwest side of the Lighthouse Sound Community on St. Martins Neck Road east of the Back Creek Road intersection; and

WHEREAS, the request specifies that the construction of the facilities will begin in August, 2011 and be completed by February, 2012; and

WHEREAS, the cost of Construction of the water and sewer infrastructure and connection of the planned subdivision will be the sole responsibility of the property owners served by the facilities; and

WHEREAS, the Worcester County Planning Commission, at their September 3, 2009 meeting, reviewed the amendment application to the Worcester County Water and Sewerage Plan and found the proposal consistent with the *Worcester County Comprehensive Development Plan*; and

WHEREAS, the County Commissioners held a duly advertised public hearing on March 15, 2011, to hear public comment on this amendment to the *Worcester County Comprehensive Water and Sewerage Plan* and expansion of the Lighthouse Sound Sanitary Service Area; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section PW 5-305 (Sanitary service areas, sub-areas and amendments) of the Code of Public Local Laws of Worcester County, Maryland, the Commissioners have determined that the proposed expansion of the service area is desirable and in the best interests of the comfort, convenience, health, safety, and welfare of the residents of the County in general, and that the facilities do not appear to be unduly detrimental to the environment of the County, and that the Construction, operation, and design of the facilities area in accordance with all required permits and applicable standards, and are feasible from both an engineering and economic standpoint.


NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The Comprehensive Water and Sewerage Plan for Worcester County is hereby amended as specified in the application of Hugh Cropper IV on behalf of the property owners of the lands of Ocean Exchange XXXI, LLC, to add the sewerage systems for the proposed residential subdivision, identified on Worcester County Tax Map 10, Parcel 37. The above referenced expansion of the existing Lighthouse Sound Sanitary Area is shown on the map entitled "Expanded Sanitary Area – Lighthouse Sound", dated August 26, 2009. Lighthouse Sound Wastewater Treatment plant will not have to be expanded to accommodate this expansion of the existing sanitary planning area.
2. The applicant's proposal for a re-assignment of two (2) equivalent dwelling units (EDUs) of treatment capacity from the Salt Grass Point Farm subdivision, which is already contained in the Lighthouse Sound Service Area, to the property proposed for expansion, is hereby granted.
3. The expansion of the existing Lighthouse Sound Sanitary Service Area is approved for the land described herein to provide public sewer to accommodate the proposed sanitary needs of the planned residential development.
4. The subject property will be designated S-1 (immediate service).
5. Once constructed and accepted by the County, the public sewer infrastructure will be owned and operated by the County.


AND BE IT FURTHER RESOLVED that this proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Environment Article of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon approval by MDE.

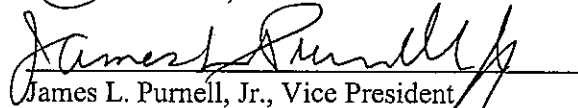
PASSED AND ADOPTED this 15th day of March, 2011.

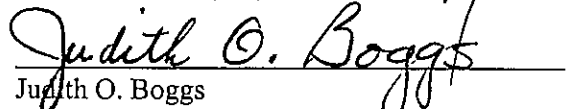
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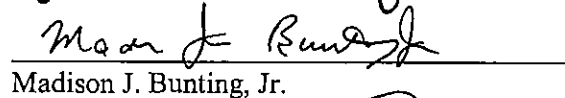

Gerald T. Mason
Chief Administrative Officer

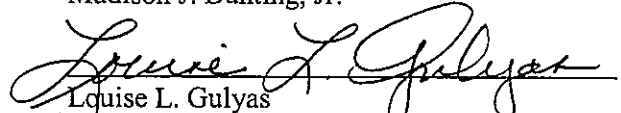
WORCESTER COUNTY COMMISSIONERS

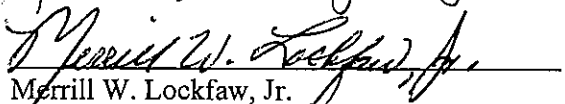

James C. Church, President



James L. Purnell, Jr., Vice President

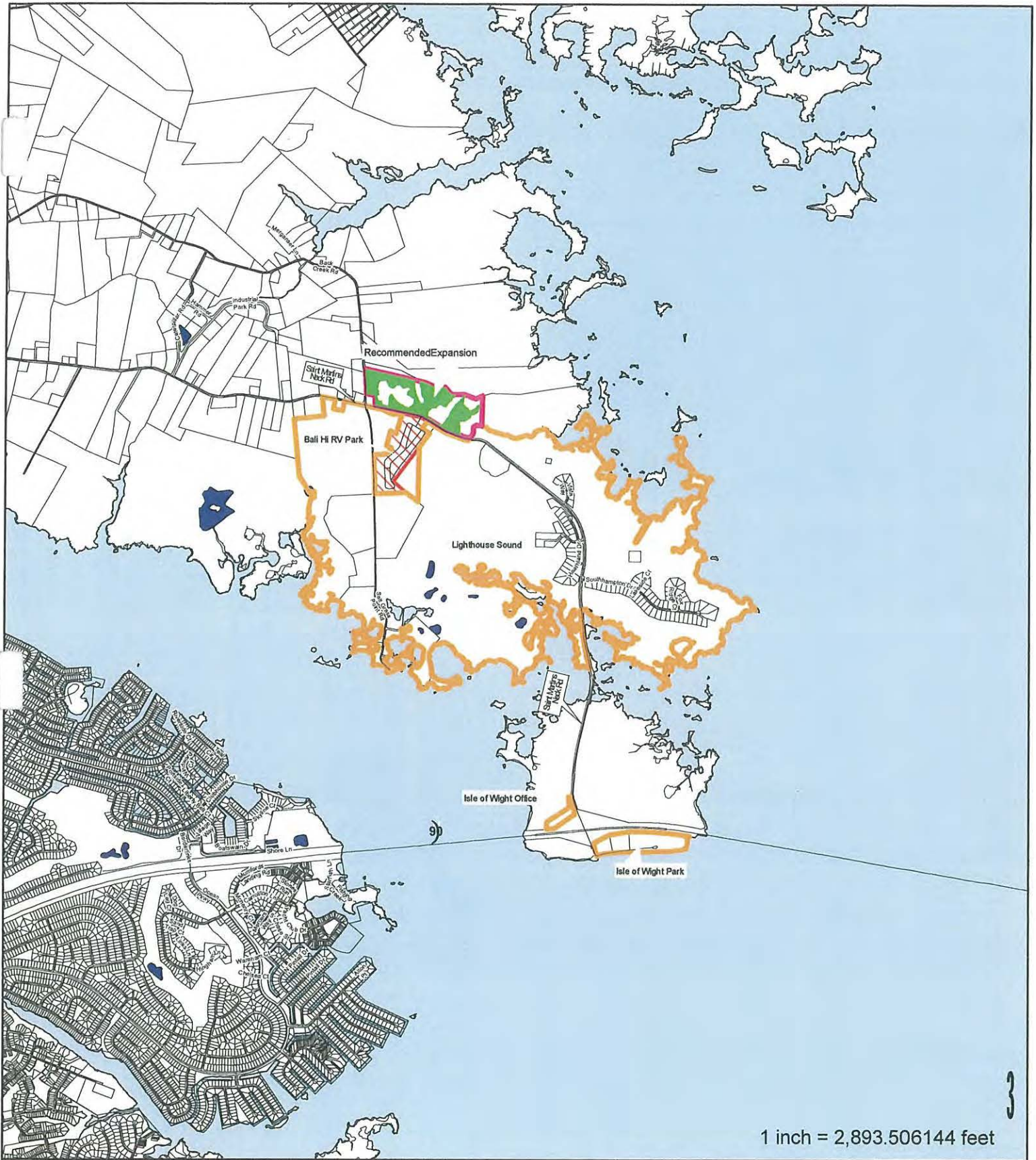

Judith O. Boggs






Madison J. Bunting, Jr.


Louise L. Gulyas


Merrill W. Lockfaw, Jr.


Virgil L. Shockley



-  Original Proposed Expansion
-  Recommended Expansion
-  S-1 - Present to 2 years
-  Private System



Expanded Sanitary Area Lighthouse Sound

Prepared by Worcester County Department of Development Review and Permitting, August 26, 2009.
Source: Wetlands, Maryland Department of Natural Resources.

RESOLUTION NO. 11 - 9

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY TO INCREASE THE CAPACITY OF THE OCEAN LANDINGS II SANITARY SERVICE AREA

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Mr. Mark Cropper, on behalf of Allen and Connie, LLC, owner, and CAMBR Company, Inc., applicant, to amend the *Comprehensive Water & Sewerage Plan for Worcester County* (hereafter *The Plan*) to increase capacity for the Ocean Landings II Sanitary Service Area which is located on the south side of US Route 50 (Ocean Gateway), east of Maryland Route 589 (Racetrack Road), and identified on Worcester County Tax Map 26 as Parcels 301, 302, 303, 305, and 455 ; and

WHEREAS, the cost of any sewer infrastructure improvements will be the sole responsibility of the property owners served by the facilities; and

WHEREAS, the Worcester County Planning Commission, at its April 7, 2011 meeting, reviewed the proposed amendment to the Worcester County Water and Sewerage Plan and found the proposal consistent with the *Worcester County Comprehensive Plan*; and

WHEREAS, the County Commissioners held a duly advertised public hearing on June 7, 2011, to consider the request to increase the capacity of the Ocean Landings II Sanitary Service Area; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the County Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water & Sewerage Plan*, as recommended by the Planning Commission, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

- I. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the application of Mr. Mark Cropper on behalf of Allen & Connie, LLC, owner, and CAMBR Company, Inc., applicant, to increase the existing wastewater treatment and disposal capacity of the sanitary service area to accommodate the needs of the Ocean Landings II project located within the existing Ocean Landings II Sanitary Service Area, which is located on the south side of US Route 50 (Ocean Gateway), east of Maryland Route 589 (Racetrack Road), and identified on Worcester County Tax Map 26 as Parcels 301, 302, 303, 305, and 455, and more specifically described as follows:
 - a. The applicant requests the amendment to increase the existing wastewater

treatment and disposal capacity of the sanitary service area from 23,000 gallons per day (77 EDUs) to a total of 30,000 gallons per day (100 EDUs). The additional treated effluent will be disposed of by spray irrigation.

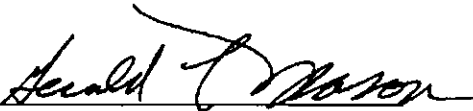
- b. The additional capacity (23 EDUs) is proposed to be used by the Ocean Landings II project and its outparcels. Any excess capacity available after final tenant selection and flow assignments will be available for distribution to other parcels within the sanitary service area if and when those needs are identified and agreed upon between the affected parties according to the shared facilities agreement in place for the sanitary service area.
- c. The proposed amendment requests no changes to the currently approved sanitary service area boundaries approved in the *Worcester County Comprehensive Water and Sewerage Plan*.


AND BE IT FURTHER RESOLVED that this proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Environment Article of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon approval by MDE.

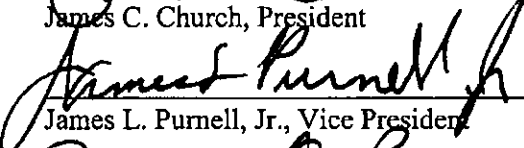
PASSED AND ADOPTED this 7th day of June, 2011.

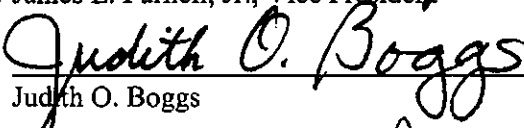
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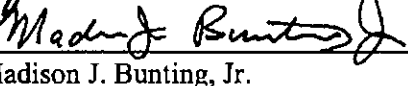
WORCESTER COUNTY COMMISSIONERS

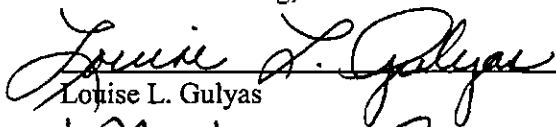

Gerald T. Mason
Chief Administrative Officer

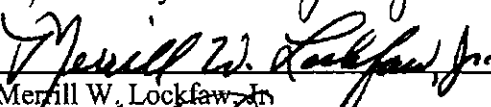

James C. Church, President



James L. Purnell, Jr., Vice President



Judith O. Boggs


Madison J. Bunting, Jr.


Louise L. Gulyas


Merrill W. Lockfaw, Jr.


Virgil L. Shockley



RESOLUTION NO. 11 - 17

**RESOLUTION AMENDING THE COMPREHENSIVE WATER AND
SEWERAGE PLAN FOR WORCESTER COUNTY -
ADDITION OF CAPITAL IMPROVEMENTS PLAN AND REVISION OF
WATER AND SEWER PLANNING AREAS - SNOW HILL SERVICE AREA -
ADDENDUM TO THE ORIGINAL RESOLUTION**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the Worcester County Commissioners previously approved Water and Sewer Amendment SW-2010-5 on December 21, 2010 by Resolution No. 10-37; and

WHEREAS, the Worcester County Commissioners have received a copy of Resolution No. 2011-3 adopted by the Mayor and Council of Snow Hill, Maryland on June 14, 2011 amending the Comprehensive Water and Sewerage Service Area designations for Snow Hill to correspond with "Priority Funding Areas" within Snow Hill as requested by the Maryland Department of Planning for consistency which was incompletely refined in the prior Water and Sewerage Plan amendment submitted to the Worcester County Commissioners and adopted by Resolution No. 10-37 on December 21, 2010; and

WHEREAS, the Worcester County Commissioners have determined that these amendments reflect a simple refinement to the maps previously approved by the County Commissioners and do not constitute a major change which would require additional review by the Worcester County Planning Commission since their prior review and favorable recommendation on October 7, 2010 or an additional public hearing subsequent to the hearing conducted by the Worcester County Commissioners on December 21, 2010 at which there was no public comment; and

WHEREAS, the County Commissioners reviewed the request for addendum by the Mayor and Council of Snow Hill, Maryland and the staff report regarding this matter and as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, determined that the proposed addendum to the previously approved amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to add the Snow Hill Water and Wastewater Capital Improvements Program Projects list for years 2010-2016 and revision of the water and sewer planning areas, as recommended by the Planning Commission, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the application of the Town of Snow Hill to reflect this addendum to the originally approved amendment approved by the Worcester County Commissioners by Resolution No. 10-37 adopted on December 21, 2010. This addendum includes a refined representation of proposed water and sewer planning areas as shown on the maps attached hereto and made a part hereof entitled "Proposed Water Planning Areas" and "Proposed Sewer Planning Areas". These maps are dated May 26, 2011, were slightly revised to provide PFA (Priority Funding Area) compliance to the amendment, and are intended to facilitate final approval of the amendment by the State. The refinements shown on these proposed planning area maps are the only changes to the original

amendment.


AND BE IT FURTHER RESOLVED that this proposed addendum to the originally approved amendment to the Worcester County Comprehensive Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Environment Article of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon approval by MDE.


AND, BE IT FURTHER RESOLVED that this Resolution shall take effect upon its passage.

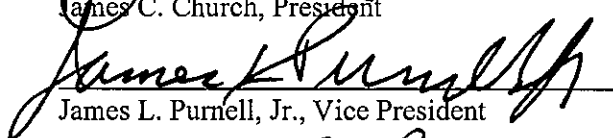
PASSED AND ADOPTED this 21st day of June, 2011.

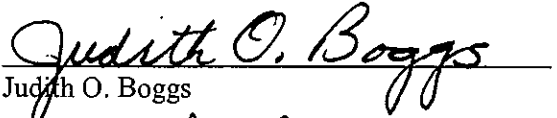
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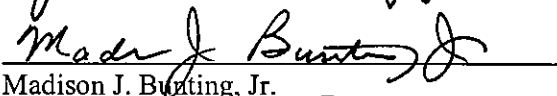
WORCESTER COUNTY COMMISSIONERS

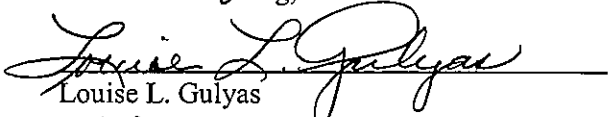

Gerald T. Mason
Chief Administrative Officer

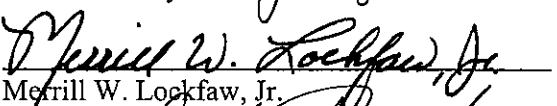

James C. Church, President

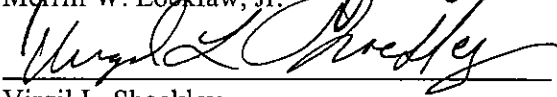

James L. Purnell, Jr., Vice President

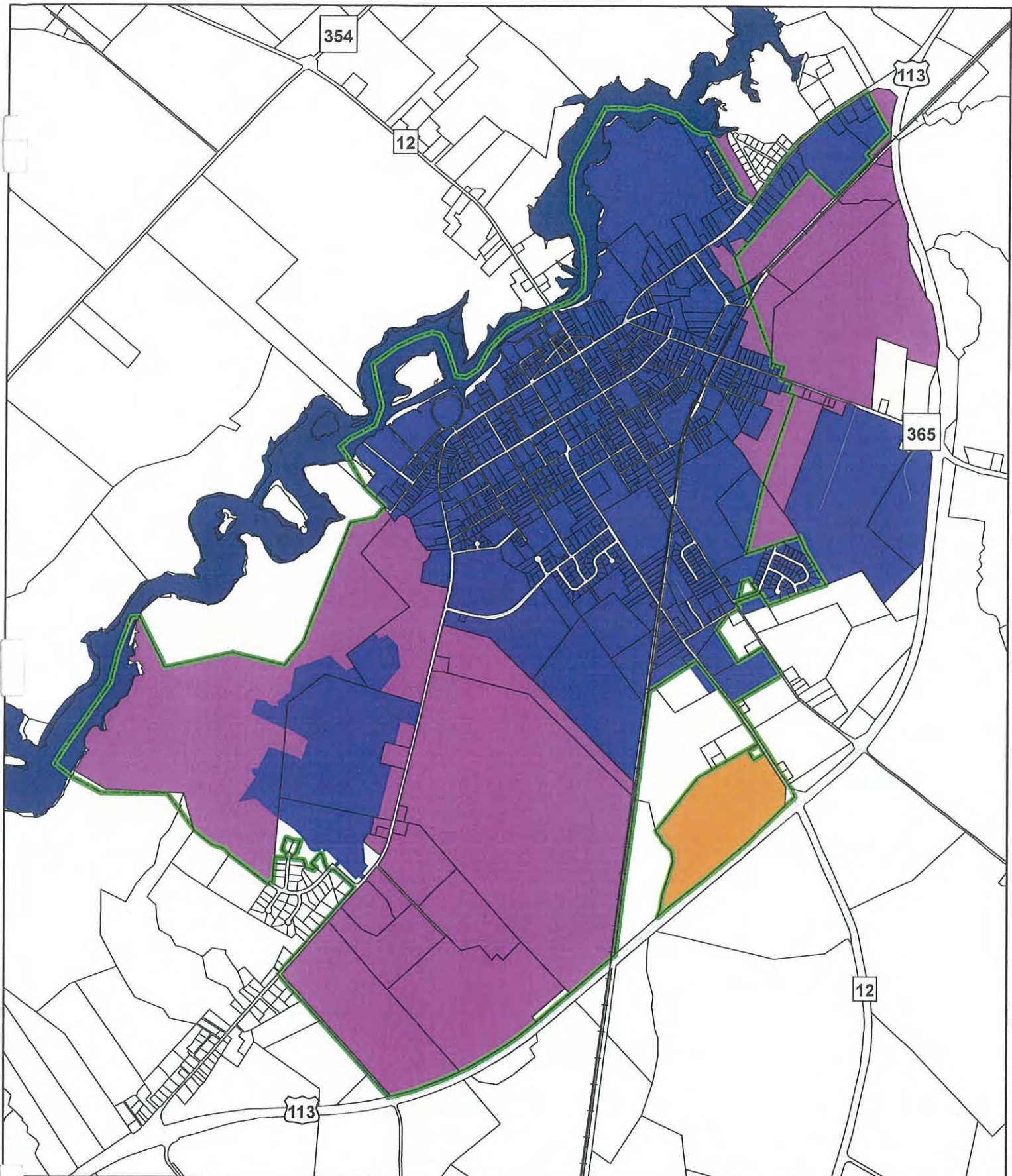

Judith O. Boggs


Madison J. Bunting, Jr.


Louise L. Gulyas


Merrill W. Lockfaw, Jr.


Virgil L. Shockley



-  Corporate Limits
- Water Planning Areas**
-  W1
-  W2
-  W3



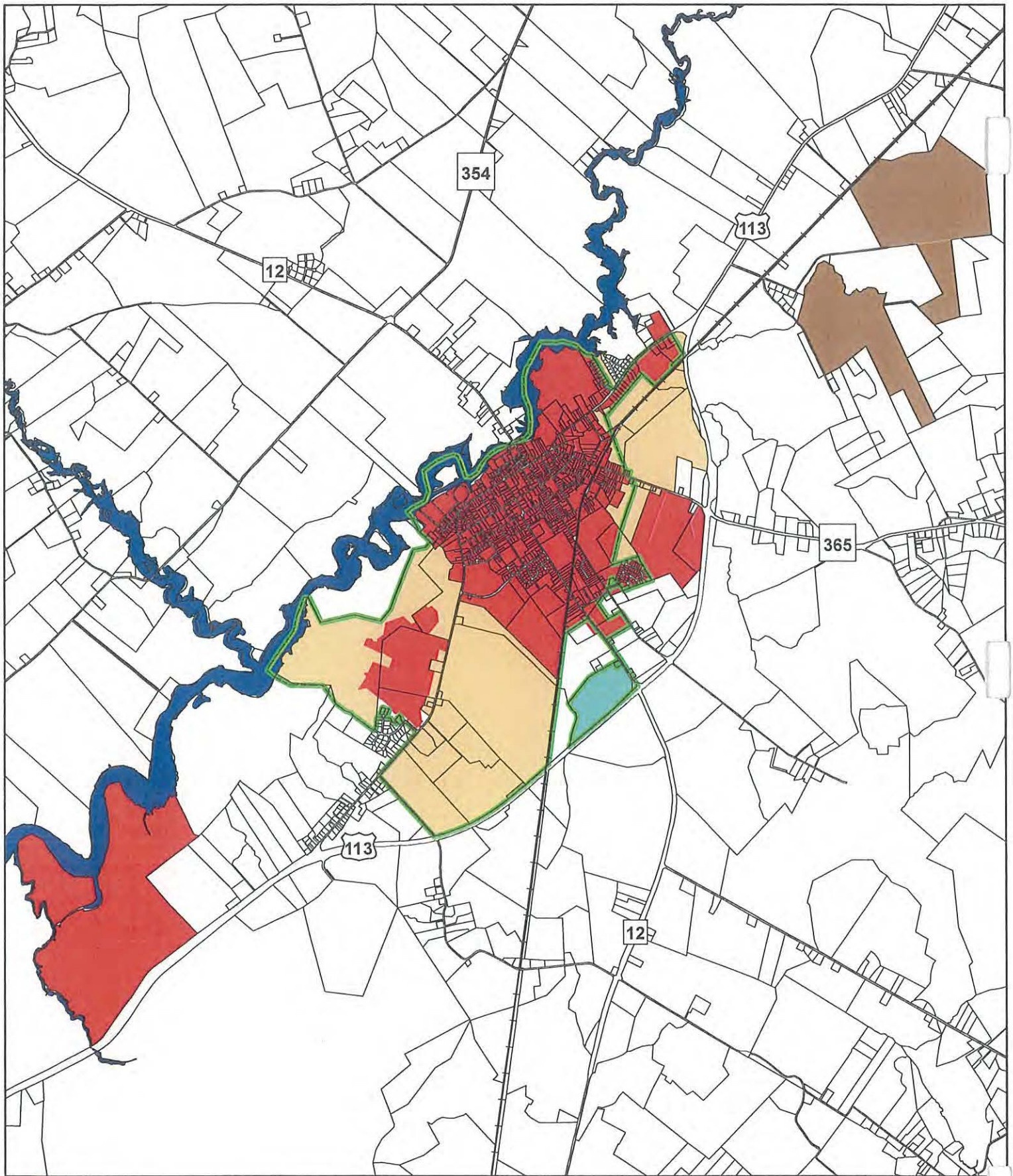
1 inch = 2,000 feet


Drawn By: MDD
Reviewed By: KLH

Proposed Water Planning Areas

Snow Hill and Environs

Prepared by Worcester County Department of Development Review and Permitting, May 26, 2011.
Source: 1994 Comprehensive Water and Sewerage Plan, Worcester County, 1994 (as amended).
H(MDD):GIS Data\Sanitary Services\Planning Areas




 Corporate Limits

Sewer Planning Areas

 S1

 S2

 S3

 Spray Site



1 inch = 4,000 feet

Drawn By:
MDD

Reviewed By:
KLH

Proposed Sewer Planning Area

Snow Hill and Environs

Prepared by Worcester County Department of Development Review and Permitting, May 26, 2011.
Source: 1994 Comprehensive Water and Sewerage Plan, Worcester County, 1994 (as amended).
H(MDD):GIS Data\Sanitary Services\Planning Areas\

RESOLUTION NO. 11 - 24

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY FOR THE STEEN ASSOCIATES, INC. PROPERTY - OCEAN PINES SANITARY SERVICE AREA

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage Plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received an application filed by Soulé and Associates, engineer, and Mark Cropper, attorney, on behalf of Steen Associates Inc. requesting a proposed amendment to the *Worcester County Water and Sewerage Plan for Worcester County*. The application for amendment to the Water and Sewerage Plan seeks to add the water and sewerage systems for a proposed 60 lot subdivision on a portion of the properties shown as Parcels 67 and 74 on Worcester County Tax Map 21, located north of Gum Point Road and south of the current boundary of the Ocean Pines Sanitary Service Area.. The applicant also proposes the sanitary services area for the project be re-designated from categories S-6 and W-6 (no planned service) to S-1 and W-1 (Present to 2-years); and

WHEREAS, the application was previously reviewed and approved by the County Commissioners in conjunction with the Ocean Pines Service Area expansion, all of which was adopted by Resolution No. 10-15 on April 20, 2010, however the Maryland Department of the Environment (MDE) discovered a technical error in the reference to the previous water and sewer categories which were incorrectly referenced as S-3 and W-3 (future service in 6 to 10-years) when they were actually previously designated as S-6 and W-6 (no planned service), which led MDE to deny the previous Water and Sewerage Plan Amendment and request a correction; and

WHEREAS, the mapping error has been corrected and resubmitted for approval; and

WHEREAS, the Worcester County Planning Commission, at their meeting of July 7, 2011, reviewed the corrected application for amendment to the Worcester County Water and Sewerage Plan and found that the proposal is consistent with the Worcester County Comprehensive Plan and the zoning category for the subject property; and

WHEREAS, the County Commissioners held a duly advertised public hearing on September 6, 2011 to hear public comment on the requested amendments to the Worcester County Water and Sewerage Plan; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the County Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan*, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:


1. The provisions of Resolution No. 10-15 Expanding the Ocean Pines Service Area for the Steen Associates, Inc. Property adopted by the County Commissioners on April 20, 2010 shall remain in full force and effect, while the provisions of said resolution with respect to the Comprehensive Water and Sewerage Plan amendment shall be replaced by this resolution; and

2. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the application of Soulé and Associates, engineer, and Mark Cropper, attorney, on behalf of Steen Associates Inc. to add the water and sewerage systems for a proposed 60 lot subdivision (the "Steen Subdivision") on a portion of the properties shown as Parcels 67 and 74 on Worcester County Tax Map 21, located north of Gum Point Road in the Ocean Pines Service Area, and to re-designate the subdivision areas as corrected from categories S-6 and W-6 (no planned service) to S-1 and W-1 (Present to 2-years).

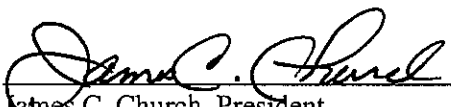
AND BE IT FURTHER RESOLVED that these proposed amendments to the Worcester County Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.

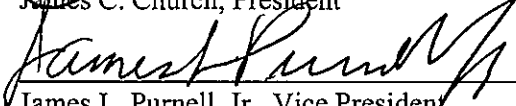
PASSED AND ADOPTED this 6th day of September, 2011.

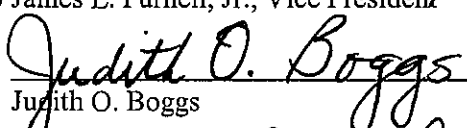
ATTEST:



Gerald T. Mason
Chief Administrative Officer

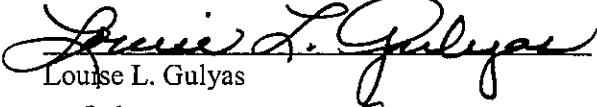
WORCESTER COUNTY COMMISSIONERS

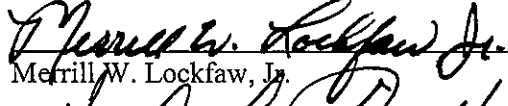

James C. Church, President

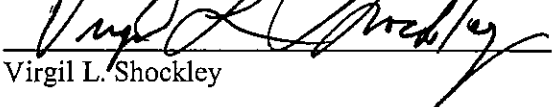

James L. Purnell, Jr., Vice President

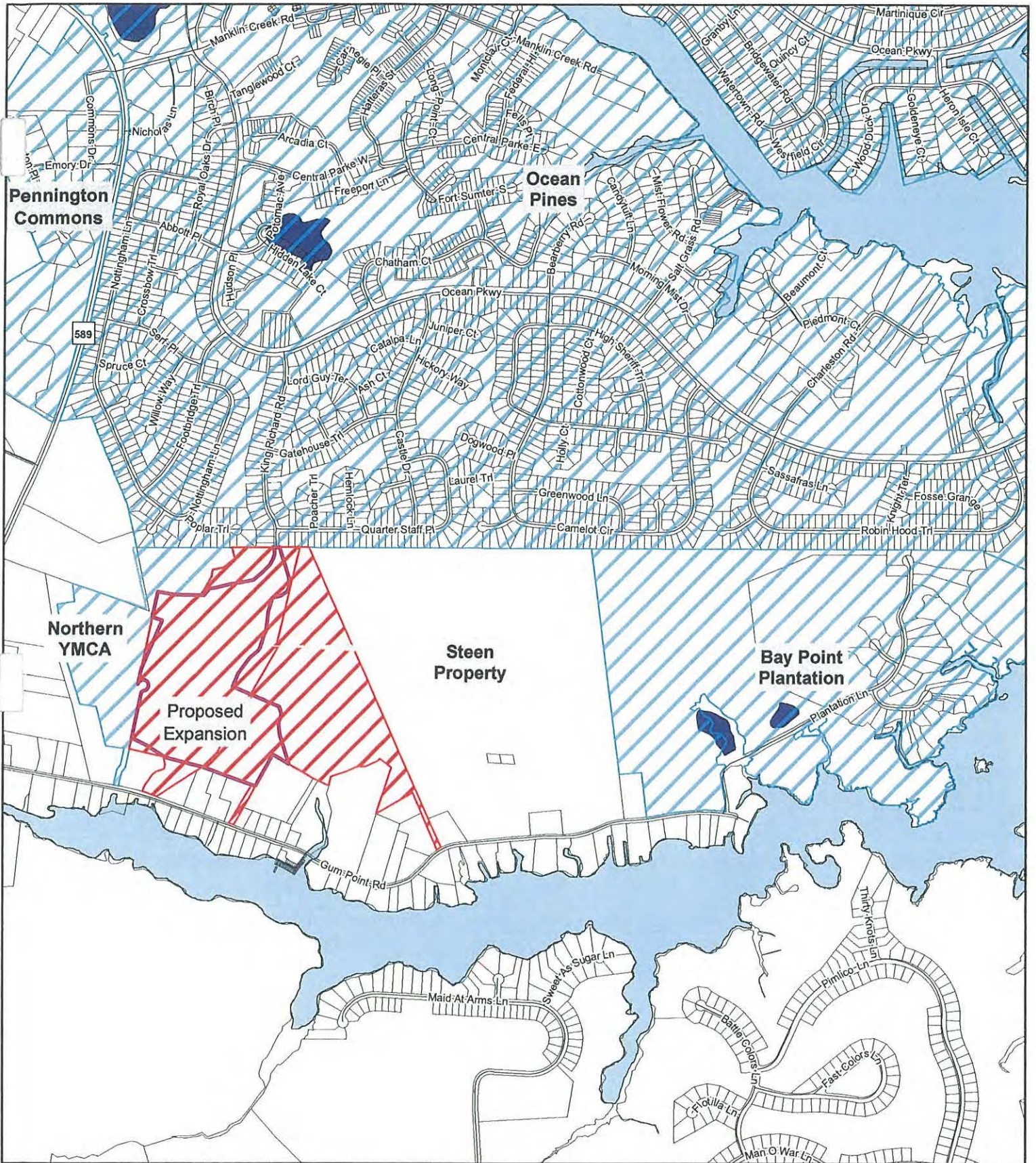

Judith O. Boggs


Madison J. Bunting, Jr.





Louise L. Gulyas


Merrill W. Lockfaw, Jr.


Virgil L. Shockley



Water Planning Areas

-  W1 - Present to 2 Years
-  W6 - No Future Service
-  Proposed Expansion

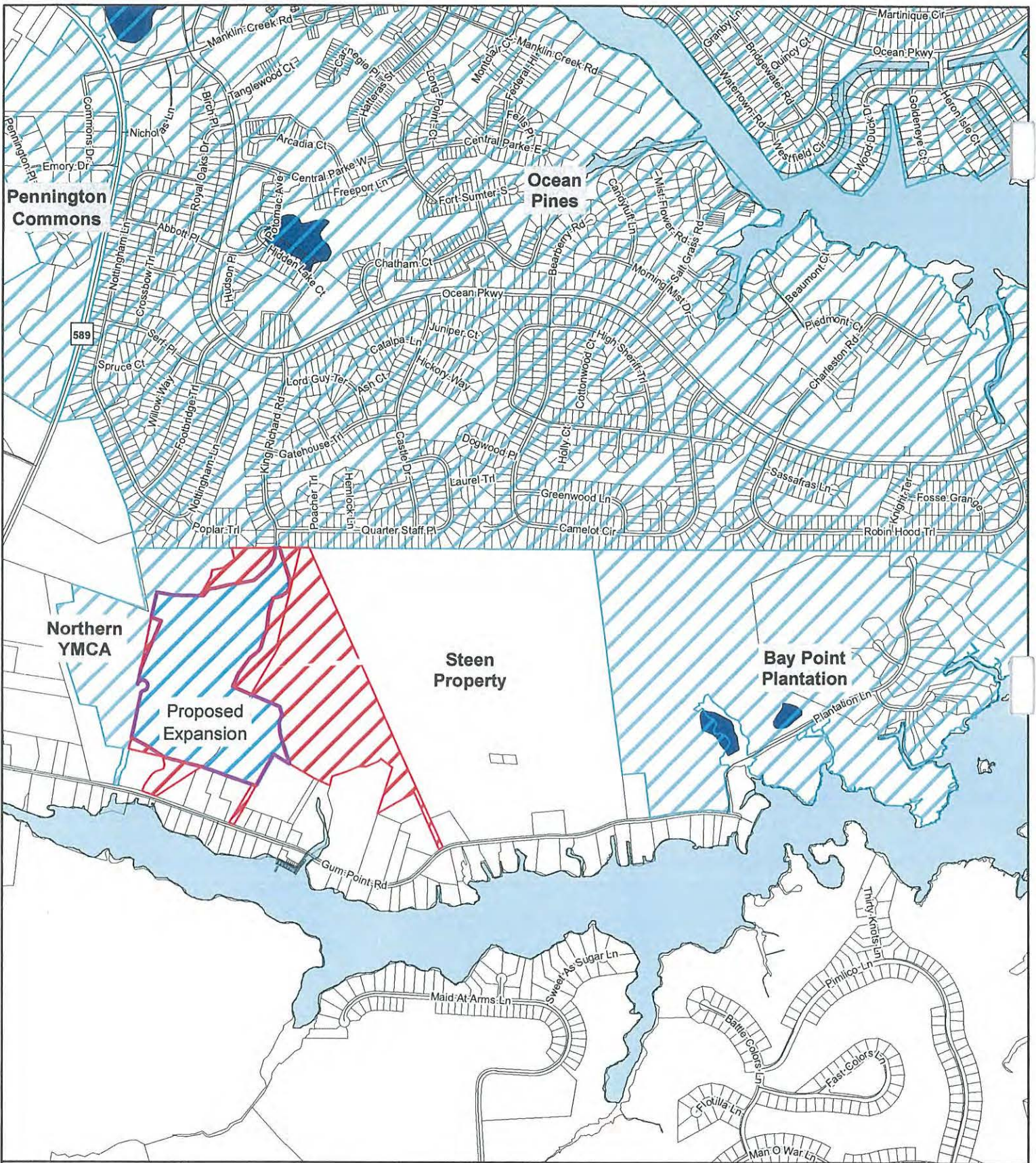


1 inch = 1,200 feet




Existing Water Planning Areas

Steen Subdivision of Ocean Pines
 W-1 Proposed
 Case 2010-01

Prepared by Worcester County Department of Development Review and Permitting, May 11, 2011.
 Source: 1994 Comprehensive Water and Sewerage Plan, Worcester County, 1994 (as amended).



Water Planning Areas

-  W1 - Present to 2 Years
-  W6 - No Future Service
-  Proposed Expansion



1 inch = 1,200 feet

Proposed Water Planning Areas

Steen Subdivision of Ocean Pines

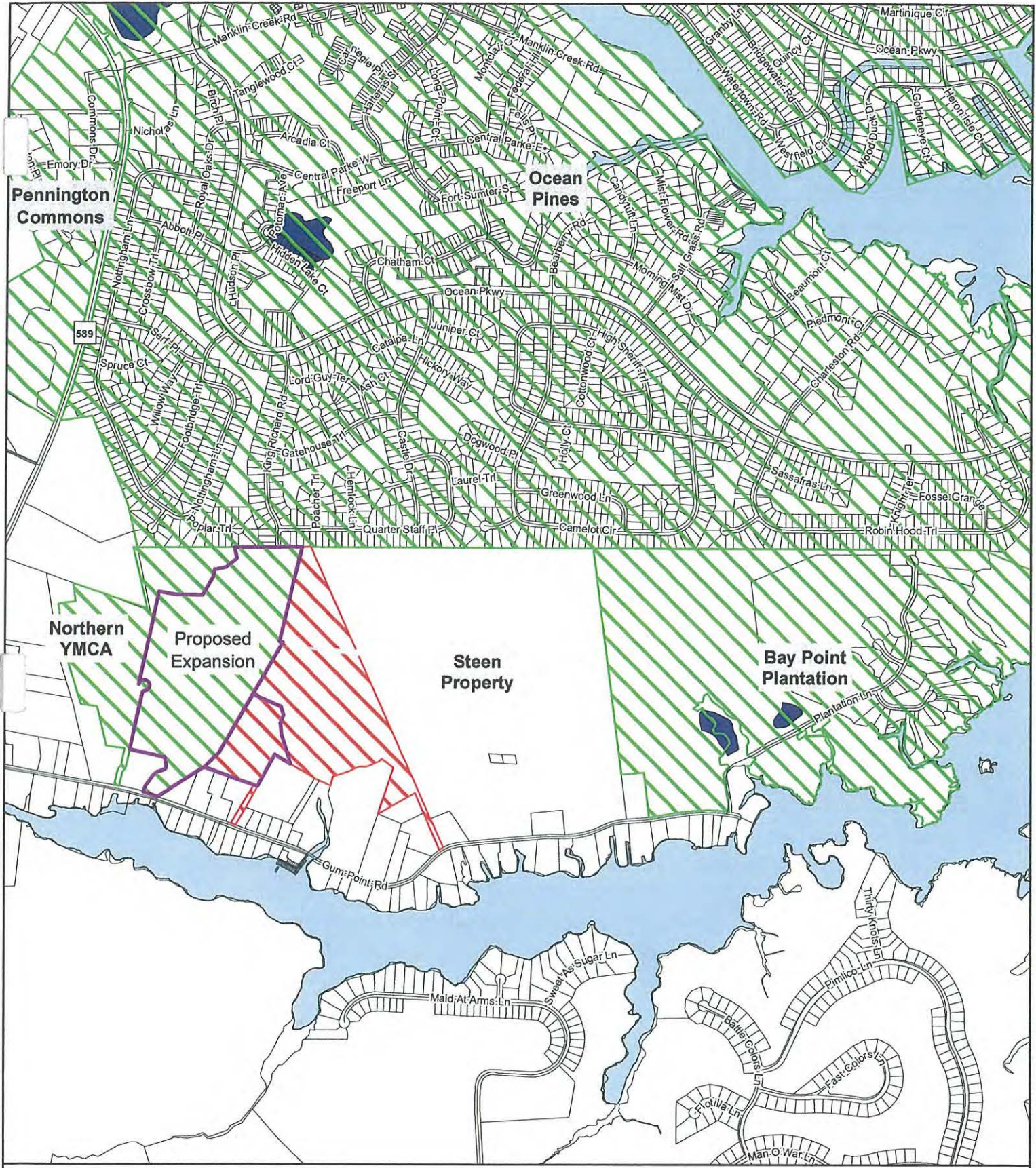
W-1 Proposed

Case 2010-01




Prepared by Worcester County Department of Development Review and Permitting, May 11, 2011.

Source: 1994 Comprehensive Water and Sewerage Plan, Worcester County, 1994 (as amended).

H(MDD):GIS Data\Sanitary Services\Water and Sewer Amendments\Ocean Pines\OceanPines Steen 2010-01\Maps



Sewer Planning Areas

-  S1 - Present to 2 Years
-  S6 - No Future Service
-  Proposed Expansion - Initially S6
-  Proposed Expansion

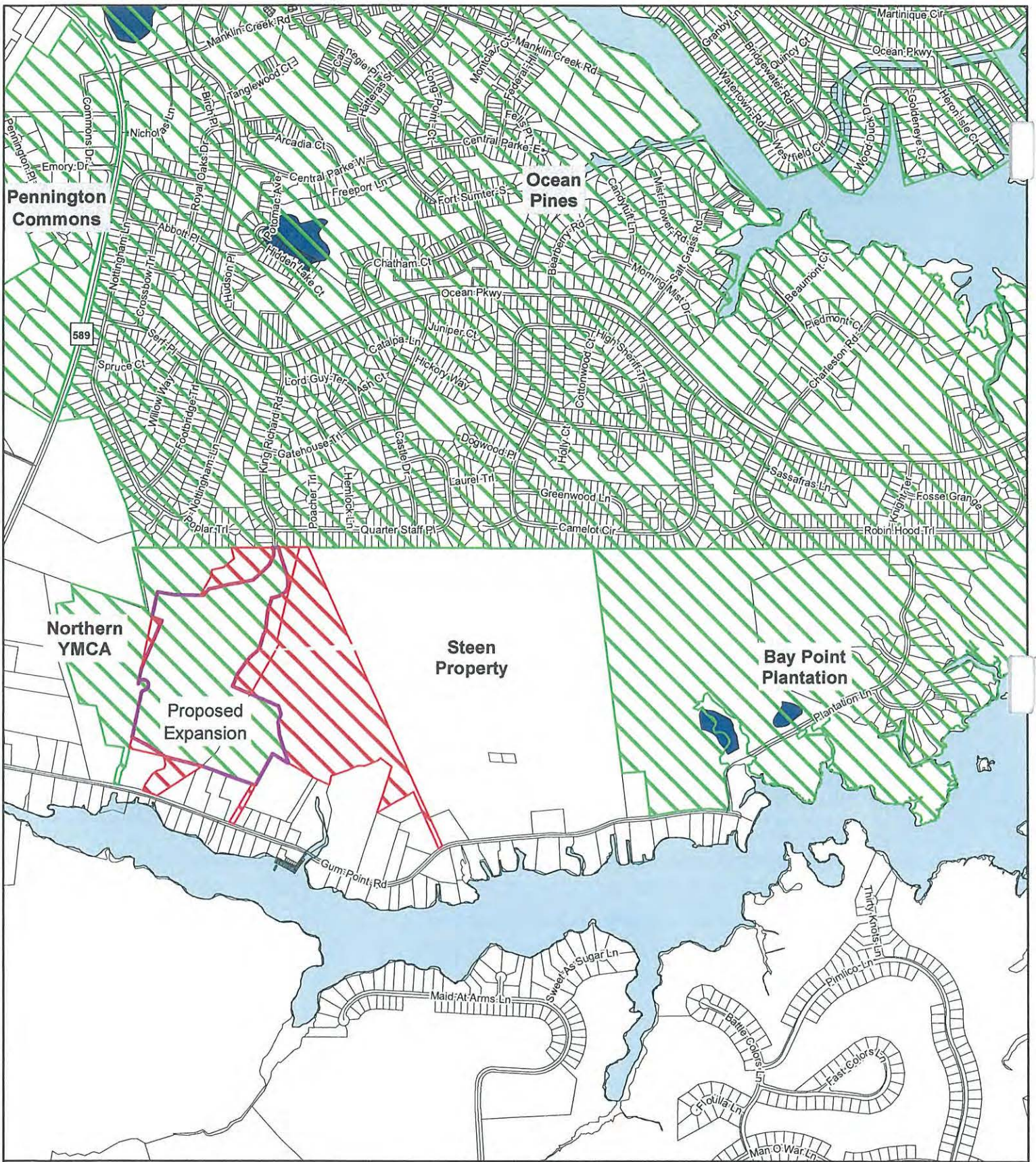


1 inch = 1,200 feet




Existing Sewer Planning Areas

Steen Subdivision of Ocean Pines
S-1 Proposed
Case 2010-01

Prepared by Worcester County Department of Development Review and Permitting, May 11, 2011.
Source: 1994 Comprehensive Water and Sewerage Plan, Worcester County, 1994 (as amended).



Sewer_Planning_Areas

-  S1 - Present to 2 Years
-  S6 - No Future Service
-  Original Proposed



1 inch = 1,200 feet

Proposed Sewer Planning Areas

Steen Subdivision of Ocean Pines
S-1 Proposed
Case 2010-01

Prepared by Worcester County Department of Development Review and Permitting, May 11, 2011.
Source: 1994 Comprehensive Water and Sewerage Plan, Worcester County, 1994 (as amended).

RESOLUTION NO. 11 - 27

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY TO ADD THE OCEAN PINES COMMERCIAL SUB-AREA FOR WATER PLANNING DESIGNATION W-1 IN THE OCEAN PINES SANITARY SERVICE AREA

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Mr. John Ross, Deputy Director of Public Works, on their behalf, requesting a proposed amendment to the *Comprehensive Water & Sewerage Plan for Worcester County* (hereafter *The Plan*) to add the proposed Ocean Pines Commercial Sub-Area to the water planning area for the Ocean Pines Sanitary Service Area. The Ocean Pines Commercial Sub-Area is located on both sides of Cathell Road along the west side of Racetrack Road (MD 589) and west of the current boundary of the Ocean Pines Sanitary Service Area, as shown on the map attached hereto and labeled "Proposed W-1 Expansion". The applicant proposes the water services area for the proposed sub-area be re-designated from planning category W-6 (no planned service) to W-1 (present to 2 years). The applicant further proposes that the commercial sub-area be allocated one hundred twenty-five (125) equivalent dwelling units (EDUs) of water service capacity from the Ocean Pines Sanitary Service Area; and

WHEREAS, the Worcester County Planning Commission, at its September 1, 2011 meeting, reviewed the proposed amendment to the Worcester County Water and Sewerage Plan and found the proposal consistent with the *Worcester County Comprehensive Plan*; and

WHEREAS, the County Commissioners held a duly advertised public hearing on November 1, 2011, to consider the request; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the County Commissioners have determined that the proposed amendment to the *Worcester County Comprehensive Water & Sewerage Plan*, as recommended by the Planning Commission, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the application of Mr. John Ross, Deputy Director of Public Works, on behalf of the County Commissioners of Worcester County, Maryland, to add the proposed Ocean Pines Commercial Sub-Area, located on both sides of Cathell Road along the west side of Racetrack Road (MD 589) and west of the current boundary of the Ocean Pines Sanitary Service Area, as shown on the map attached hereto and labeled "Proposed W-1 Expansion", to the water planning area for the Ocean Pines Sanitary Service Area; and


2. The Ocean Pines Commercial Sub-Area is hereby re-designated from planning category W-6 (no planned service) to W-1 (present to 2 years); and
3. The Ocean Pines Commercial Sub-Area is hereby allocated one hundred twenty-five (125) equivalent dwelling units (EDUs) of water service capacity from the Ocean Pines Sanitary Service Area to serve the properties within the sub-area.


AND BE IT FURTHER RESOLVED that this proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Environment Article of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon approval by MDE.

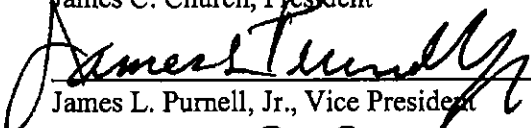
PASSED AND ADOPTED this 1st day of November, 2011.

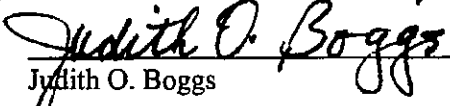
ATTEST:

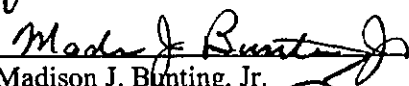
WORCESTER COUNTY COMMISSIONERS

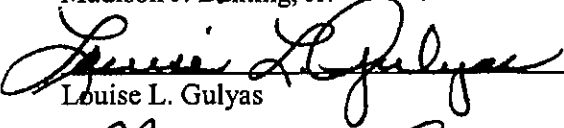

 Gerald T. Mason
 Chief Administrative Officer

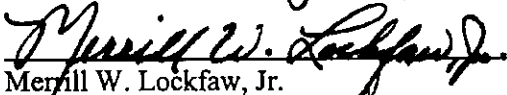

 James C. Church, President

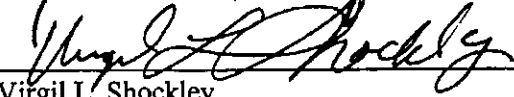

 James L. Purnell, Jr., Vice President

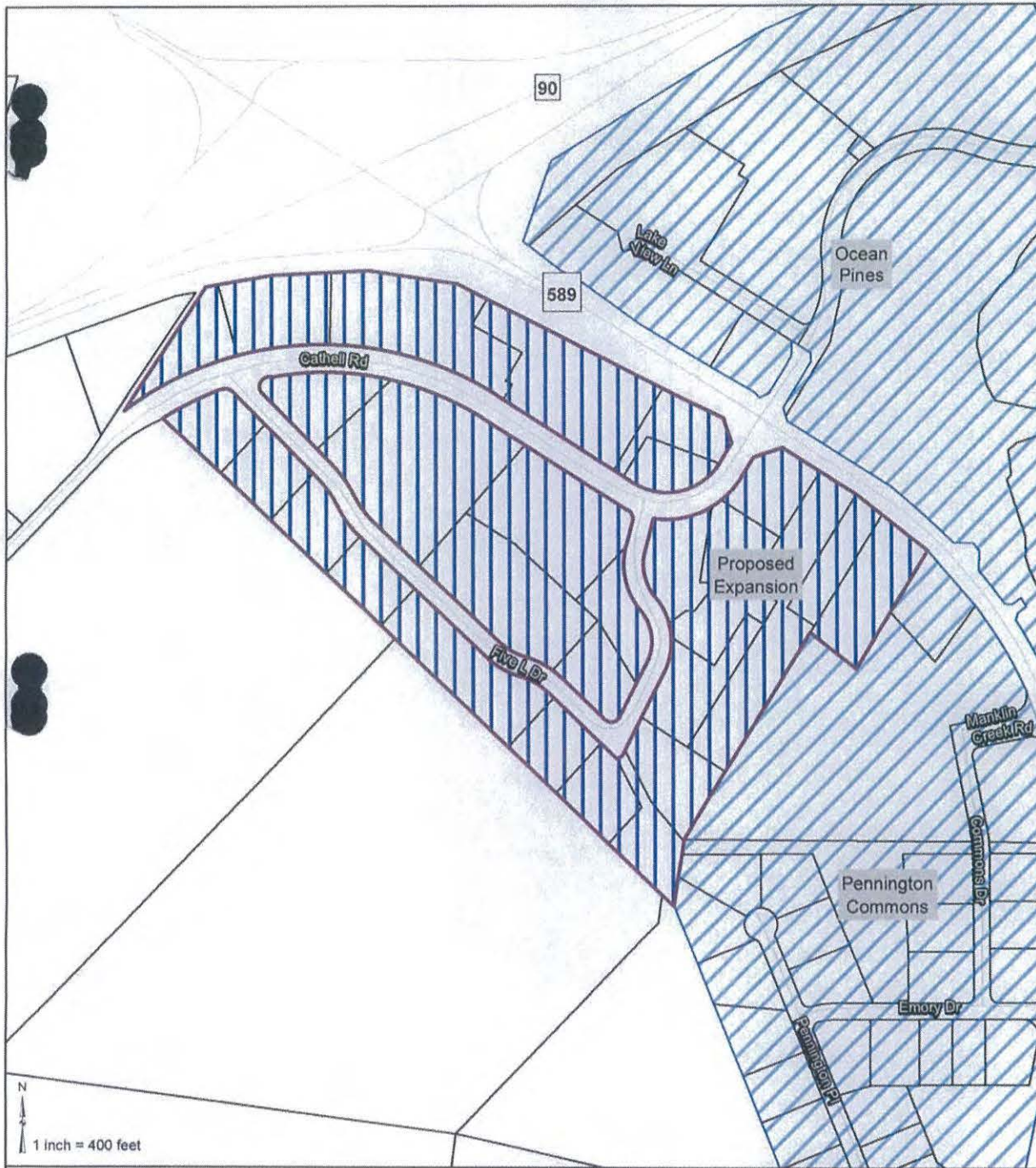

 Judith O. Boggs


 Madison J. Bunting, Jr.


 Louise L. Gulyas


 Merrill W. Lockfaw, Jr.


 Virgil L. Shockley



Existing Water Planning Areas

Pines Plaza
W-1 Proposed
Case 2011-02



Proposed W-1 Expansion

W1 - Present to 2 Years

Prepared by Worcester County Department of Development Review and Permitting, August 25, 2011.

Source: 1994 Comprehensive Water and Sewerage Plan, Worcester County, 1994 (as amended).

H:\MDD\GIS Data\Sanitary Services\Water and Sewer Amendments\Ocean Pines\OceanPines_PinesPlaza_2011-02\Maps

RESOLUTION NO. 12 - 21

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND
SEWERAGE PLAN FOR WORCESTER COUNTY TO ADD THE
OCEAN DOWNS SANITARY SERVICE AREA

WHEREAS, the County Commissioners of Worcester County, Maryland (hereafter "County Commissioners") adopted the *Comprehensive Water and Sewerage Plan for Worcester County* (hereafter "The Plan") on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received an application filed by John Salm on behalf of the property owner, William Rickman of Ocean Enterprises 589, LLC requesting a proposed amendment to The Plan for the subject property shown as Parcel 99 on Worcester County Tax Map 21, located on the east side of Maryland Route 589 (Racetrack Road), north of Maryland Route 707 (Grays Corner Road). The application for amendment to The Plan seeks to designate the subject property as a sewer planning area, category S-1 (Present to 2-years), in order to receive sewer service by contract from the Ocean Pines Sanitary Service Area to the north. The applicant is proposing an initial allocation of sixty-three (63) equivalent dwelling units (EDUs) with an ultimate allocation of three hundred thirty-three (333) EDUs of sewerage treatment capacity from the Ocean Pines Sanitary Service Area to serve the subject property; and

WHEREAS, the cost of any sewer infrastructure improvements will be the sole responsibility of the property owners served by the facilities; and

WHEREAS, the Worcester County Planning Commission, at their meeting of July 12, 2012, reviewed the proposed amendment to The Plan and found that the proposal is consistent with the *Worcester County Comprehensive Plan* and the zoning category for the subject property; and

WHEREAS, the County Commissioners held a duly advertised public hearing on September 4, 2012 to hear public comment on the requested amendment to The Plan as well as establishment of the Ocean Downs Sanitary Service Area; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the County Commissioners have determined that the proposed amendment to The Plan, as recommended by the Planning Commission, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

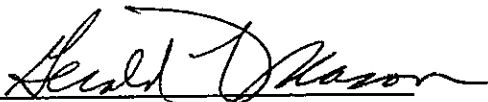
1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the application of John Salm on behalf of the property owner, William Rickman of Ocean Enterprises 589, LLC, to designate the subject property shown as Parcel 99 on Worcester County Tax Map 21, located on the east side of Maryland Route 589 (Racetrack Road), north of Maryland Route 707 (Grays Corner Road) as a sewer planning area, category S-1 (Present to 2-years), to be known as the Ocean Downs Sanitary Service Area, in order to receive sewer service by contract from the Ocean Pines Sanitary Service Area to the north. The Ocean Downs Sanitary Service Area will receive an initial allocation of sixty-three (63) equivalent dwelling units (EDUs) with an ultimate allocation of three hundred thirty-three (333) EDUs of sewerage treatment capacity from the Ocean Pines Sanitary Service Area to serve the subject property.

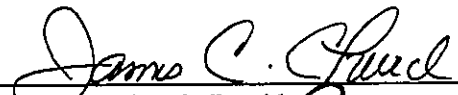
AND BE IT FURTHER RESOLVED that this proposed amendment to The Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.

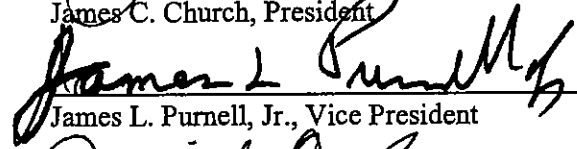
PASSED AND ADOPTED this 4th day of September, 2012.

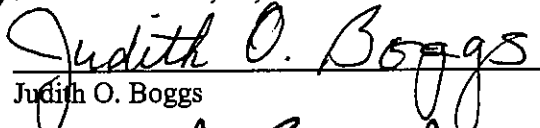
ATTEST:

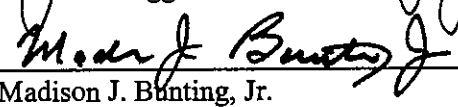
WORCESTER COUNTY COMMISSIONERS

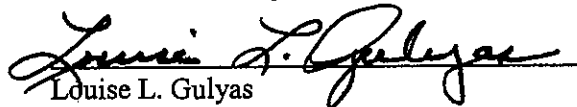

Gerald T. Mason
Chief Administrative Officer

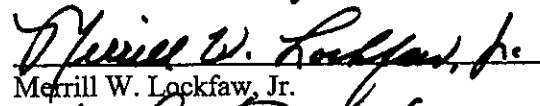

James C. Church, President



James L. Purnell, Jr., Vice President


Judith O. Boggs


Madison J. Bunting, Jr.


Louise L. Gulyas


Merrill W. Lockfaw, Jr.


Virgil L. Shockley

RESOLUTION NO. 12-22

**RESOLUTION APPROVING THE ESTABLISHMENT OF THE
OCEAN DOWNS SANITARY SERVICE AREA**

WHEREAS, pursuant to Section PW 5-305 of the Public Works Article of the Code of Public Local Laws of Worcester County, Maryland, at least sixty-seven percent (67%) of the current property owners in the proposed Ocean Downs Sanitary Service Area petitioned the County Commissioners of Worcester County, Maryland (hereafter "County Commissioners") to establish a sanitary service area for the purposes of providing a wastewater collection system, pump station, and force main to connect to the Ocean Pines sewer collection system to provide public sewer service to accommodate the existing horse racetrack and video lottery facility and remaining land on the subject property shown as Parcel 99 on Worcester County Tax Map 21, located on the east side of Maryland Route 589 (Racetrack Road), north of Maryland Route 707 (Grays Corner Road). Proposed service will be provided by contract for an initial service capacity level of sixty-three (63) equivalent dwelling units (EDU's) at a rate of 300 gallons per EDU and an ultimate build-out potential of three hundred thirty three (333) EDU's from the existing Ocean Pines Sanitary Service Area; and

WHEREAS, the County Commissioners have evaluated the petition and have found that the proposed establishment of the Ocean Downs Sanitary Service Area and facilities are desirable for the comfort, convenience, health, safety, and welfare of the people that will be served by the facilities; is feasible for construction and operation of the facilities from an economic and engineering standpoint; is in the best interest of the public health, safety, and welfare of all residents of the County; will not be unduly detrimental to the environment of the County; and the design and operation of the facilities will be in accordance with all required permits and applicable standards; and

WHEREAS, the cost of construction of the facilities and connection to the Ocean Pines sewer collection system will be the sole responsibility of the property owners served by the facilities; and

WHEREAS, the County Commissioners held a duly advertised public hearing on September 4, 2012 to consider the request for establishment of the proposed service area.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland, that:

1. The Ocean Downs Sanitary Service Area is hereby established and shall comprise all of the real property located on the on the east side of Maryland Route 589 (Racetrack Road), north of Maryland Route 707 (Grays Corner Road) in the Third Tax District of Worcester County, Maryland, and identified as Parcel 99 on Worcester County Tax Map 21, comprising approximately 166.55 acres of land.
2. The Ocean Downs Sanitary Service Area is established for the land described herein to provide a wastewater collection system consisting of a combination of gravity and low pressure force mains, a central pumping station which will convey

sewage effluent to the Ocean Pines sewer collection system via a force main running from the central pump station, under Turville Creek to the County boat ramp, through a recorded easement on the Steen subdivision, and ultimately connecting to the Ocean Pines sewer collection system. Service will be provided by contract for an initial service capacity level of sixty-three (63) equivalent dwelling units (EDU's) at a rate of 300 gallons per EDU, and an ultimate build-out potential of three hundred thirty three (333) EDU's from the existing Ocean Pines Sanitary Service Area. Construction of the proposed facilities is expected to begin in late 2013 with completion within one calendar year from the start of construction.


3. The establishment of the Ocean Downs Sanitary Service Area is subject to the following conditions:
 - a. The property owner will enter into a Public Services Agreement between the County and Developer that will define the terms of sewer service from the Ocean Pines Sanitary Service Area. Said agreement shall include use of the constructed infrastructure, specifically the force main from the track to the Ocean Pines collection system, by the properties in the Turville Creek portion of the Greater Ocean Pines Sewer Planning Area. The Turville Creek area has been allocated 113 EDU's for eventual connection to the Ocean Pines Sanitary Area for public sewer service.
 - b. The property owner will cooperate with the County on any current and future submittals or examinations required by the Maryland Department of the Environment (MDE) for nutrient credit review. The nutrient credit, once accepted by MDE, is only for the single property in the proposed service area. It is not for offsite transfer to other properties of credits or corresponding sanitary capacity.
 - c. The existing pump station on the Ocean Downs property will be used as a pump station and be inspected and accepted by the Worcester County Department of Public Works for use as a pump station for the force main connecting to the Ocean Pines collection system.
 - d. The pump station will have emergency power supplied by the emergency power system for the racetrack. Should the commercial portion of the property be subdivided from the current property in the future, the applicant will immediately be required to supply and install a dedicated emergency power system for the pump station.
 - e. The applicant will cooperate with the County in the investigation of a future connection of the subject property to public water.

AND BE IT FURTHER RESOLVED that the establishment of this proposed Service Area shall be contingent upon the official incorporation of the Ocean Downs Sanitary Service Area into the *Worcester County Comprehensive Water and Sewerage Plan* which is subject to

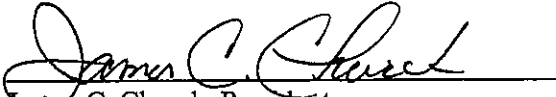
review and approval by the Maryland Department of the Environment (MDE) in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland.

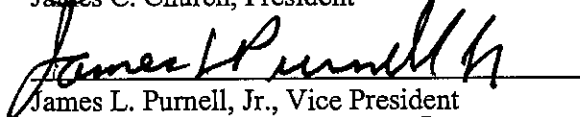
PASSED AND ADOPTED this 4th day of September, 2012.

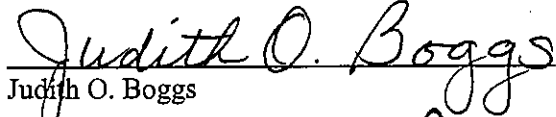
ATTEST:

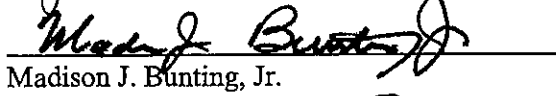

Gerald T. Mason
Chief Administrative Officer

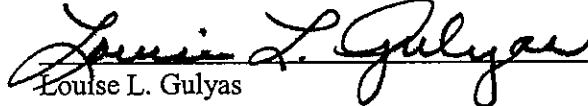
WORCESTER COUNTY COMMISSIONERS

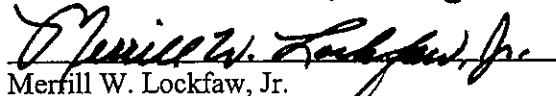

James C. Church, President


James L. Purnell, Jr., Vice President

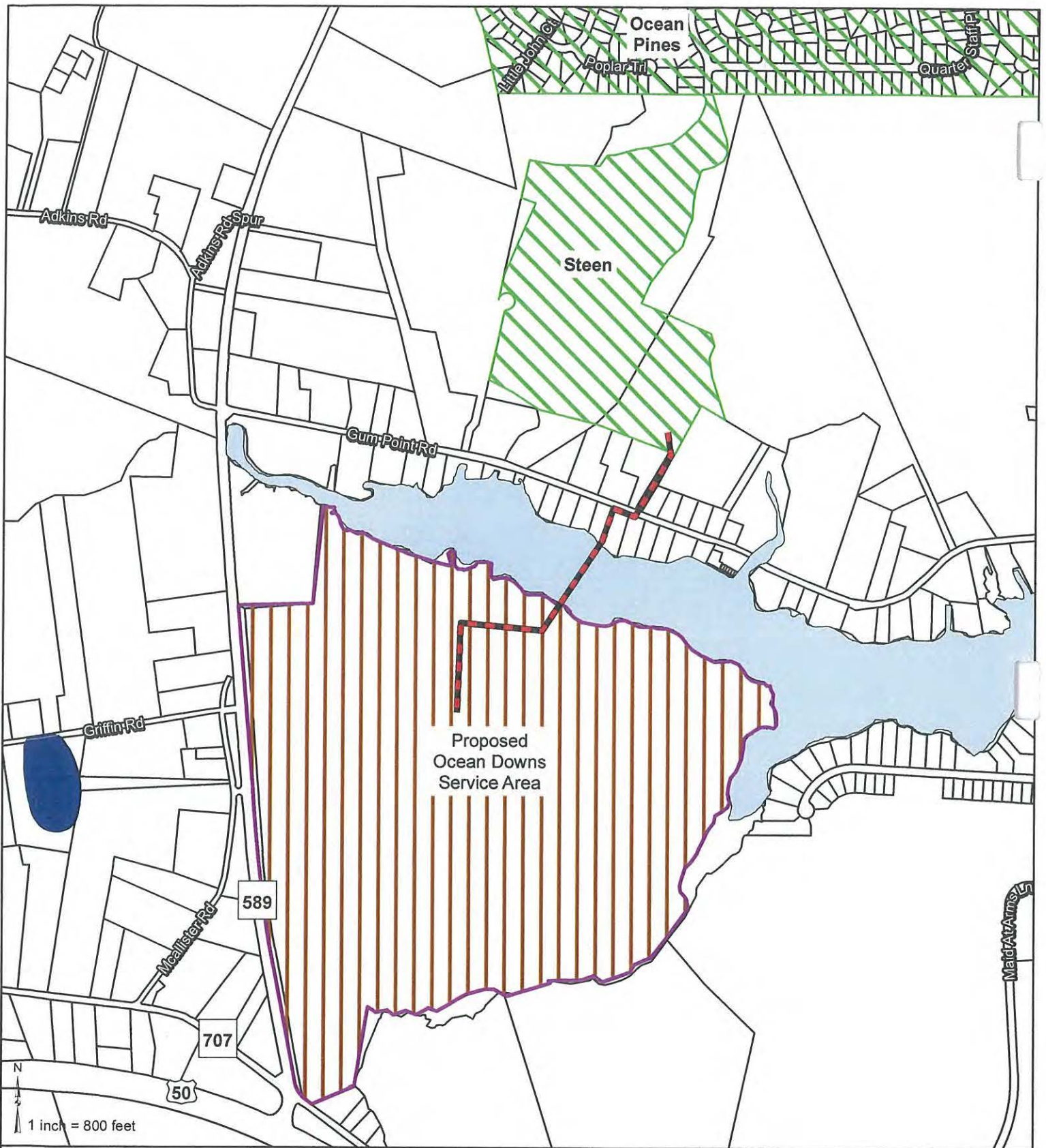

Judith O. Boggs





Madison J. Bunting, Jr.


Louise L. Gulyas


Merril W. Lockfaw, Jr.


Virgil L. Shockley



-  Proposed Sewer Pipeline
-  Proposed Ocean Downs Service Area
-  Ocean Pines Service Area



Proposed Service Area

Ocean Downs

Prepared by Worcester County Department of Development Review and Permitting, July 03, 2012.
 Source: 1994 Comprehensive Water and Sewerage Plan, Worcester County, 1994 (as amended).

MDD: H:\GIS Data\Sanitary Services\Water and Sewer Amendments\Ocean Pines\OceanPines_OceanDowns_2012-01\Maps\OP_OceanDowns_ProposedSvcArea_07-03-12.mxd

RESOLUTION NO. 12 - 26

**RESOLUTION AMENDING THE COMPREHENSIVE WATER AND
SEWERAGE PLAN FOR WORCESTER COUNTY FOR
ADDITION OF CAPITAL IMPROVEMENT PLAN AND REFINEMENT OF
TECHNICAL DATA - OCEAN CITY SERVICE AREA**

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from the Town of Ocean City to amend the *Worcester County Comprehensive Water and Sewerage Plan* (the Plan) to revise water and sewer technical data in the Plan and include an updated Capital Improvement Plan for water and sewer facilities in the Ocean City Service Area. There are no planned changes to the service area maps other than a consolidation and update to the existing maps and diagrams; and

WHEREAS, the Worcester County Planning Commission reviewed the proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan at their meeting of October 4, 2012 and found it to be consistent with the Comprehensive Plan for Worcester County, Maryland; and

WHEREAS, the County Commissioners held a duly advertised public hearing on November 20, 2012 to consider public comment on this amendment to the Worcester County Comprehensive Water and Sewerage Plan; and

WHEREAS, the County Commissioners reviewed the recommendations of the Planning Commission and staff reports and as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to revise water and sewer technical data in the Plan and include an updated Capital Improvement Plan for water and sewer facilities in the Ocean City Service Area, is desirable.

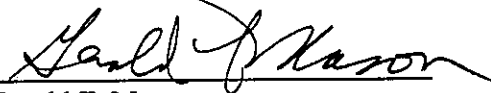
NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* (the Plan) is hereby amended as specified in the application of the Town of Ocean City to reflect the revised water and sewer technical data in the Plan and to include an updated Capital Improvement Plan for water and sewer facilities in the Ocean City Service Area. There are no changes to the service area maps other than a consolidation and update to the existing maps and diagrams as attached hereto.

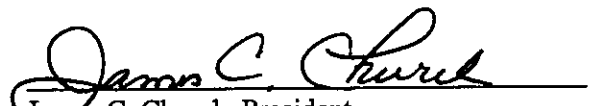
AND BE IT FURTHER RESOLVED that this proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Environment Article of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon approval by MDE.

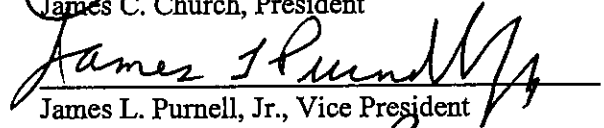
PASSED AND ADOPTED this 20th day of November, 2012.


ATTEST:

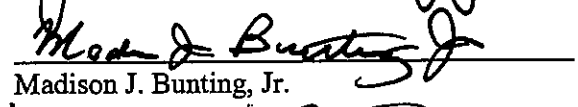

Gerald T. Mason
Chief Administrative Officer

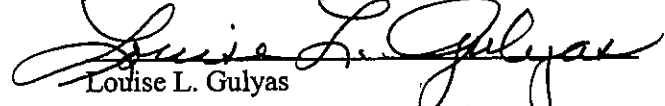
WORCESTER COUNTY COMMISSIONERS

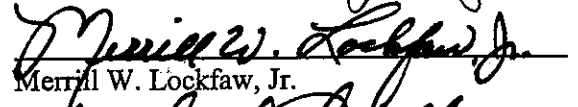

James C. Church, President

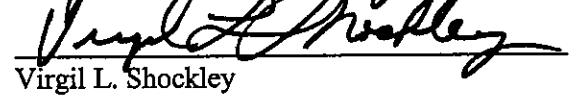

James L. Purnell, Jr., Vice President

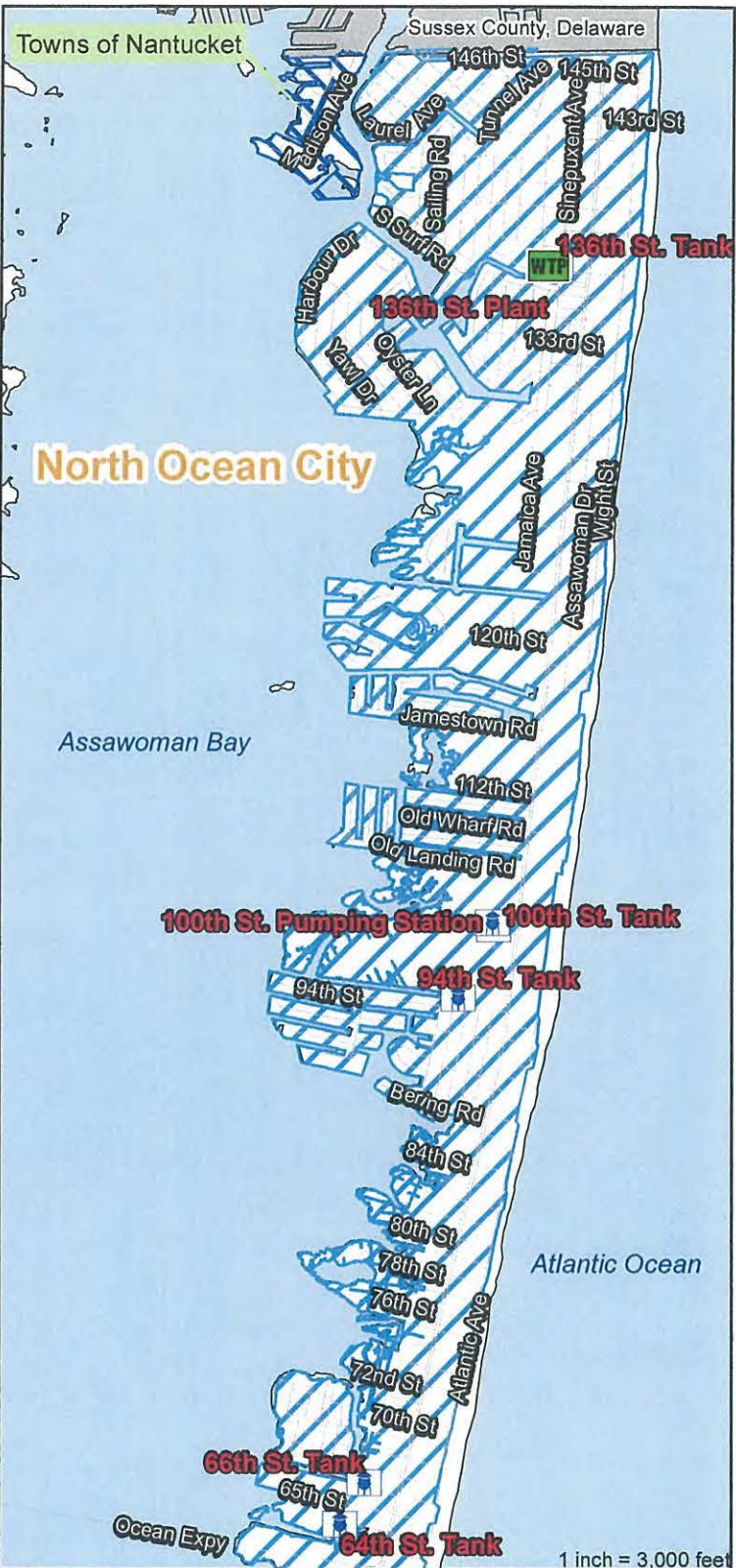
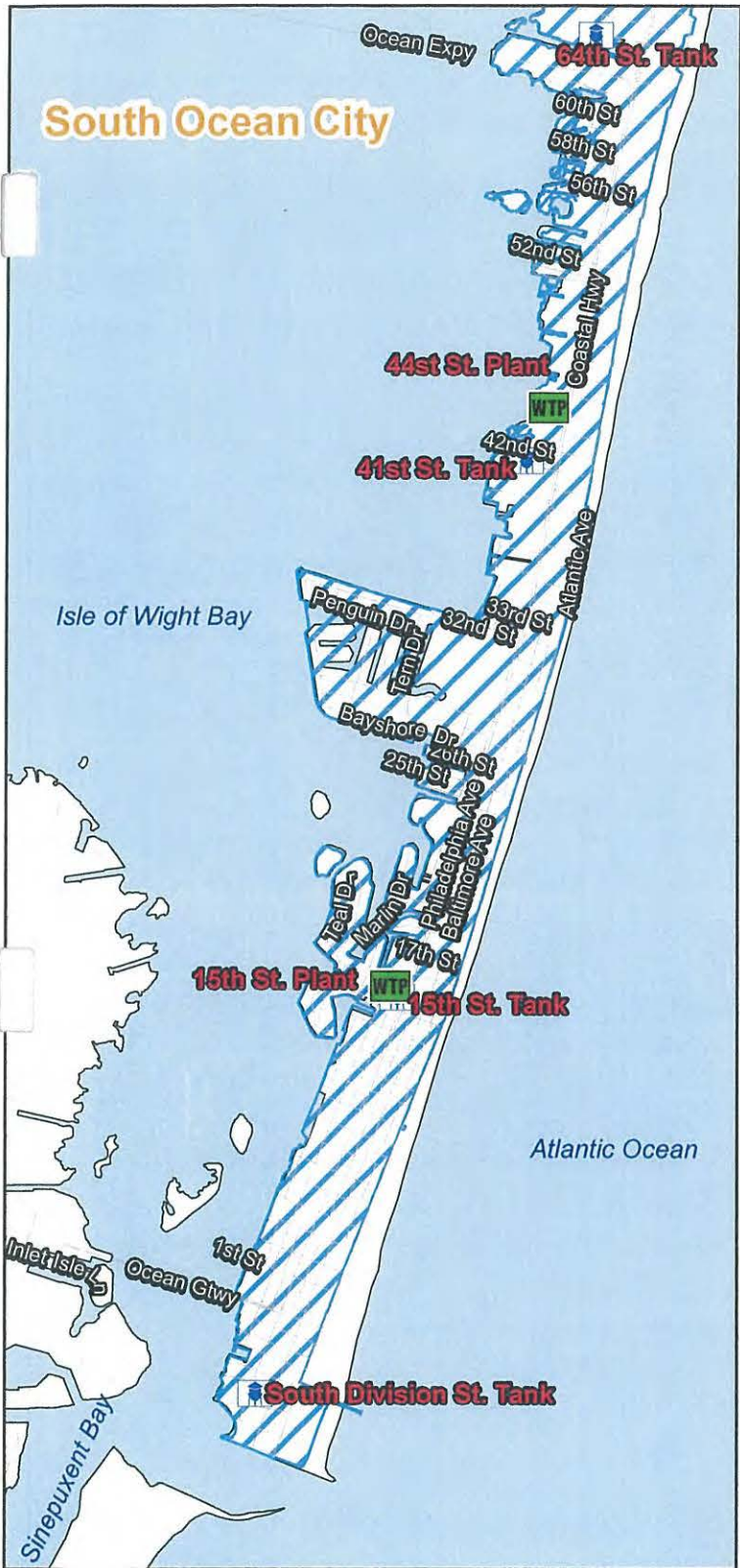

Judith O. Boggs



Madison J. Bunting, Jr.




Louise L. Gulyas


Merrill W. Lockfaw, Jr.


Virgil L. Shockley



- Water Facilities**
-  Pumping Station
 -  Storage Tank
 -  Treatment Plant

- Water Planning Areas**
-  W1 - Town of Ocean City
 -  W1 - Towns of Nantucket



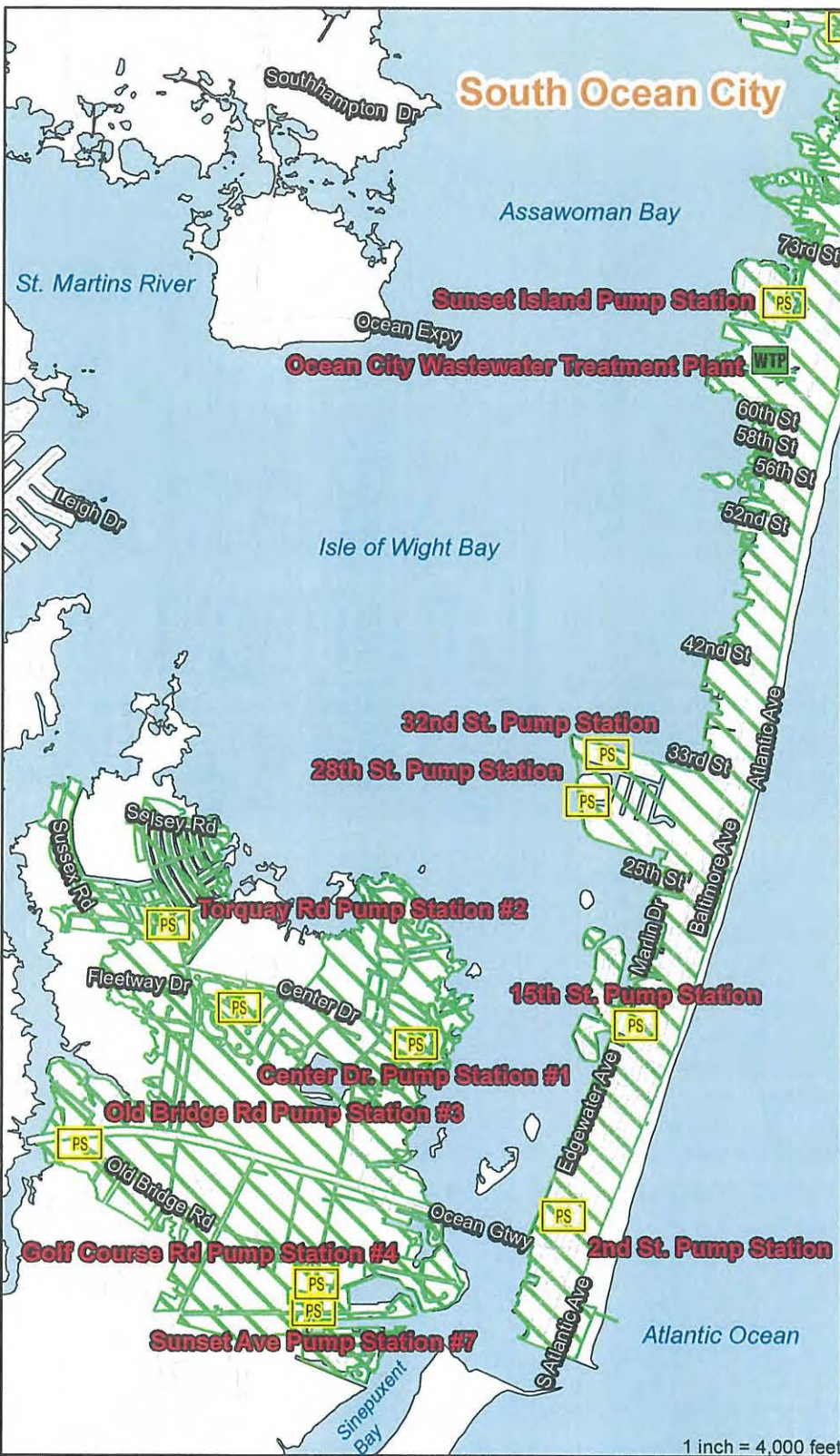
Water Service Area

Ocean City
W-1 Current
Case 2012-02
Figure No.: 3-11

Prepared by Worcester County Department of Development Review and Permitting, May 29, 2012.
Source: 1994 Comprehensive Water and Sewerage Plan, Worcester County, 1994 (as amended).

MDD H:\GIS Data\Sanitary Services\Water and Sewer Amendments\Ocean City\WaterServiceArea_OceanCity(05-29-12).mxd

1 inch = 3,000 feet



Sewer Facilities


- WTP Treatment Plant
- PS Pump Station

Sewer Planning Areas

- S1 - Town of Ocean City
- S1 - Towns of Nantucket

Sewer Service Area

Ocean City
S-1 Current
Case 2012-02
Figure No.: 4-10



N

Prepared by Worcester County Department of Development Review and Permitting, May 29, 2012.
Source: 1994 Comprehensive Water and Sewerage Plan, Worcester County, 1994 (as amended).
MDD H:\GIS Data\Sanitary Services\Water and Sewer Amendments\Ocean City\SewerServiceArea_OceanCity(05-29-12).mxd

RESOLUTION NO. 13 - 12

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY TO INCREASE THE OCEAN PINES WASTEWATER TREATMENT PLANT DISCHARGE OCEAN PINES SANITARY SERVICE AREA

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from the Worcester County Department of Public Works on their behalf to amend the *Worcester County Comprehensive Water and Sewerage Plan* (the Plan) to increase the treatment capacity of the Ocean Pines Wastewater Treatment Plant (WWTP) from 2.5 million gallons per day (MGD) to 2.6 MGD; and

WHEREAS, the current nutrient allocation in the existing discharge permit is adequate to accommodate the proposed increase in flow with no physical improvements necessary to the Ocean Pines WWTP. Furthermore, no changes are planned at this time to the approved S-1 planning area of the Ocean Pines Sanitary Service Area; and

WHEREAS, the Worcester County Planning Commission reviewed the proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan at their meeting of April 4, 2013 and found it to be consistent with the Comprehensive Plan for Worcester County, Maryland; and

WHEREAS, the County Commissioners held a duly advertised public hearing on May 21, 2013 to consider public comment on this amendment to the Worcester County Comprehensive Water and Sewerage Plan; and

WHEREAS, the County Commissioners reviewed the recommendations of the Planning Commission and staff reports and as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to increase the treatment capacity of the Ocean Pines Wastewater Treatment Plant (WWTP) from 2.5 MGD to 2.6 MGD, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* (the Plan) is hereby amended as specified in the application of the Worcester County Department of Public Works to increase the treatment capacity of the Ocean Pines Wastewater Treatment Plant (WWTP) from 2.5 million gallons per day (MGD) to 2.6 MGD.

AND BE IT FURTHER RESOLVED that this proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Environment Article of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon approval by MDE.

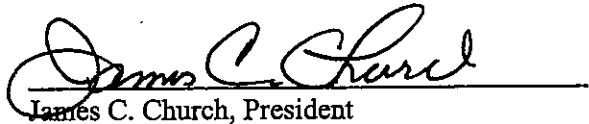
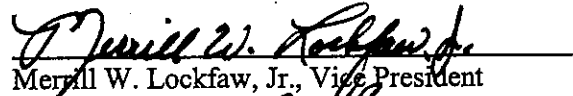
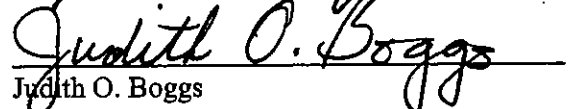
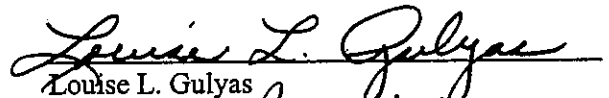
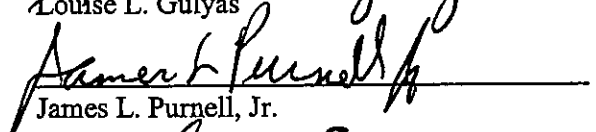
PASSED AND ADOPTED this 21st day of May, 2013.

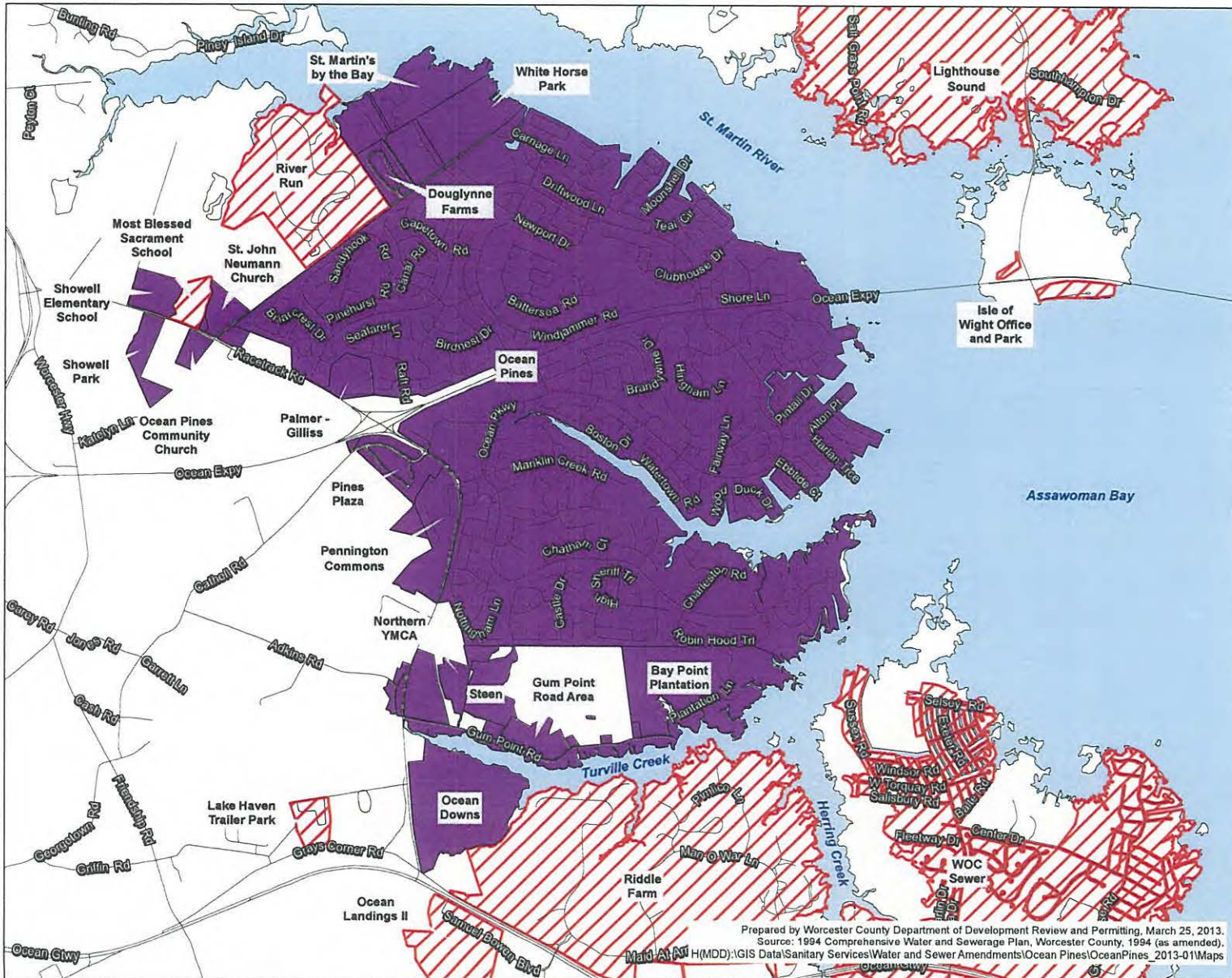
ATTEST:



Gerald T. Mason
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS


James C. Church, President
Merrill W. Lockfaw, Jr., Vice President
Judith O. Boggs
Madison J. Bunting, Jr.
Louise L. Gulyas
James L. Purnell, Jr.
Virgil L. Shockley



**Worcester County,
Maryland**

**Ocean Pines
Sanitary Service Area
Case # 2013-01**

Sewer Planning Areas

- S1 - Ocean Pines Planning Area
- S1 - Other

**Department of Development
Review and Permitting
Technical Services Division**

Drawn By: MDD Reviewed By: KLH
 0 0.125 0.25 0.375 0.5
 Miles
 1 inch = 0.5 miles

Map prepared on March 25, 2013.
 Map prepared for Worcester County
 Department of Environmental Programs.

Prepared by Worcester County Department of Development Review and Permitting, March 25, 2013.
 Source: 1994 Comprehensive Water and Sewerage Plan, Worcester County, 1994 (as amended).
 M:\GIS Data\Sanitary Services\Water and Sewer Amendments\Ocean Pines\OceanPines_2013-01\Maps

RESOLUTION NO. 13 - 26

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY TO EXPAND THE RIDDLE FARM SANITARY SERVICE AREA - SEWER PLANNING AREA

WHEREAS, the County Commissioners of Worcester County, Maryland (hereafter "County Commissioners") adopted the *Comprehensive Water and Sewerage Plan for Worcester County* (hereafter "The Plan") on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received an application filed by Mark Spencer Cropper on behalf of WGC EDU, LLC seeking to amend the *Worcester County Comprehensive Water and Sewerage Plan* to add the following properties shown on Worcester County Tax Map 26 as Parcels 107, 258, 259, 298, 299, 300, 320, 322, 368 and 455 (Areas A and B), and Parcels 97, 98, 99, 101, 102, 104, 105, 106, 127, 129, 246, 247, 249, 250, 251, 336, 347, 351, 394, 420 and 440 (Area C), to the Riddle Farm Sewer Planning Area for the purpose of providing public sewer collection, treatment and disposal service from the Riddle Farm sewer system. The subject properties are located on the south side of US Route 50 (Ocean Gateway), just east of its intersection with Maryland Route 589 (Racetrack Road), east of the Town of Berlin, in the Third Tax District Worcester County, Maryland; and

WHEREAS, the maximum service commitment available to the subject properties is two hundred sixty-seven (267) equivalent dwelling units (EDUs) of sewer service at a rate of 275 gallons per day (gpd) per EDU achieved by expansion of the Riddle Farm Sewage Treatment Plant with disposal of treated effluent by spray irrigation. The above referenced properties will be designated S-1 (current to 2-years) in the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, the cost of any sewer infrastructure improvements will be the sole responsibility of the property owners served by the facilities; and

WHEREAS, the Worcester County Planning Commission, at their meeting of November 7, 2013, reviewed the proposed amendment to The Plan and found that the proposal is consistent with the *Worcester County Comprehensive Plan* and the zoning categories for the subject properties; and

WHEREAS, the County Commissioners held a duly advertised public hearing on December 17, 2013 to hear public comment on the requested amendment to The Plan; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the County Commissioners have determined that the proposed amendment to The Plan, as recommended by the Planning Commission, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

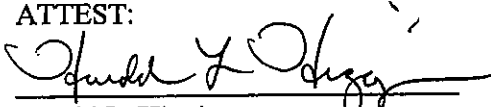
1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as shown on the map attached hereto entitled "Route 50 Commercial Planning Areas – S-1 Proposed, Case No. 2013-02" and as specified in the application of Mark Spencer Cropper on behalf of WGC EDU, LLC, to add the following properties shown on Worcester County Tax Map 26 as Parcels 107, 258, 259, 298, 299, 300, 320, 322, 368 and 455 (Areas A and B), and Parcels 97, 98, 99, 101, 102, 104, 105, 106, 127, 129, 246, 247, 249, 250, 251, 336, 347, 351, 394, 420 and 440 (Area C), to the Riddle Farm Sewer Planning Area for the purpose of providing public sewer collection, treatment and disposal service from the Riddle Farm sewer system; and

2. The maximum service commitment available to the subject properties is two hundred sixty-seven (267) equivalent dwelling units (EDUs) of sewer service at a rate of 275 gallons per day (gpd) per EDU achieved by expansion of the Riddle Farm Sewage Treatment Plant with disposal of treated effluent by spray irrigation. The above referenced properties will be designated S-1 (current to 2-years) in the *Worcester County Comprehensive Water and Sewerage Plan*. The expanded capacity will be provided as follows:
- a. The existing wastewater treatment and disposal capacity of the sanitary area will be increased by an additional 80,000 gpd from 197,750 gallons per day to a total of 277,750 gallons per day.
 - b. The additional treated effluent will be disposed of by a parallel expansion of the spray irrigation system to accommodate the entire 36 holes of the two golf courses for the Riddle Farm community. The current Groundwater Discharge Permit is proposed to be similarly expanded to accommodate the increased flow.
 - c. State of Maryland treated effluent storage requirements will be maintained by a seasonally adjusted storage factor typical of flow patterns identified for this service area.

AND BE IT FURTHER RESOLVED that this proposed amendment to The Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.


PASSED AND ADOPTED this 17th day of December, 2013.

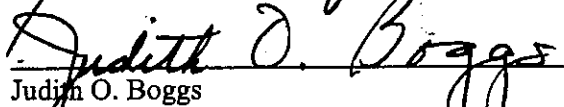
ATTEST:



 Harold L. Higgins
 Chief Administrative Officer

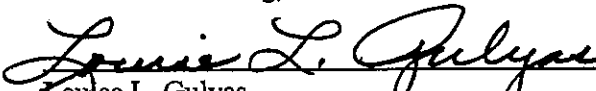
WORCESTER COUNTY COMMISSIONERS

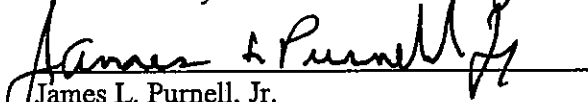

 James C. Church, President


 Merrill W. Lockfaw, Jr., Vice President

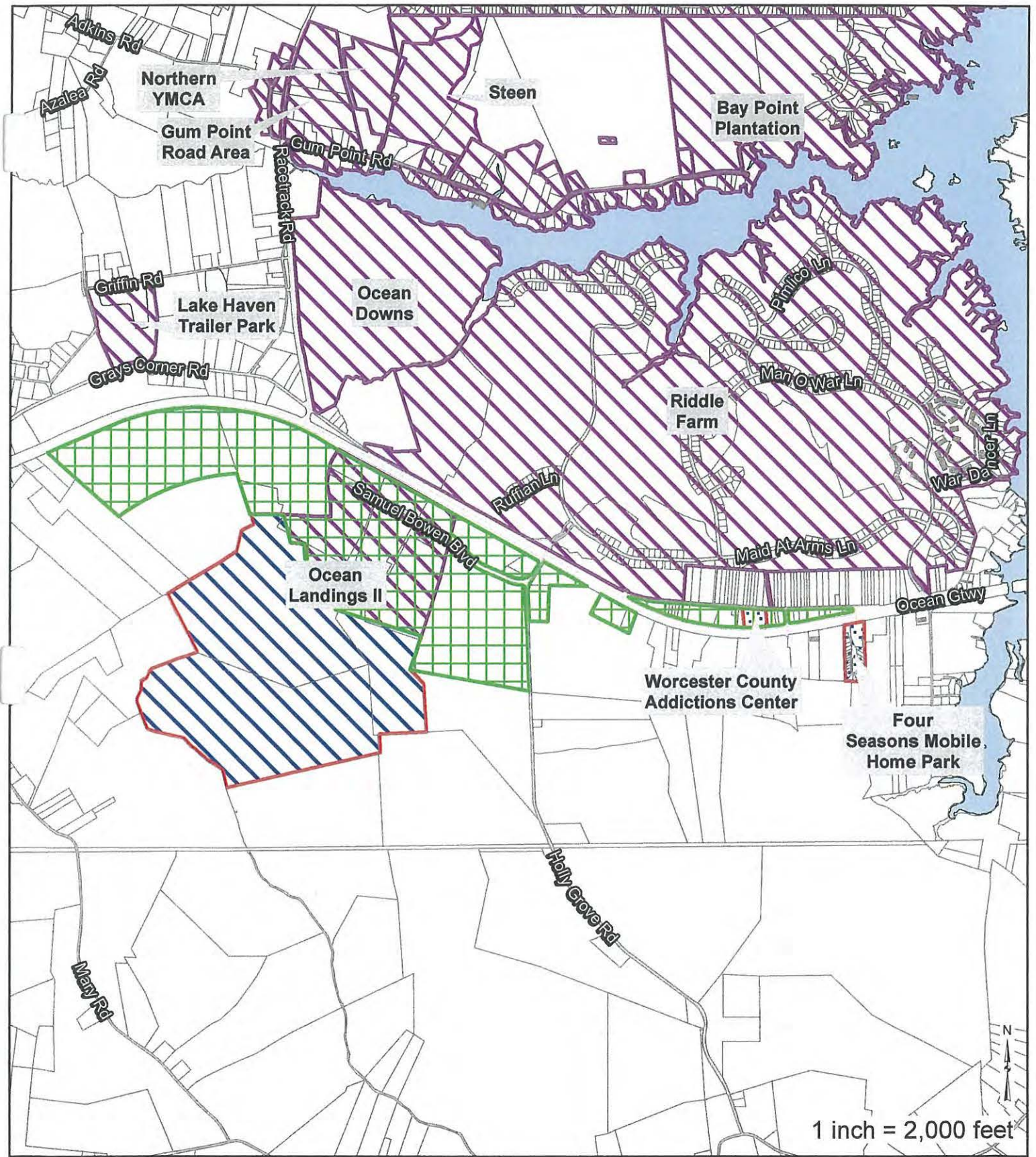

 Judith O. Boggs



 Madison J. Bunting, Jr.


 Louise L. Gulyas



 James L. Purnell, Jr.



 Virgil L. Shockley




 Proposed Expansion

Sewer Planning Areas

 S1 - Current to 2 Years

 S6 - No Future Service, Ocean Landings II

 Private Sewer Systems

Existing Sewer Planning Areas

Route 50 Commercial Planning Areas

S-1 Proposed

Case 2013-02

Prepared by Worcester County Department of Development Review and Permitting, August 02, 2013.
Source: 1994 Comprehensive Water and Sewerage Plan, Worcester County, 1994 (as amended).

H:\MDD\GIS Data\Sanitary Services\Water and Sewer Amendments\Riddle Farm\RiddleFarm-2013-02\Maps

RESOLUTION NO. 13 - 27

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY TO EXPAND THE RIDDLE FARM SANITARY SERVICE AREA - WATER PLANNING AREA

WHEREAS, the County Commissioners of Worcester County, Maryland (hereafter "County Commissioners") adopted the *Comprehensive Water and Sewerage Plan for Worcester County* (hereafter "The Plan") on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received an application filed by Public Works Deputy Director John Ross on their behalf seeking to amend the *Worcester County Comprehensive Water and Sewerage Plan* to add the following properties shown on Worcester County Tax Map 26 as Parcels 107, 258, 259, 298, 299, 300, 320, 322, 368 and 455 (Areas A and B) to the Riddle Farm Water Planning Area for the purpose of providing public water service from the Riddle Farm water supply system. The subject properties are located on the south side of US Route 50 (Ocean Gateway), just east of its intersection with Maryland Route 589 (Racetrack Road), east of the Town of Berlin, in the Third Tax District Worcester County, Maryland; and

WHEREAS, the maximum service commitment available to the subject properties is two hundred sixty-seven (267) equivalent dwelling units (EDUs) of water service at a rate of 350 gallons per day (gpd) per EDU. The above referenced properties will be designated W-1 (current to 2-years) in the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, the cost of any water infrastructure improvements will be the sole responsibility of the property owners served by the facilities; and

WHEREAS, the Worcester County Planning Commission, at their meeting of November 7, 2013, reviewed the proposed amendment to The Plan and found that the proposal is consistent with the *Worcester County Comprehensive Plan* and the zoning categories for the subject properties; and

WHEREAS, the County Commissioners held a duly advertised public hearing on December 17, 2013 to hear public comment on the requested amendment to The Plan; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the County Commissioners have determined that the proposed amendment to The Plan, as recommended by the Planning Commission, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

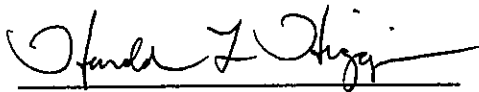
1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as shown on the map attached hereto entitled "Route 50 Commercial Planning Areas – W-1 Proposed, Case No. 2013-04" and as specified in the application of Public Works Deputy Director John Ross on their behalf to add the following properties shown on Worcester County Tax Map 26 as Parcels 107, 258, 259, 298, 299, 300, 320, 322, 368 and 455 (Areas A and B) to the Riddle Farm Water Planning Area for the purpose of providing public water service from the Riddle Farm water supply system; and

2. The maximum service commitment currently available to the subject properties is two hundred sixty-seven (267) equivalent dwelling units (EDUs) of water service at a rate of 350 gallons per day (gpd) per EDU. The above referenced properties will be designated W-1 (current to 2-years) in the *Worcester County Comprehensive Water and Sewerage Plan*.

AND BE IT FURTHER RESOLVED that this proposed amendment to The Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.

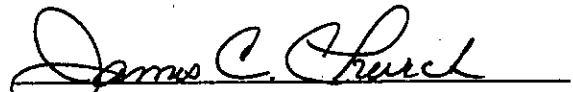
PASSED AND ADOPTED this 17th day of December, 2013.

ATTEST:



Harold L. Higgins
Chief Administrative Officer

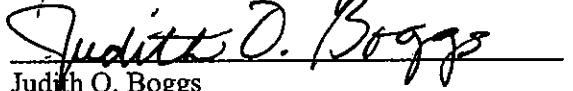
WORCESTER COUNTY COMMISSIONERS



James C. Church, President



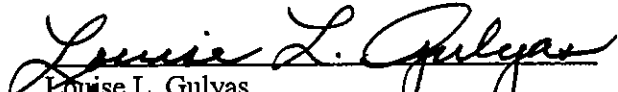
Merrill W. Lockfaw, Jr., Vice President



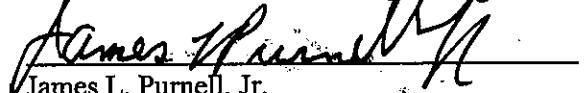
Judith O. Boggs



Madison J. Bunting, Jr.



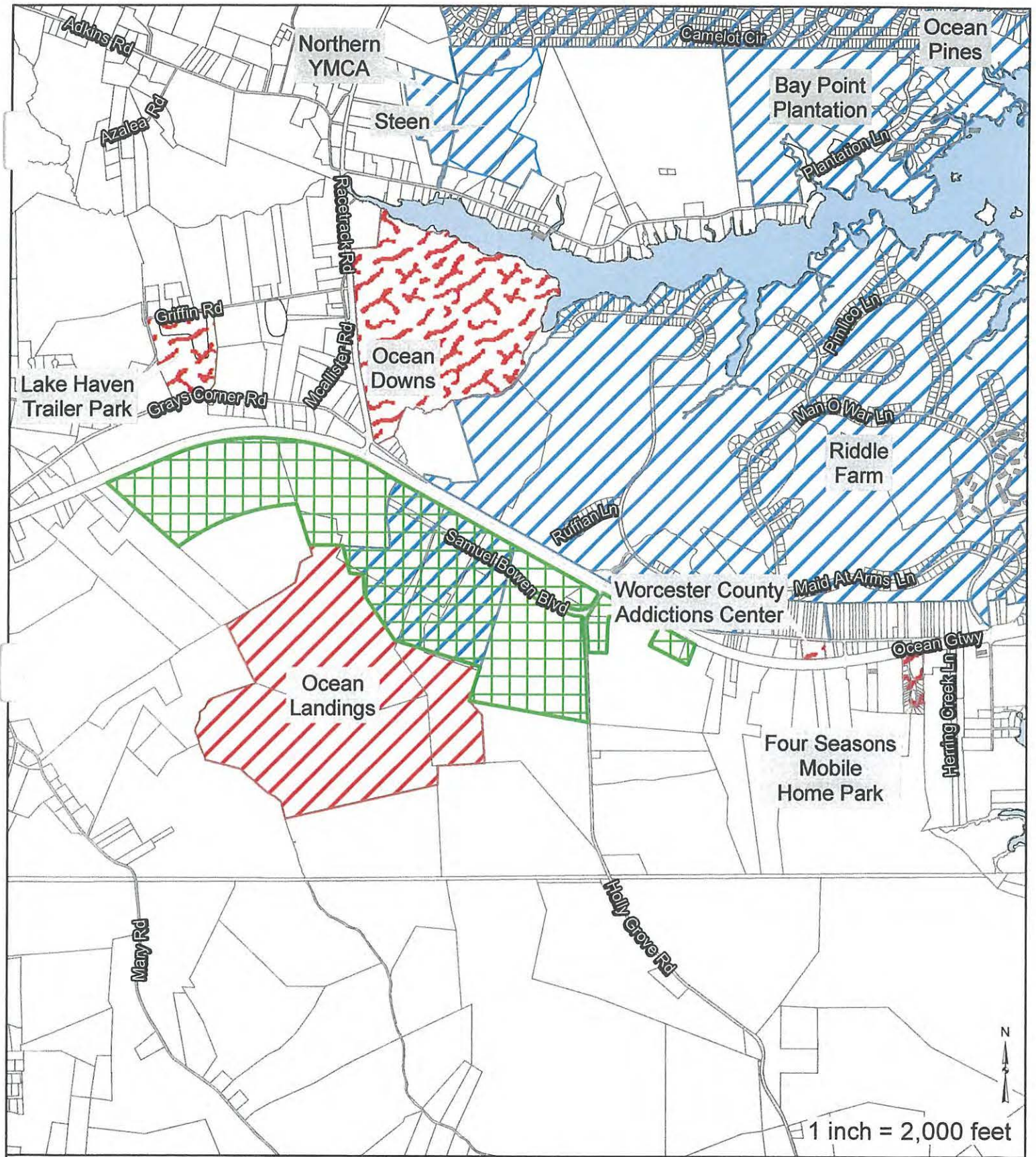
Louise L. Gulyas



James L. Purnell, Jr.



Virgil L. Shockley




Existing Water Planning Areas




Route 50 Commercial Planning Areas

W-1 Proposed

Case 2013-04

 Proposed W-1 Expansion

Water Planning Areas

-  W1 - Current to 2 Years
-  W6 - No Future Service, Ocean Landings
-  Private Water Systems

RESOLUTION NO. 14 - 7

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY TO EXPAND THE ISLAND RESORT CAMPGROUND WATER AND SEWER PLANNING AREAS

WHEREAS, the County Commissioners of Worcester County, Maryland (hereafter "County Commissioners") adopted the *Comprehensive Water and Sewerage Plan for Worcester County* (hereafter "The Plan") on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received an application filed by Steven Soulé on behalf of Island Resort Campground, Inc. (the "applicant") to amend the *Worcester County Comprehensive Water and Sewerage Plan* to expand the Island Resort Campground Water and Sewer Planning Areas to add thirty-two (32) campsites to the existing one hundred ten (110) unit campground. The subject property is more specifically identified on Worcester County Tax Map 40 as Parcel 93 and is located on a 57-acre property located north of Croppers Island Road north of Newark, Maryland; and

WHEREAS, the Worcester County Planning Commission, at their meeting of February 6, 2014, reviewed the proposed amendment to The Plan and found that the proposal is consistent with the *Worcester County Comprehensive Plan* and the zoning categories for the subject properties; and

WHEREAS, the cost of any sewer and water infrastructure improvements will be the sole responsibility of the applicant and/or the property owners served by the facilities; and

WHEREAS, the County Commissioners held a duly advertised public hearing on March 18, 2014 to hear public comment on the requested amendment to The Plan; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the County Commissioners have determined that the proposed amendment to The Plan, as recommended by the Planning Commission, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

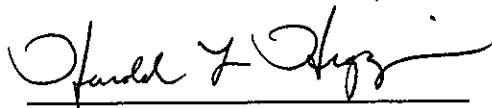
1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as shown on the maps attached hereto entitled "Sewer Planning Area - Island Resort Campground - Water and Sewer Update - Case 2013-03" and "Water Planning Area - Island Resort Campground - Water and Sewer Update - Case 2013-03" and as specified in the application of Steven Soulé on behalf of Island Resort Campground, Inc. to expand the Island Resort Campground Water and Sewer Planning Areas to provide water and sewer service to an additional thirty-two (32) seasonal campsites in addition to the existing one hundred ten (110) seasonal campsites located north of Croppers Island Road, north of Newark, Maryland, and more specifically identified on Worcester County Tax Map 40 as Parcel 93 and as follows:
 - a. This amendment hereby increases the existing 110 site seasonal campground by 32 additional seasonal campsites for a total of 142 campsites. To support the additional campsites, this amendment expands the currently approved Island Resort Campground Water and Sewer Planning Area boundaries as previously approved in the *Worcester County Comprehensive Water and Sewerage Plan*.

- b. The applicant will construct the additional ten (10) days of storage for their existing package wastewater treatment plant (WWTP), as requested by the Maryland Department of the Environment (MDE) to support the expansion. The applicant will apply for an MDE construction permit to construct the storage and the water and sewer infrastructure to serve the expansion. The applicant will also request an additional MDE construction permit if the flow approaches 9,600 gallons per day (gpd), as specified in their Groundwater Discharge Permit.

AND BE IT FURTHER RESOLVED that this proposed amendment to The Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon said approval by MDE.



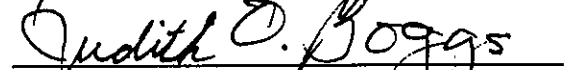


PASSED AND ADOPTED this 18th day of March, 2014.

ATTEST:



Harold L. Higgins
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS


James C. Church, President
Merrill W. Lockfaw, Jr., Vice President
Judith O. Boggs
Madison J. Bunting, Jr.
Louise L. Gulyas

Absent

James L. Purnell, Jr.


Virgil L. Shockley

RESOLUTION NO. 14 - 23

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY TO ADD TWO OUTFALLS AND INCREASE DISCHARGE PERMIT FLOW FROM THE WASTEWATER TREATMENT PLANT IN THE MYSTIC HARBOUR SANITARY SERVICE AREA

WHEREAS, the County Commissioners of Worcester County, Maryland (hereafter "County Commissioners") adopted the *Comprehensive Water and Sewerage Plan for Worcester County* (hereafter "The Plan") on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received an application filed by John Ross of the Worcester County Department of Public Works on behalf of the County Commissioners (the "applicant") to amend the *Worcester County Comprehensive Water and Sewerage Plan* (hereinafter "the Plan") to increase the permitted flow for the Mystic Harbour Wastewater Treatment Plant (WWTP) from 250,000 gallons per day (gpd) to 450,000 gpd, and to add two additional outfalls to the permitted outfalls for the discharge from the Mystic Harbour WWTP referenced in the discharge permit. The additional outfalls include the Eagles Landing Golf Course, which will reuse treated effluent from the Mystic Harbour WWTP for irrigation, and the Ocean City WWTP, which will receive treated effluent redirected from the Mystic Harbour WWTP when sufficient capacity does not exist in the injection wells or the golf course irrigation system; and

WHEREAS, the Worcester County Planning Commission, at their meeting of September 4, 2014, reviewed the proposed amendment to The Plan and found that the proposal is consistent with the *Worcester County Comprehensive Plan* and the zoning categories for the subject properties; and

WHEREAS, a Memorandum of Understanding (MOU) was signed between the County Commissioners and the Mayor and Council of Ocean City (the "Town") regarding spray irrigation and redirection of treated effluent, which was ratified by the Town under Ordinance 2014-21, dated August 4, 2014; and

WHEREAS, the County Commissioners held a duly advertised public hearing on October 21, 2014 to hear public comment on the requested amendment to The Plan; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the County Commissioners have determined that the proposed amendment to The Plan, as recommended by the Planning Commission, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the proposal of Mr. John Ross on behalf of the County Commissioners to amend the Plan to increase the permitted flow for the Mystic

Harbour Wastewater Treatment Plant (WWTP) and to add two additional outfalls to the permitted outfalls for the discharge from the Mystic Harbour WWTP, more specifically described as follows:

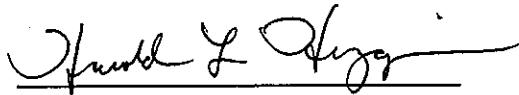
- a. The Mystic Harbour WWTP, which was previously upgraded, is proposed to have the permitted discharge flow expanded by 200,000 gpd to a total permitted discharge capacity of 450,000 gpd. The additional treated effluent will be disposed of by reuse on the Eagles Landing Golf Course for irrigation or redirection of the treated effluent to the Ocean City WWTP when capacity does not exist in either the injection wells or the golf course irrigation system.
- b. The agreement to utilize the golf course for treated Class III effluent reuse in accordance with State guidelines and the redirection of treated effluent to the Ocean City WWTP when capacities are needed, was approved in an MOU between the County Commissioners and the Mayor and Council of Ocean City.
- c. The MOU also called for the Town to connect currently designated S-1 sewer planning area properties including the Eagles Landing Course, Animal Shelter, and the Ocean City Airport to the Mystic Harbour sewer collection system.
- d. The additional capacity is intended to serve the wastewater planning areas approved as shown in the County Commissioner's Resolution No. 09-16, with respect to the mapped planning areas in Figure 4-14. The estimates for specific capacity needs were also detailed in a supplemental exhibit for that prior amendment, which approved the rebuild of the Mystic Harbour WWTP with the requisite treatment capacity.
- e. The amendment contemplates the following infrastructure improvements:
 - i. Effluent pumping at the Mystic Harbour WWTP and a pipeline to convey treated effluent between Mystic Harbour and Eagles Landing Golf Course.
 - ii. Modifications to existing irrigation pond storage at the Eagles Landing Golf Course to hold treated effluent prior to reuse for irrigation.
 - iii. Reconstruction of the Eagles Landing Golf Course irrigation systems to maintain compliance with land treatment regulations.
 - iv. Subject to final engineering, potential improvements may be made for WWTP telemetry and operational adjustments to enable utilization of all proposed outfalls requested in this amendment.

- f. The proposed amendment does not seek to intensify or amend the wastewater planning areas approved in Resolution No. 09-16, with respect to the mapped planning areas in Figure 4-14, in the *Worcester County Comprehensive Water and Sewerage Plan*.

AND BE IT FURTHER RESOLVED that these proposed amendments to The Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon said approval by MDE.

PASSED AND ADOPTED this 21st day of October, 2014.

ATTEST:

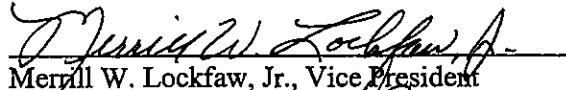


Harold L. Higgins
Chief Administrative Officer

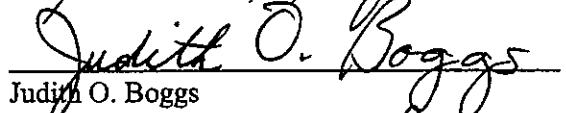
WORCESTER COUNTY COMMISSIONERS



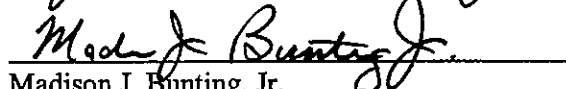
James C. Church, President



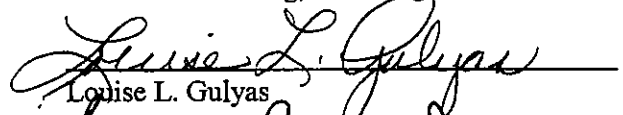
Merrill W. Lockfaw, Jr., Vice President



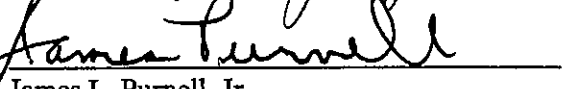
Judith O. Boggs



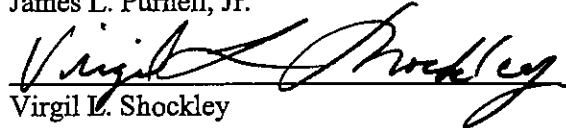
Madison J. Bunting, Jr.



Louise L. Gulyas



James L. Purnell, Jr.



Virgil L. Shockley

RESOLUTION NO. 14 - 24

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY TO ADD FRONTIER TOWN CAMPGROUND TO THE MYSTIC HARBOUR SANITARY SERVICE AREA

WHEREAS, the County Commissioners of Worcester County, Maryland (hereafter "County Commissioners") adopted the *Comprehensive Water and Sewerage Plan for Worcester County* (hereafter "The Plan") on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received an application filed by Mitchell Parker, on behalf of Parkel Corp (the "applicant"), to amend the *Worcester County Comprehensive Water and Sewerage Plan* (hereinafter "the Plan") to add the Frontier Town Campground to the S-1 sewer planning area for the Mystic Harbour Sanitary Service Area. The applicant requests an expansion of the S-1 sewer planning area to designate more of Frontier Town (Tax Map 33, part of Parcel 94) for public sanitary service from the Mystic Harbour sewer system. Although a section of Frontier Town already receives sewer service from Assateague Pointe, the applicant will need additional capacity to serve the campground and any expansion or intensification of uses in the campground; and

WHEREAS, the Worcester County Planning Commission, at their meeting of October 2, 2014, reviewed the proposed amendment to The Plan and found that the proposal is consistent with the *Worcester County Comprehensive Plan* and the zoning categories for the subject properties; and

WHEREAS, the County Commissioners held a duly advertised public hearing on November 18, 2014 to hear public comment on the requested amendment to The Plan; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the County Commissioners have determined that the proposed amendment to The Plan, as recommended by the Planning Commission, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* is hereby amended as specified in the proposal of Mitchell Parker, on behalf of Parkel Corp (the "applicant"), to amend the *Worcester County Comprehensive Water and Sewerage Plan* (hereinafter "the Plan") to add the Frontier Town Campground to the S-1 sewer planning area for the Mystic Harbour Sanitary Service Area, more specifically described as follows:
 - a. More of Frontier Town (Tax Map 33, part of Parcel 94) will be designated as an S-1 sewer planning area for the Mystic Harbour Sanitary Service

Area for public sanitary service from the Mystic Harbour sewer system. Although a section of Frontier Town already receives sewer service from Assateague Pointe, the applicant will need additional capacity to serve the campground and any expansion or intensification of uses in the campground that are currently served by multiple, conventional, on-site sewage systems.

- b. It is proposed that one hundred sixty (160) equivalent dwelling units (EDUs) of capacity will be needed to serve this request.
- c. Addition to the Mystic Harbour sewer planning area will allow for sanitary service to existing developed areas of Frontier Town, which will provide the flow necessary to use the remainder of the requested capacity and abandon the existing conventional onsite sewer systems. Service will be provided by diverting flows from Frontier Town's onsite systems by a combination of gravity/force mains and pump stations to the Mystic Harbour Wastewater Treatment Plant (WWTP). As specified in the Plan, access to such community system improvements will be limited to properties that are designated in an S-1 sewer planning area.
- d. The amendment contemplates the following infrastructure improvements:
 - i. An effluent pump station and a force main pipeline to convey treated effluent will be constructed northward on Rt 611 between Frontier Town Campground and connected with the existing force main that exits Eagles Nest Road onto Rt 611 (which serves the Castaways Campground) and continues to the Mystic Harbour WWTP. Infrastructure built in County Right-of-Ways will be inspected and accepted for turnover to the County by the Department of Public Works.
 - ii. Modifications to existing Frontier Town sewer infrastructure will include: onsite tankage, included conversion to holding/dosing configurations, and reconfiguration of gravity and force mains.
 - iii. Subject to final engineering, potential improvements could be made for WWTP telemetry and operational adjustments to enable efficient monitoring and dosing of flows to the Mystic Harbour WWTP.
- e. The proposed amendment will amend the wastewater planning areas approved in Resolution No. 09-16, with respect to the mapped planning areas in Figure 4-14, in the *Worcester County Comprehensive Water and Sewerage Plan*. The expansion will be detailed in an amended Figure 4-14, included as an attachment to the amendment packet submission to the Maryland Department of the Environment (MDE).

AND BE IT FURTHER RESOLVED that these proposed amendments to The Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon said approval by MDE.

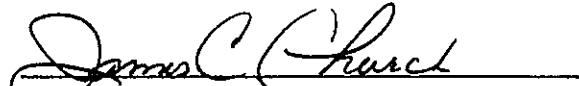

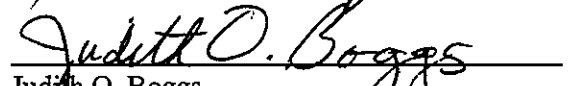
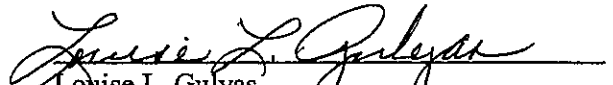
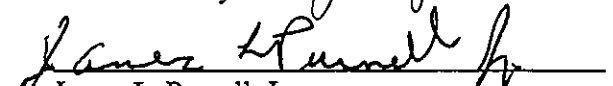
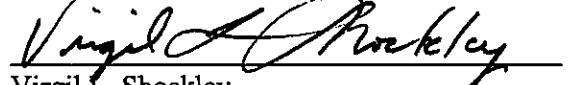
PASSED AND ADOPTED this 18th day of November, 2014.

ATTEST:



Harold L. Higgins
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS


James C. Church, President
Merrill W. Lockfaw, Jr., Vice President
Judith O. Boggs
Madison J. Bunting, Jr.
Louise L. Gulyas
James L. Purnell, Jr.
Virgil L. Shockley

RESOLUTION NO. 14 - 25

**RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE
PLAN FOR WORCESTER COUNTY TO ADD THE CRABS TO GO
COMMERCIAL AREA TO THE OCEAN DOWNS SANITARY SERVICE AREA**

WHEREAS, the County Commissioners of Worcester County, Maryland (hereafter "County Commissioners") adopted the *Comprehensive Water and Sewerage Plan for Worcester County* (hereafter "The Plan") on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received an application filed by Mark Wittmyer, on behalf of Cox 122 Raceway and Grey's Corner, LLC (the "applicant"), the owners of the Crabs to Go properties, to amend the *Worcester County Comprehensive Water and Sewerage Plan* (hereinafter "the Plan") to add the Crabs to Go commercial area to the S-1 sewer planning area for the Ocean Downs Sanitary Service Area. The applicant requests an expansion of the S-1 sewer planning area to designate the Crabs to Go commercial area properties as identified on Worcester County Tax Map 21, Parcels 153, 154, 155, 156 and 170 for public sanitary service from the Ocean Downs sanitary area. The Ocean Downs Sanitary Service Area is served by contract from the Ocean Pines Sanitary Service Area; and

WHEREAS, the Worcester County Planning Commission, at their meeting of November 6, 2014, reviewed the proposed amendment to The Plan and found that the proposal is consistent with the *Worcester County Comprehensive Plan*; and

WHEREAS, the County Commissioners held a duly advertised public hearing on December 16, 2014 to hear public comment on the requested amendment to The Plan; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the County Commissioners have determined that the proposed amendment to The Plan, as recommended by the Planning Commission, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* (hereinafter "the Plan") is hereby amended as specified in the proposal of Mark Wittmyer, on behalf of Cox 122 Raceway and Grey's Corner, LLC (the "applicant"), the owners of the Crabs to Go properties, to amend the Plan to add the Crabs to Go commercial area to the S-1 sewer planning area for the Ocean Downs Sanitary Service Area, more specifically described as follows:
 - a. The Crabs to Go commercial area properties as identified on Worcester County Tax Map 21 as Parcels 153, 154, 155, 156 and 170 will be given an S-1 sewer planning area designation within the Ocean Downs Sanitary Service Area in order to receive public sanitary sewer service from the Ocean Downs Service Area. This will be added to appropriate tables and updated information for the Ocean Downs Sanitary Service Area in the Plan.

- b. It is proposed that twenty-one (21) equivalent dwelling units (EDUs) of sewer capacity from the Ocean Downs Sanitary Service Area will be utilized to serve the Crabs to Go commercial area properties. The expansion will eliminate an equivalent ten (10) EDUs of conventional septic flow from the Coastal Bays watershed.
- c. The amendment contemplates the following infrastructure improvements by the applicant: Construction of a force main and pump station to connect to the Ocean Downs collection system.
- d. The expansion will be detailed in an amended area map for the Ocean Downs Sanitary Service Area, included as an attachment to the amendment packet submission to the Maryland Department of the Environment (MDE).

AND BE IT FURTHER RESOLVED that these proposed amendments to The Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon said approval by MDE.

PASSED AND ADOPTED this 16th day of December, 2014.

ATTEST:

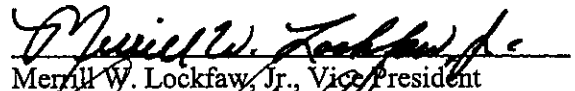


Harold L. Higgins
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS



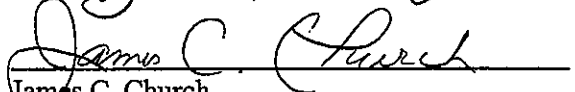
Madison J. Bunting, Jr., President



Merrill W. Lockfaw, Jr., Vice President



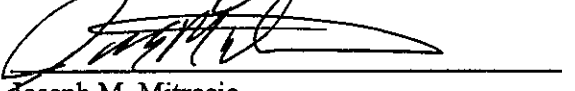
Anthony W. Bertino, Jr.



James C. Church



Theodore J. Elder



Joseph M. Mitrecic



Diana Purnell

RESOLUTION NO. 15 - 24

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY, MARYLAND TO EXPAND THE TOWN OF BERLIN WATER AND SEWER PLANNING AREAS

WHEREAS, the County Commissioners of Worcester County, Maryland (hereafter "County Commissioners") adopted the *Comprehensive Water and Sewerage Plan for Worcester County* (hereafter "The Plan") on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received an application filed by Mr. David Engelhart to revise the Town of Berlin's water and sewer planning areas to be compliant with their recent annexations that expanded the Town's corporate limits; and

WHEREAS, the Worcester County Planning Commission, at their meeting of June 4, 2015, reviewed the proposed amendments to The Plan and found that the proposals are consistent with the *Worcester County Comprehensive Plan*; and

WHEREAS, the County Commissioners held a duly advertised public hearing on July 21, 2015 to hear public comment on the requested amendments to The Plan; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the County Commissioners have determined that the proposed amendment to The Plan, as recommended by the Planning Commission, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* (hereinafter "the Plan") is hereby amended as specified in the proposal of Mr. David Engelhart to revise the Town of Berlin's water and sewer planning areas to be compliant with their recent annexations that expanded the Town's corporate limits. The application specifically provides for the maps to be updated for the Town of Berlin Sanitary Service Area in the *Worcester County Comprehensive Water and Sewerage Plan* with the sewer and water planning areas to be revised as follows:
 - a. The property identified on Worcester County Tax Map 25 as Parcel 91 on Seahawk Road (Town Resolution No. 2014-06, 9828 Seahawk, LLC) is hereby designated W-1/S-1 (immediate service), revising the current designation of W-6/S-6 (no planned public service); and
 - b. The properties identified on Tax Map 25 as Parcels 165 and 436 at the intersection of Friendship Road and Ocean Gateway/US Route 50 (Town Resolution No. 2015-03, Black, Arby's) are hereby designated W-1/S-1 (immediate service), revising the current designation of W-3/S-3 (6-10 years); and

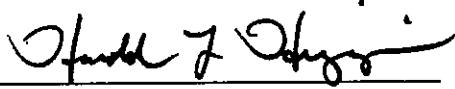
- c. The property identified on Tax Map 32 as Parcel 319 at the intersection of Germantown Road and Worcester Highway/US Route 113 (Town Resolution No. 2011-01, Derrickson) is hereby designated W-1/S-1 (immediate service), revising the current designation of W-2/S-2 (3-5 years).

AND BE IT FURTHER RESOLVED that these proposed amendments to The Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon said approval by MDE.

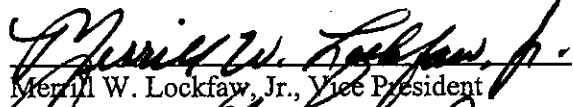
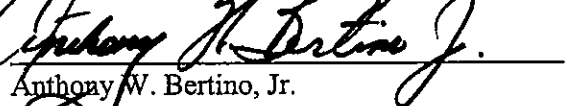
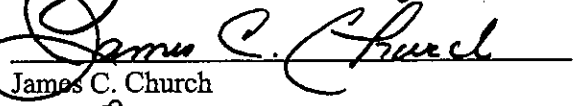
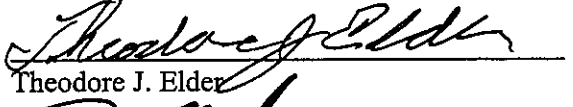
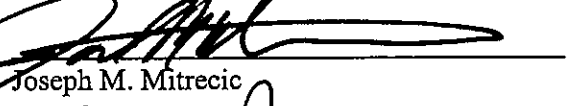
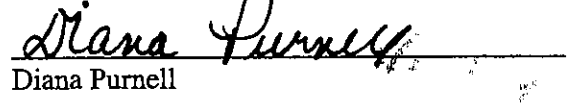
PASSED AND ADOPTED this 21st day of July, 2015.

ATTEST:

WORCESTER COUNTY COMMISSIONERS



Harold L. Higgins
Chief Administrative Officer


Madison J. Bunting, Jr., President
Merrill W. Lockfaw, Jr., Vice President
Anthony W. Bertino, Jr.
James C. Church
Theodore J. Elder
Joseph M. Mitrecic
Diana Purnell

RESOLUTION NO. 15 - 29

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY, MARYLAND TO ADD TWO SPRAY IRRIGATION AREAS IN THE NEWARK SANITARY SERVICE AREA

WHEREAS, the County Commissioners of Worcester County, Maryland (hereafter "County Commissioners") adopted the *Comprehensive Water and Sewerage Plan for Worcester County* (hereafter "The Plan") on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Mr. John Ross, Deputy Director of the Worcester County Department of Public Works, on behalf of the Worcester County Commissioners, applicant, to amend the Comprehensive Water & Sewerage Plan for Worcester County, Maryland (hereafter The Plan) to add two properties for spray irrigation of treated effluent from the Newark Wastewater Treatment Plant (WWTP); and

WHEREAS, the Worcester County Planning Commission, at their meeting of September 3, 2015, reviewed these proposed amendments to The Plan and found the proposals to be consistent with the *Worcester County Comprehensive Plan*; and

WHEREAS, the County Commissioners held a duly advertised public hearing on October 20, 2015 to hear public comment on the requested amendments to The Plan; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the County Commissioners have determined that the proposed amendments to The Plan, as recommended by the Planning Commission, are desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* (hereinafter "the Plan") is hereby amended as specified in the proposal of Mr. John Ross, Deputy Director of the Worcester County Department of Public Works, on behalf of the Worcester County Commissioners, applicant, to add two properties for spray irrigation of treated effluent from the Newark Wastewater Treatment Plant (WWTP) more specifically described as follows:
 - a. The addition of the Willard Farm property to the Newark wastewater treatment infrastructure for spray irrigation of treated effluent from the Newark wastewater treatment plant (WWTP). The property is identified on Worcester County Tax Map 40, as Parcel 72 and is located on the northwest side of Newark Road, north of the Newark WWTP.

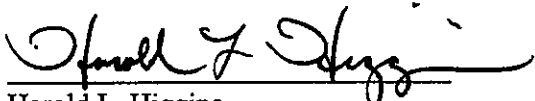
- b. The addition of the rear portion of the Worcester Technical High School property to the Newark wastewater treatment infrastructure for spray irrigation of treated effluent from the Newark WWTP. The property is identified on Worcester County Tax Map 48, as Parcel 27 and located on the east side of Worcester Highway (US 113), south of the Newark WWTP.
- c. The addition of a future force main to the Newark wastewater treatment infrastructure for delivery of treated effluent to the future Willard Farm spray irrigation system.

AND BE IT FURTHER RESOLVED that these proposed amendments to The Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon said approval by MDE.

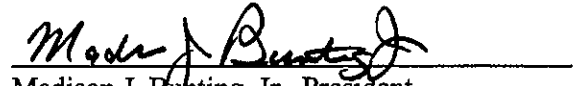
PASSED AND ADOPTED this 20th day of October, 2015.

ATTEST:

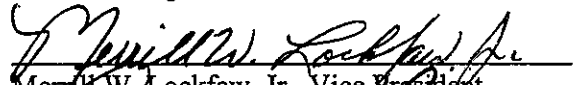
WORCESTER COUNTY COMMISSIONERS




 Harold L. Higgins
 Chief Administrative Officer



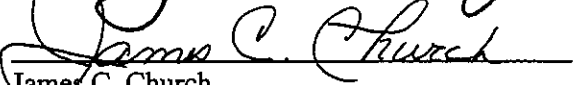
 Madison J. Bunting, Jr., President




 Merrill W. Lockfaw, Jr., Vice President



 Anthony W. Bertino, Jr.



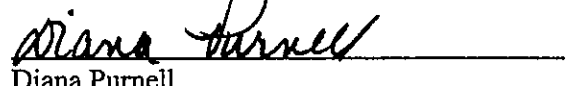
 James C. Church



 Theodore I. Elder



 Joseph M. Mitreic



 Diana Purnell

RESOLUTION NO. 15 - 32

CORRECTING RESOLUTION NO. 15-24 AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY, MARYLAND TO EXPAND THE TOWN OF BERLIN WATER AND SEWER PLANNING AREAS

WHEREAS, the County Commissioners of Worcester County, Maryland (hereafter "County Commissioners") adopted Resolution No. 15-24 on July 21, 2015 to amend the *Comprehensive Water and Sewerage Plan for Worcester County* (hereafter "The Plan") to revise the Town of Berlin's water and sewer planning areas to be compliant with their recent annexations that expanded the Town's corporate limits; and

WHEREAS, upon their review and approval of The Plan as amended, the Maryland Department of the Environment (MDE) noted that a clerical error incorrectly identified one of the annexed parcels referenced in Resolution No. 15-24 as Tax Map 25, Parcel 436 while the correct map and parcel reference is Tax Map 25, Parcel 438; and

WHEREAS, the County Commissioners wish to correct this clerical error; and

WHEREAS, the County Commissioners adopted The Plan on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners received an application filed by Mr. David Engelhart to revise the Town of Berlin's water and sewer planning areas to be compliant with their recent annexations that expanded the Town's corporate limits; and

WHEREAS, the Worcester County Planning Commission, at their meeting of June 4, 2015, reviewed the proposed amendments to The Plan and found that the proposals are consistent with the *Worcester County Comprehensive Plan*; and

WHEREAS, the County Commissioners held a duly advertised public hearing on July 21, 2015 to hear public comment on the requested amendments to The Plan; and

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, the County Commissioners determined that the proposed amendment to The Plan, as recommended by the Planning Commission, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. Resolution No. 15-24, adopted on July 21, 2015 is hereby repealed and replaced by this resolution, nunc pro tunc.
2. The *Comprehensive Water and Sewerage Plan for Worcester County* (hereinafter "the Plan") is hereby amended as specified in the proposal of Mr. David Engelhart to revise the Town of Berlin's water and sewer planning areas to be compliant with their recent annexations that expanded the Town's corporate limits. The application specifically provides for the maps to be updated for the Town of Berlin Sanitary Service Area in the *Worcester County Comprehensive Water and*

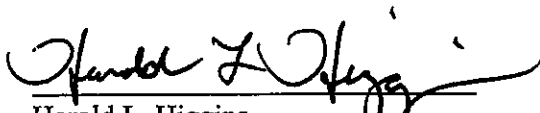
Sewerage Plan with the sewer and water planning areas to be revised as follows:

- a. The property identified on Worcester County Tax Map 25 as Parcel 91 on Seahawk Road (Town Resolution No. 2014-06, 9828 Seahawk, LLC) is hereby designated W-1/S-1 (immediate service), revising the current designation of W-6/S-6 (no planned public service); and
- b. The properties identified on Tax Map 25 as Parcels 165 and 438 at the intersection of Friendship Road and Ocean Gateway/US Route 50 (Town Resolution No. 2015-03, Black, Arby's) are hereby designated W-1/S-1 (immediate service), revising the current designation of W-3/S-3 (6-10 years); and
- c. The property identified on Tax Map 32 as Parcel 319 at the intersection of Germantown Road and Worcester Highway/US Route 113 (Town Resolution No. 2011-01, Derrickson) is hereby designated W-1/S-1 (immediate service), revising the current designation of W-2/S-2 (3-5 years).


AND BE IT FURTHER RESOLVED that these proposed amendments to The Plan have been forwarded to the Maryland Department of the Environment (MDE) and were reviewed and approved, subject to the correction referenced herein, in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland and that said amendments, as corrected, are hereby officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan*.

PASSED AND ADOPTED this 3rd day of November, 2015.

ATTEST:



Harold L. Higgins
Chief Administrative Officer

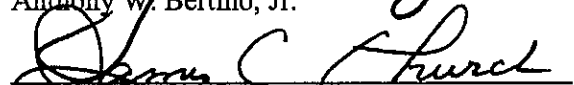
WORCESTER COUNTY COMMISSIONERS


Madison J. Bunting, Jr., President


Absent


Merrill W. Lockfaw, Jr., Vice President


Anthony W. Bertino, Jr.


James C. Church


Theodore J. Elder


Joseph M. Mitrecic


Diana Purnell

RESOLUTION NO. 16 - 29

**RESOLUTION AMENDING THE WORCESTER COUNTY
WATER AND SEWERAGE PLAN TO EXPAND THE
FORT WHALEY CAMPGROUND WASTEWATER TREATMENT SYSTEM**

WHEREAS, the County Commissioners have received a petition filed by Hugh Cropper, IV, attorney, on behalf of Sun TRS Fort Whaley, LLC for expansion of the Fort Whaley Campground wastewater treatment system located on a 72.5 acre parcel at the southeast corner of US Route 50 (Ocean Gateway) and Dale Road south of the Village of Whaleyville and identified on Worcester County Tax Map 18 as Parcel 20, Lot A; and

WHEREAS, Sun TRS Fort Whaley, LLC has proposed that sanitary services will be provided to an additional sixty-seven (67) campsites, without a change in the previously approved water and sewerage planning boundaries, by the existing and proposed drainfields along with treatment from a package plant that will be installed on the property that will still fall within the limits of the approved discharge permit which allows a maximum capacity of 31,500 gallons per day (gpd) as previously approved by the County Commissioners by Resolution No. 09-06 adopted on April 21, 2009 for the existing 210 seasonal campsites; and

WHEREAS, the cost of the Construction of the wastewater treatment system infrastructure will be the sole responsibility of the property owner served by the facilities; and

WHEREAS, the Worcester County Planning Commission, at its November 3, 2016 meeting, reviewed the proposed amendment to the Worcester County Water and Sewerage Plan and found the proposal consistent with the Worcester County Comprehensive Plan with the condition, suggested in staff comments, that qualifies the approval pending completion of successful testing of the proposed new drain fields through the wet season; and

WHEREAS, the County Commissioners held a duly advertised public hearing on December 20, 2016, to consider this petition for expansion of the Fort Whaley Campground wastewater treatment system.

WHEREAS, as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et.seq. of the Environment Article of the Annotated Code of Maryland, the County Commissioners have determined that the proposed amendment to the Worcester County Comprehensive Water & Sewerage Plan, as recommended by the Planning Commission, is desirable

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Worcester County Water and Sewerage Plan* is hereby amended to reflect the expansion of the Fort Whaley Campground wastewater treatment system to provide service to an additional sixty-seven (67) campsites to the existing two hundred and ten (210) lot campground without a change in the previously approved water and sewerage planning boundaries. The property is identified on Worcester County Tax Map 18 as Parcel 20, Lot A, and is located on the southerly side of US Route 50 at the easterly side of Dale Road, at the Junction of US Route 50 (Ocean Gateway) and MD Route 610 (Whaleyville Road) south of the Village of Whaleyville.
2. Anticipated infrastructure includes the development of additional drainfield and reserve areas, connecting force/gravity mains for the new drainfields and any modifications to the wastewater

treatment plant and storage as required by the Maryland Department of the Environment (MDE).

- The review of this amendment considered the preliminary non-seasonal testing that was done by a consultant on the campground to narrow the areas to be tested for additions to the existing approved drainfields. The Commissioners concur with the Planning Commission's condition that qualifies the approval pending completion of successful testing of the proposed new drainfields through the wet season.

AND BE IT FURTHER RESOLVED that this proposed amendment to the Worcester County Comprehensive Water and Sewerage Plan shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland, and that this amendment shall be officially incorporated into the Worcester County Comprehensive Water and Sewerage Plan upon approval by MDE.


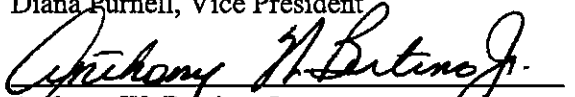
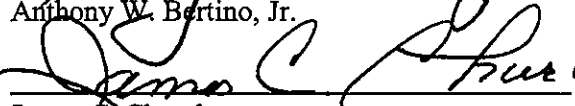

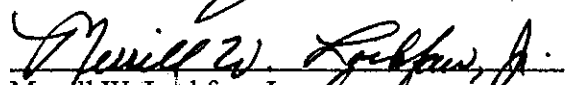
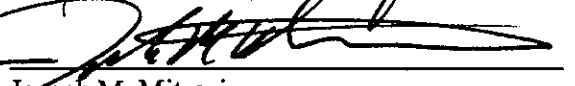
PASSED AND ADOPTED this 20th day of December, 2016.

ATTEST:



Harold L. Higgins
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS


Madison J. Bunting, Jr., President
Diana Burnell, Vice President
Anthony W. Bertino, Jr.
James C. Church
Theodore J. Elder
Merrill W. Lockfaw, Jr.
Joseph M. Mitrecic

RESOLUTION NO. 17 - 7

RESOLUTION AMENDING THE COMPREHENSIVE WATER AND SEWERAGE PLAN FOR WORCESTER COUNTY FOR MISCELLANEOUS TECHNICAL DATA AND CAPITAL PLAN INFORMATIONAL UPDATES FOR OCEAN CITY SANITARY SERVICE AREA

WHEREAS, the County Commissioners of Worcester County, Maryland adopted a Comprehensive Water and Sewerage plan for the County on August 23, 1994, pursuant to Section 9-503 of the Environment Article of the Annotated Code of Maryland; and

WHEREAS, the County Commissioners have received a request from Jim Parsons, Chief Deputy Director of Public Works, on behalf of the Mayor and Council of the Town of Ocean City, Maryland to amend the *Worcester County Comprehensive Water and Sewerage Plan* (the Plan) to update the Town of Ocean City's water system informational items in the Plan, including: revised water system text, revised water system profile figure, revised water storage tank schedule table, and revised water improvement schedules in the capital plan for the Town's systems; and

WHEREAS, the Worcester County Planning Commission reviewed the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* at their meeting of March 2, 2017 and found it to be consistent with the *Comprehensive Plan for Worcester County, Maryland*; and

WHEREAS, the County Commissioners held a duly advertised public hearing on April 25, 2017 to consider public comment on this amendment to the *Worcester County Comprehensive Water and Sewerage Plan*; and

WHEREAS, the County Commissioners reviewed the recommendations of the Planning Commission and staff reports and as a result of their investigation and evaluation of the proposal in accordance with the provisions of Section 9-503 et. seq. of the Environment Article of the Annotated Code of Maryland, determined that the proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* to update the Town of Ocean City's water system informational items in the Plan, is desirable.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that:

1. The *Comprehensive Water and Sewerage Plan for Worcester County* (the Plan) is hereby amended as specified in the application of Jim Parsons, Chief Deputy Director of Public Works, on behalf of the Mayor and Council of the Town of Ocean City, Maryland to update the Town of Ocean City's water system informational items in the Plan, including: revised water system text, revised water system profile figure, revised water storage tank schedule table, and revised water improvement schedules in the capital plan for the Town's systems, and this

information will be updated in the Plan for the Ocean City Sanitary Service Area, more specifically described as follows:

- a. Updates to Ocean City water system text on page 3-1 of The Plan, a revised page 3-6 for the water system profile figure, and a revised page 3-7a for the water storage tank schedule.
- b. Revisions to the Ocean City capital plan water system improvement schedules with revised page 3-7b (Schedule A) and page 3-7f (Schedule B).

AND BE IT FURTHER RESOLVED that this proposed amendment to the *Worcester County Comprehensive Water and Sewerage Plan* shall be forwarded to the Maryland Department of the Environment (MDE) for their review and approval in accordance with the provisions of Section 9-507 of the Environment Article of the Annotated Code of Maryland and that this amendment shall be officially incorporated into the *Worcester County Comprehensive Water and Sewerage Plan* upon approval by MDE.

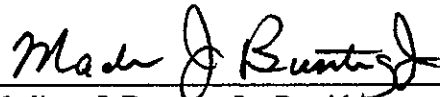
PASSED AND ADOPTED this 25th day of April, 2017.

ATTEST:



Harold L. Higgins
Chief Administrative Officer

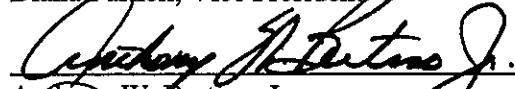
COUNTY COMMISSIONERS OF
WORCESTER COUNTY, MARYLAND



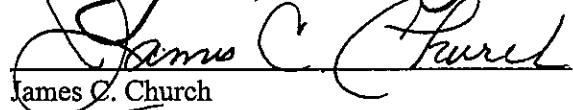
Madison J. Bunting, Jr., President



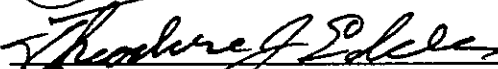
Diana Purnell, Vice President



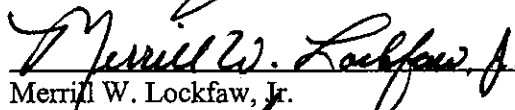
Anthony W. Bertino, Jr.



James C. Church



Theodore J. Elder



Merrill W. Lockfaw, Jr.



Joseph M. Mitreic

**RESOLUTION WITHDRAWING THE PROPOSED AMENDMENT
TO THE WORCESTER COUNTY
WATER AND SEWERAGE PLAN TO EXPAND THE
FORT WHALEY CAMPGROUND WASTEWATER TREATMENT SYSTEM**

WHEREAS, the County Commissioners of Worcester County Maryland by Resolution No. 16-29 adopted on December 20, 2016 reviewed and approved a proposed amendment to the *Worcester County Water and Sewerage Plan* to reflect the expansion of the Fort Whaley Campground wastewater treatment system to provide service to an additional sixty-seven (67) campsites to the existing two hundred and ten (210) lot campground without a change in the previously approved water and sewerage planning boundaries. The property is identified on Worcester County Tax Map 18 as Parcel 20, Lot A, and is located on the southerly side of US Route 50 at the easterly side of Dale Road, at the Junction of US Route 50 (Ocean Gateway) and MD Route 610 (Whaleyville Road) south of the Village of Whaleyville; and

WHEREAS, Hugh Cropper, IV, attorney, on behalf of the applicant, Sun TRS Fort Whaley, LLC, submitted a letter to the County dated May 25, 2017 requesting to withdraw the proposed amendment to expand the campground while construction of the new wastewater treatment plant and other related sewer upgrades to serve the existing campground are underway; and

WHEREAS, the County Commissioners reviewed this request at their meeting on June 20, 2017 and agreed to withdraw the proposed amendment from further consideration by the Maryland Department of the Environment (MDE) which is currently reviewing the proposed amendment in accordance with the provisions of Section 9-507 of the Annotated Code of Maryland.

NOW, THEREFORE, BE IT RESOLVED by the County Commissioners of Worcester County, Maryland that the proposed amendment to the *Worcester County Water and Sewerage Plan* adopted by Resolution No. 16-29 on December 20, 2016 to reflect the expansion of the Fort Whaley Campground wastewater treatment system is hereby withdrawn and is to be given no further consideration by the Maryland Department of the Environment (MDE).

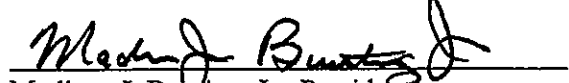
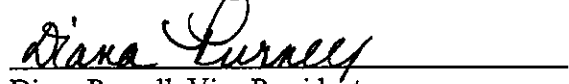
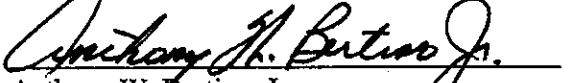

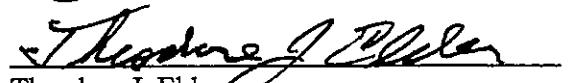
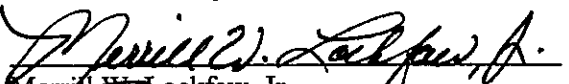
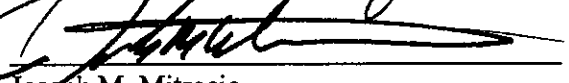
PASSED AND ADOPTED this 20th day of June, 2017.

ATTEST:



Harold L. Higgins
Chief Administrative Officer

WORCESTER COUNTY COMMISSIONERS


Madison J. Bunting, Jr., President
Diana Burnell, Vice President
Anthony W. Bertino, Jr.
James C. Church
Theodore J. Elder
Merrill W. Lockfaw, Jr.
Joseph M. Mitreic

APPENDIX “F”

94-66



MARYLAND DEPARTMENT OF THE ENVIRONMENT
2500 Broening Highway • Baltimore, Maryland 21224
(410) 631-3000

William Donald Schaefer
Governor

David A.C. Carroll
Secretary

~~November 2, 1994~~

The Honorable Jeanne Lynch
President
Worcester County Commissioners
Room 112, Court House
Snow Hill MD 20863

Dear Ms. Lynch:

We have completed our review of the 1994 Update of the Worcester County Water and Sewerage Plan (Plan), adopted by the County Commissioners on August 23, 1994.

The Maryland Department of the Environment (MDE) approves the 1994 Update. This action completes our review, as required by Section 9-507 of the Environment Article of State law.

MDE appreciates the County's continued efforts in water and sewerage planning, especially the efforts of Ms. Phyllis Wimbrow and Mr. Rick Wells are truly appreciated. Ms. Wimbrow's contribution is particular outstanding in our experience of water and sewerage planning.

Thank you for giving us the opportunity to review the Plan. If you have any questions regarding this matter, please call me at (410) 631-3567 or Mr. Ray Anderson of my staff at (410) 631-3721.

Sincerely,

J. L. Hearn, Director
Water Management Administration

JLH:lp

cc: Ms. Phyllis Wimbrow ✓
Mr. Rick Wells
Mr. Ronald Kreitner



VERIFIEL

MARYLAND DEPARTMENT OF THE ENVIRONMENT
2500 Broening Highway • Baltimore, Maryland 21224
(410) 631-3000

95-03
95-09
95-10
95-11
95-24

Parris N. Glendening
Governor

Jane T. Nishida
Secretary

January 31, 1996

The Honorable Floyd F. Bassett, Jr.
President
Worcester County Commissioners
Room 112, Court House
Snow Hill MD 22863

Dear Mr. Bassett:

We have completed our review of the five amendments (Lands of 589 Corporation; Herring Landing; Lands of Marina Developers; Mariner's County Down; and, Town of Snow Hill) which comprise the 1995 Amendment Cycle to the 1994 Worcester County Water and Sewerage Plan.

The 1995 Amendment Cycle is consistent with the County's land use plan and our growth management concerns.

The Maryland Department of the Environment (MDE) approves the 1995 Amendment Cycle. This action completes our review, as required by Section 9-507 of the Environment Article of State law.

MDE appreciates the County's continued efforts in water and sewerage planning. Ms. Phyllis Wimbrow of your Planning, Permits, and Inspections Department is commended for having prepared the 1995 Amendment Cycle. Thank you for giving us this opportunity to review these amendments.

If you have questions regarding this matter, please call me at (410) 631-3567 or Mr. Ray Anderson, Water and Sewerage Planning Section at (410) 631-3721.

Sincerely,

J.L. Hearn, Director
Water Management Administration

JLH:lp

cc: Ms. Phyllis Wimbrow

MDE

MARYLAND DEPARTMENT OF THE ENVIRONMENT
2500 Broening Highway • Baltimore, Maryland 21224
(410) 631-3000

Fde Mystic Harbour

*Mr. J. L. Hearn
INFO
✓ cc: J. T. Nishida*

Parris N. Glendening
Governor

Jane T. Nishida
Secretary

96-29

October 1, 1997

CERTIFIED MAIL

John H. Burbage, Jr., President
M.H. Utilities Corporation
9428 Stephen Decatur Highway
Berlin, Maryland 21811

RE: Mystic Harbour Permit Modification

Dear Mr. Burbage:

Enclosed is Modification A of State Discharge Permit 91-DP-2273. Please replace the existing pages of the permit with the enclosed modified pages. Permit conditions not affected by this modification remain unchanged. The permit expiration date remains February 2, 1999.

The Permittee is responsible for complying with all permit conditions. Accordingly, you are advised to carefully read the enclosed modification and permit and become thoroughly familiar with the requirements.

The permit contemplates that the performance of the pre-treatment processes and disposal system at Mystic Harbour need to be continuously evaluated in order to facilitate the phased project development and system expansion. Please advise your consultants to draft the proposed plan to fill the requirements as provided in the permit for the Department's review. A detailed plan is necessary to develop the framework and the evaluation process so that it can be phased to correspond with planned expansion. Although the permit specifically allows for an increase in capacity to 0.25 mgd, the Department retains the right to deny the expansion if it is not satisfied with the phased expansion process of monitoring and evaluation. At this point, the Department has rated the system as being fully capable of handling a daily flow of up to 0.12 mgd and will review phased expansion consistent with the permit and as detailed in the reference plan.

*Jack
read this
to P.C.*

Consistent with statutory and permit requirements, subdivision approvals may be granted prospectively based upon assurance of water and sewerage facility availability in time to serve construction. Building permit issuance, however, is to be predicated on facility adequacy and availability of capacity.

If you have any questions, please call Ching-Tzone Tien, Chief, Groundwater Discharge Permits Division, at (410) 631-3662.

Sincerely,

J.L. Hearn, Director
Water Management Administration

cc: Ron Nelson
Mike Powell
Rick Wells

96-40

VERIFIEL



MARYLAND DEPARTMENT OF THE ENVIRONMENT
2500 Broening Highway • Baltimore, Maryland 21224
(410) 631-3000

Parris N. Glendening
Governor

Jane T. Nishida
Secretary

August 13, 1996

G. Troy Purnell
Vice-President
Assateague Pointe, Inc.
8552 Stephen Decatur Road
Berlin MD 21811

Dear Mr. Purnell:

This is in response to your letter of July 23, 1996 to John Tustin of Worcester County requesting that 15 lots being developed by Tom Collins be allowed to obtain sewer service from the existing Assateague Pointe wastewater system.

This office has no objection to the 15 lot request if all applicable County requirements are met. Wastewater treatment and disposal systems at Assateague Pointe will have to be expanded to accommodate any flow beyond the 15 lots. If you have any questions, please call me at (410) 631-3752.

Sincerely,

Jeffrey L. Rein, Deputy Program Administrator
Water/Wastewater Permits Program
Water Management Administration

JLR/ba

cc: John Tustin
Rick Wells



MARYLAND DEPARTMENT OF THE ENVIRONMENT
2500 Broening Highway • Baltimore, Maryland 21224
(410) 631-3000

97-49
97-50

Parris N. Glendening
Governor

Jane T. Nishida
Secretary

MAR 31 1998

The Honorable Granville D. Trimper
President
Worcester County Commissioners
Room 112, Court House
Snow Hill MD 22863

Dear Mr. Trimper:

We have completed our review of two amendments to the 1994 Worcester County Water and Sewerage Plan. Resolution 97-49 is on behalf of Ann Lockhart Showell while Resolution 97-50 is for Goodwin Taylor. These two amendments provide water and wastewater services to the proposed Homeport Planned Unit Development (PUD), formerly Captain's Point, and to the Riddle Farm PUD, respectively. They were adopted by the County Commissioners on December 9, 1997.

Being consistent with the County's land use plan and our growth management concerns, they are approved by the Maryland Department of the Environment. This action completes our review, as required by Section 9-507 of the Environment Article of State law. Ms. Phyllis Wimbrow of your Planning, Permits and Inspections Department is commended for having prepared these amendments.

Should you have any questions regarding these matters, please feel free to call me at (410) 631-3567, or have a member of your staff contact Mr. Ray Anderson at (410) 631-3721.

Sincerely,

J. L. Hearn, Director
Water Management Administration

cc: Ms. Phyllis Wimbrow
Mr. Ronald M. Kreitner
Ms. Linda C. Janey

VERIFIEL

98.1
98.2



MARYLAND DEPARTMENT OF THE ENVIRONMENT
2500 Broening Highway • Baltimore, Maryland 21224
(410) 631-3000

Parris N. Glendening
Governor

Jane T. Nishida
Secretary

JUL 08 1998

The Honorable Granville D. Trimper
President
Worcester County Commissioners
Room 112, Court House
Snow Hill MD 22863

Dear Mr. Trimper:

We have completed our review of the Lighthouse Sound and the Sandpiper Village amendments to the 1994 Worcester County Water and Sewerage Plan. On January 20, 1998 the Sandpiper Village amendment was adopted by Resolution 98-1 and the Lighthouse Sound amendment was adopted by Resolution 98-2.

Being consistent with the County's land use plan and our growth management concerns, they are approved by the Maryland Department of the Environment. This action completes our review, as required by Section 9-507 of the Environment Article of State law. Ms. Phyllis Wimbrow of your Planning, Permits and Inspections Department is commended for having prepared these two amendments.

Should you have any questions regarding these matters, please feel free to call me at (410) 631-3567, or have your staff contact Mr. Ray Anderson at (410) 631-3721.

Sincerely,

J.L. Hearn, Director
Water Management Administration

cc: Ms. Phyllis Wimbrow
Mr. Ronald M. Kreitner
Ms. Linda C. Janey

✓ INFO. pending



MARYLAND DEPARTMENT OF THE ENVIRONMENT

2500 Broening Highway • Baltimore Maryland 21224
(410) 631-3000 • 1-800-633-6101 • [http:// www.mde.state.md.us](http://www.mde.state.md.us)

Parris N. Glendening
Governor

Jane T. Nishida
Secretary

October 23, 1998

98-19

The Honorable Granville D. Trimper, President
Worcester County Commissioners
Room 112, Court House
Snow Hill, Maryland 22863

Re: Mystic Harbour/Water and Sewer Plan Amendment, Resolution 98-19

Dear Mr. Trimper:

After considering additional information provided by Worcester County staff regarding the expansion of the Mystic Harbour Service Area, the Maryland Department of the Environment (MDE) hereby approves the amendment as adopted by the Worcester County Commission. This approval is granted with the condition that said approval not allow Worcester County, or other public or private entities, to violate or override the terms, conditions or intent of the West Ocean City Consent Order to limit development in the sensitive areas within the West Ocean City Service Area.

MDE has been informed that, since the Mystic Harbour wastewater system is to be owned and operated by the County, issues relating to the viability of the two systems are no longer of concern. However, if the transfer of the system does not occur, MDE's concern about system viability will remain. With regard to the comments provided to MDE by the Maryland Office of Planning, the planning staff found the amendment to be "generally consistent" with the County Comprehensive Plan. MDE urges the County to carefully consider the suggestion of MOP to refine service area designations to ensure orderly development within the Service Area.

This action completes our review of Resolution 98-19, as required by Section 9-507 of the Environment Article of State law. Should you have any questions, please call me at (410) 631-3567.

Sincerely,

J.L. Ham
J.L. Ham, Director
Water Management Administration

JLH/dp

cc: Mr. Edward Hammonds
Ms. Phyllis Wimbrow
Mr. Richard Wells
Mr. Ronald Kreitner
Ms. Linda C. Janey





MARYLAND DEPARTMENT OF THE ENVIRONMENT

2500 Broening Highway • Baltimore Maryland 21224
(410) 631-3000 • 1-800-633-6101 • <http://www.mde.state.md.us>

Parris N. Glendening
Governor

Jane T. Nishida
Secretary

OCT 06 1998

The Honorable Granville D. Trimper, President
Worcester County Commissioners
Room 112, Court House
Snow Hill MD 22863

RECEIVED
Worcester County Commissioners
Date 10/21/98

Dear Mr. Trimper:

We are reviewing two amendments to the 1994 Worcester County Water and Sewerage Plan. One amendment enlarges the Mystic Harbor sewer service area for the MH Utilities Corporation. The other amendment allows privately-owned water and sewer systems to be provided for a proposed project known as The Landings.

In order that we may give a favorable consideration to the Mystic Harbor amendment, additional information is needed, as follows: 1) Did you receive any adverse public comments at the hearing to adopt the Mystic Harbor amendment? If so, please provide a copy of these comments. 2) Under State law, MDE is allowed to perform an affordability analysis of sewerage systems. While we believe that the West Ocean City and Mystic Harbor sewerage systems will remain viable if the overlapping districts are allowed, please explain how sewer allocation to individual properties will be determined and how the County will address billing and accounting transactions. Please send us the financial data on the viability of both systems. 3) In light of the West Ocean City Consent Order, does the County anticipate that development in the flood plain of the West Ocean City sewer service area will occur as a result of service from the Mystic Harbor sewer service area? The Consent Order will remain in effect, and MDE is concerned that the spirit and intent of the Consent Order continue to be addressed. 4) During the State's review, we received the enclosed comments from the Maryland Office of Planning (MOP). Upon your review of their comments, I would appreciate your direct reply to the MOP with a copy to my office.

Our review period for both amendments ends on October 23, 1998. Because we believe that more information is needed, the review period is extended by another 90 days, or until January 21, 1999 for the Mystic Harbor amendment. The Landings amendment is approved. This action completes our initial review, as required by Section 9-507 of the Environment Article of State law.

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②

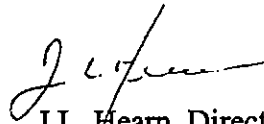
③

*

The Honorable Granville D. Trimper
page two

Should you have any questions, please feel free to call me at (410) 631-3567.

Sincerely,



J.L. Hearn, Director
Water Management Administration

enclosure

cc: Ms. Phyllis Wimbrow
Mr. Ronald M. Kreitner
Ms. Linda C. Janey

9822

F



MARYLAND DEPARTMENT OF THE ENVIRONMENT

2500 Broening Highway • Baltimore Maryland 21224
(410) 631- 3000 • 1- 800 -633-6101 • [http:// www. mde. state. md. us](http://www.mde.state.md.us)

Parris N. Glendening
Governor

Jane T

OCT 06 1998

The Honorable Granville D. Trimper, President
Worcester County Commissioners
Room 112, Court House
Snow Hill MD 22863

Dear Mr. Trimper:

We are reviewing two amendments to the 1994 Worcester County Water and Sewerage Plan. One amendment enlarges the Mystic Harbor sewer service area for the MH Utilities Corporation. The other amendment allows privately-owned water and sewer systems to be provided for a proposed project known as The Landings.

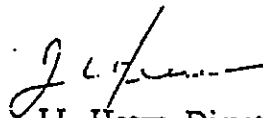
In order that we may give a favorable consideration to the Mystic Harbor amendment, additional information is needed, as follows: 1) Did you receive any adverse public comments at the hearing to adopt the Mystic Harbor amendment? If so, please provide a copy of these comments. 2) Under State law, MDE is allowed to perform an affordability analysis of sewerage systems. While we believe that the West Ocean City and Mystic Harbor sewerage systems will remain viable if the overlapping districts are allowed, please explain how sewer allocation to individual properties will be determined and how the County will address billing and accounting transactions. Please send us the financial data on the viability of both systems. 3) In light of the West Ocean City Consent Order, does the County anticipate that development in the flood plain of the West Ocean City sewer service area will occur as a result of service from the Mystic Harbor sewer service area? The Consent Order will remain in effect, and MDE is concerned that the spirit and intent of the Consent Order continue to be addressed. 4) During the State's review, we received the enclosed comments from the Maryland Office of Planning (MOP). Upon your review of their comments, I would appreciate your direct reply to the MOP with a copy to my office.

Our review period for both amendments ends on October 23, 1998. Because we believe that more information is needed, the review period is extended by another 90 days, or until January 21, 1999 for the Mystic Harbor amendment. The Landings amendment is approved. This action completes our initial review, as required by Section 9-507 of the Environment Article of State law.

The Honorable Granville D. Trimper
page two

Should you have any questions, please feel free to call me at (410) 631-3567.

Sincerely,



J.L. Hearn, Director
Water Management Administration

enclosure

cc: Ms. Phyllis Wimbrow
Mr. Ronald M. Kreitner
Ms. Linda C. Jancy



MARYLAND DEPARTMENT OF THE ENVIRONMENT
2500 Broening Highway • Baltimore Maryland 21224
(410) 631-3000 • 1-800-633-6101 • <http://www.mde.state.md.us>

Parris N. Glendening
Governor

Jane T. Nishida
Secretary

MAY 05 1999

The Honorable Jeanne Lynch, President
Worcester County Commissioners
Room 112, Court House
Snow Hill MD 22863

Dear Ms. Lynch:

We have completed our review of an amendment to the 1994 Worcester County Water and Sewerage Plan, adopted by Resolution No. 99-4 on January 5, 1999. The amendment increases the amount of potable water service and wastewater service, via a spray system for the Lighthouse Sound golf course, from 30,030 to 37,950 gpd. Enclosed is a copy of the supportive comments from the Maryland Office of Planning (MOP). With regard to MOP's environmental concerns, the mitigation measures, incorporated into the discharge permit issued last year for the spray system, have been retained in the new discharge permit revised for the proposed increase in flow. They were presented to MOP in our enclosed letter of June 19, 1998.

Being consistent with the County's land use plan and our growth management concerns, the amendment is approved by the Maryland Department of the Environment. This action completes our review, as required by Section 9-507 of the Environment Article of State law. Ms. Phyllis Wimbrow of your Planning, Permits and Inspection Department is commended for having prepared the amendment. Thank you for giving us an opportunity to review the amendment.

If you have any questions, please call me at (410) 631-3567 or Mr. Ray Anderson at (410) 631-3726.

Sincerely,

J.L. Hearn, Director
Water Management Administration

enclosures

cc: Ms. Phyllis Wimbrow
Mr. Ronald M. Kreitner
Ms. Linda C. Janey



SANDY COAST

MARYLAND DEPARTMENT OF THE ENVIRONMENT

2500 Broening Highway • Baltimore Maryland 21224
(410) 631-3000 • 1-800-633-6101 • http://www.mde.state.md.us

Parris N. Glendening
Governor

Jane T. Nishida
Secretary

JAN 20 2001

00-11
00-24

The Honorable Jeanne Lynch, President
Worcester County Commissioners
Room 112, Court House
Snow Hill MD 22863

Dear Ms. Lynch:

We have completed our review of Amendment SW 2000-1 (Merial Select, Inc.) and SW 2000-2 (Town of Berlin) to the 1994 Worcester County Water and Sewerage Plan. Amendment SW 2000-1 allows the company to replace its existing, marginal on-site water and sewerage systems with safe and adequate on-site water and sewerage systems, each with a maximum capacity of 30,000 gallons per day. Said property is shown on Worcester County Tax Map 25 as Parcel 50. On April 18, 2000 the amendment for Merial Select, Inc. was adopted by County Resolution No. 00-11. Amendment SW 2000-2 allows the Town of Berlin to extend water and sewer services outside of the Town limits along Maryland Route 818 and north of U.S. Route 50 to serve the needs of a future industrial park (Berlin Technology Park), proposed on the west side of U.S. Route 113, north of U.S. Route 50. On June 20, 2000 the amendment for the Berlin Technology Park was adopted by County Resolution No. 00-24. This amendment was adopted by the County Commissioners with the understanding that these services become appropriate after the property is annexed into the Town of Berlin and appropriate zoning is enacted by the Town to permit construction of the Technology Park.

Being consistent with the County's land use plan and our growth management objectives, these amendments are approved by the Maryland Department of the Environment. This action completes our review, as required by Section 9-507 of the Environment Article of State law. Enclosed for your review is a copy of the supportive comments from the Maryland Department of Planning. Thank you for giving us this review opportunity. If you have any questions, please call me at (410) 631-3567.

*

Sincerely,

J.L. Hearn, Director
Water Management Administration

enclosure

received
2-9-01 B.N.



MARYLAND DEPARTMENT OF THE ENVIRONMENT

P.O. Box 2057 • Baltimore, Maryland 21203-2057

(410) 631-3000 • 1-800-633-6101 • [http:// www. mde. state. md. us](http://www.mde.state.md.us)

00-33

Parris N. Glendening
Governor

Jane T. Nishida
Secretary

MAR - 8 2001

RECEIVED

MAR 14 2001 *val*

The Honorable Jeanne Lynch, President
Worcester County Commissioners
Room 112, Court House
Snow Hill MD 22863

Dear Ms. Lynch:

We have completed our review of an amendment to the 1994 Worcester County Water and Sewerage Plan (Plan) which includes the Ocean City Partners Ltd. Partnership shared sanitary and well facilities between the Home Depot and Wal-Mart stores into the Plan. The amendment was approved by the Worcester County Commissioners on September 19, 2000 as Resolution #00-33. Said property is shown on Worcester County Tax Map 26 as Parcel 303, Lots 1 & 2.

Being consistent with the County's land use plan, the amendment is approved by the Maryland Department of the Environment (MDE). This action completes our review, as required by Section 9-507 of the Environment Article of State law. Enclosed for your review is a copy of the supportive comments from the Maryland Department of Planning. MDE appreciates the continued efforts of Worcester County in water and sewerage planning. Mr. Sandy Coyman and Mr. Robert Nelson of your Department of Comprehensive Planning are commended for having prepared the amendment.

Thank you for giving us this review opportunity. If you have any questions, please call me at (410) 631-3567 or Mr. Ray Anderson at (410) 631-3726.

Sincerely,

J.L. Hearn, Director
Water Management Administration

enclosure

cc: Mr. Sandy Coyman
Mr. Robert Nelson
Mr. Larry Duket



MARYLAND DEPARTMENT OF THE ENVIRONMENT

P.O. Box 2057 • Baltimore, Maryland 21203-2057

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00-43

Parris N. Glendening
Governor

Jane T. Nishida
Secretary

APR 20 2001

RECEIVED

APR 24 2001

The Honorable Jeanne Lynch, President
Worcester County Commissioners
Room 112, Court House
Snow Hill MD 22863

Dear Ms. Lynch:

We have completed our review of two amendments to the 1994 Worcester County Water and Sewerage Plan. The Mark Odachowski amendment allows expansion of the Mystic Harbor water and sewerage service areas to serve the Mark Odachowski property. This amendment was adopted by the Commissioners on December 5, 2000. Amendment SW 2000-4 allows expansion of the River Run sewerage service area to serve the Howard Hall-Catholic Diocese school property. Water for the school will be provided by an on-site system. This amendment was adopted by the Commissioners on December 12, 2000.

Being consistent with the County's land use plan, these amendments are approved by the Maryland Department of the Environment. This action completes our review, as required by Section 9-507 of the Environment Article of State law. Enclosed for your review is a copy of the supportive comments from the Maryland Department of Planning. Thank you for giving us this review opportunity. If you have any questions, please call me at (410) 631-3567.

Sincerely,

J.L. Hearn, Director
Water Management Administration

enclosure

cc: Mr. Sandy Coyman
Mr. Robert Nelson
Mr. Larry Duket



MARYLAND DEPARTMENT OF THE ENVIRONMENT

P.O. Box 2057 • Baltimore, Maryland 21203-2057

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00-44

Parris N. Glendening
Governor

Jane T. Nishida
Secretary

APR 20 2001

RECEIVED

APR 26 2001

The Honorable Jeanne Lynch, President
Worcester County Commissioners
Room 112, Court House
Snow Hill MD 22863

Dear Ms. Lynch:

We have completed our review of two amendments to the 1994 Worcester County Water and Sewerage Plan. The Mark Odachowski amendment allows expansion of the Mystic Harbor water and sewerage service areas to serve the Mark Odachowski property. This amendment was adopted by the Commissioners on December 5, 2000. Amendment SW 2000-4 allows expansion of the River Run sewerage service area to serve the Howard Hall-Catholic Diocese school property. Water for the school will be provided by an on-site system. This amendment was adopted by the Commissioners on December 12, 2000.

Being consistent with the County's land use plan, these amendments are approved by the Maryland Department of the Environment. This action completes our review, as required by Section 9-507 of the Environment Article of State law. Enclosed for your review is a copy of the supportive comments from the Maryland Department of Planning. Thank you for giving us this review opportunity. If you have any questions, please call me at (410) 631-3567.

Sincerely,

J.L. Hearn, Director
Water Management Administration

enclosure

cc: Mr. Sandy Coyman
Mr. Robert Nelson
Mr. Larry Duket

CC

SEWER FILE INFO STATE

02-05



MARYLAND DEPARTMENT OF THE ENVIRONMENT
2500 Broening Highway □ Baltimore, Maryland 21224
410-631-3000 □ 1-800-633-6101 □ <http://www.mde.state.md.us>

Parris N. Glendening
Governor

Merrylin Zaw-Mon
Acting Secretary

JUN 13 2002

Copy: Sandy Lyman
John Tustin
Ed Tudor
Phil Thompson

The Honorable John E. Bloxom
President
Worcester County Commissioners
One West Market Street
Courthouse Room 112
Snow Hill MD 21863

Dear Mr. Bloxom:

We have completed our review of an amendment to the 1994 Worcester County Water and Sewerage Plan which creates a new water service area for the private water system to serve the 500-student Most Blessed Sacrament School. The amendment was adopted by the Worcester County Commissioners on March 5, 2002.

The Maryland Department of Planning (MDP) has advised that the amendment is consistent with the Worcester County Comprehensive Plan. This amendment is approved by the Maryland Department of the Environment. This action completes our review, as required by Section 9-507 of the Environment Article of State law.

Mr. Robert Nelson, of your Department of Comprehensive Planning is commended for having prepared this amendment. Enclosed for your information is a copy of the supportive comments from the MDP.

Thank you for giving us this review opportunity. Should you have any questions regarding the amendment, please feel free to call Mr. Ray Anderson at (410) 631-3726.

Sincerely,

Robert M. Summers, Director
Water Management Administration

enclosure

RECEIVED

JUN 27 2002

cc: Mr. Robert Nelson
Mr. James T. Noonan

received
07-11-02 BN



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230

410-537-3000 • 1-800-633-6101

02-22

Parris N. Glendening
Governor

Richard F. Pecora
Secretary

Kathleen Kennedy Townsend
Lt. Governor

OCT 24 2002

Merrilyn Zaw-Mon
Deputy Secretary

The Honorable John E. Bloxom, President
Worcester County Commissioners
Room 112, Court House
Snow Hill MD 22863

Dear Mr. Bloxom:

We have completed our review of an amendment to the 1994 Worcester County Water and Sewerage Plan, adopted by Resolution No. 02-22 on June 18, 2002. This amendment expands the water and sewer service areas for the Town of Snow Hill to include 86 parcels which surround these service areas. During the State's review of the amendment, the Maryland Department of Planning (MDP) advised us that a portion of the amendment is consistent with the Snow Hill Comprehensive Plan and Worcester County Comprehensive Plan, while a portion of the amendment is not consistent with either Comprehensive Plan. More specifically, MDP advises that the consistent portion of the amendment includes the W/S-1 areas that bring the maps up to date with the realities of existing service, whether inside or outside of the current municipal boundary; the W/S-1 areas which are located outside of the current municipal boundary, likely to be annexed within the next two years, yet located within the growth areas as shown in the two Comprehensive Plans; and, finally, the W/S-2 and 3 parcels that are located within the existing Enterprise Zone. MDP advised that the inconsistent portion of the amendment includes any of the parcels located in the W/S-2 service areas that are not a part of the existing Enterprise Zone; and, all of the proposed W/S-3 service areas, except those parts that are in the existing Enterprise Zone. Enclosed for your review is a copy of the review comments from the MDP. The Maryland Department of the Environment approves that portion of the amendment which MDP advises is consistent with both of the above-mentioned comprehensive plans, and does not approve that portion of the amendment for which MDP advises is not consistent with these plans. The proposed abandonment of the Town's existing waste water treatment seems premature at this time. Outstanding planning issues need to be resolved before the Town should consider a new plant. This action completes our review, as required by Section 9-507 of the Environment Article of State law. Thank you for giving us this review opportunity. If you have any questions, please call Mr. George L. Keller, Acting Program Manager at (410) 537-3746.

Sincerely,

RECEIVED

OCT 28 2002

Virginia P. Kearney
Robert M. Summers, Director
Water Management Administration

enclosures

"Together We Can Clean Up"

02-32



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230

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Parris N. Glendening
Governor

Richard F. Pecora
Secretary

Kathleen Kennedy Townsend
Lt. Governor

Merrylin Zaw-Mon
Deputy Secretary

DEC 20 2002

The Honorable John E. Bloxom, President
Worcester County Commissioners
Government Office Center, Suite 1103
1 West Market Street
Snow Hill MD 21863

Dear Mr. Bloxum:

We have completed our review of an amendment to the 1994 Worcester County Water and Sewerage Plan, adopted by Resolution No. 02-32. This amendment adds water and sewer systems to serve the commercial shopping center with capacities of 23,000 gallons per day for Ocean Landing II. The project will be located adjacent to the existing Home Depot, east of Berlin on U.S. Route 50.

The Maryland Department of Planning (MDP) advises that the amendment is consistent with the Worcester County Comprehensive Plan. The Maryland Department of the Environment approves the amendment. This action completes our review, as required by Section 9-507 of the Environment Article of State law. Enclosed for your review is a copy of the supportive comments from the MDP.

Thank you for giving us this review opportunity. Mr. Robert Nelson, Department of Comprehensive Planning is commended for preparing the amendment. If you have questions regarding the amendment, please call Mr. Ray Anderson at (410) 537-3726.

Sincerely,

Robert M. Summers, Director
Water Management Administration

enclosure

cc: Mr. Robert Nelson
Mr. James T. Noonan

RECEIVED

JAN 02 2003

"Together We Can Clean Up"



ISLAND RESORT
2003

COMES

MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230
410-537-3000 • 1-800-633-6101

Robert L. Ehrlich, Jr.
Governor

Kendl P. Philbrick
Acting Secretary

Michael S. Steele
Lt. Governor

JUL 22 2003

03-11
03-12

The Honorable John E. Bloxom, President
Board of County Commissioners of Worcester County, Maryland
County Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195

Dear Mr. Bloxom:

We have completed our review of two amendments to the 1994 Worcester County Water and Sewerage Plan for Pennington Commons and the Island Resort Campground. The Pennington Commons amendment was adopted by Resolution #03-11 on April 1, 2003. It adds water and sewerage systems to serve a commercial property. The property consists of a 90-unit hotel, a 6,000 sq ft restaurant, 4 retail stores, and 29 homes to be located on the west side of MD 589 across from Manklin Creek Road at the South Gate of the Ocean Pines community. The water system will be a privately-owned shared facility with a 0.017 mgd capacity. The sewerage system will be a spray irrigation facility with a 0.027 mgd capacity. This amendment was adopted by the Worcester County Commissioners (WCC) by Resolution No. #03-11 on April 1, 2003. The Island Resort Campground amendment plans water and sewerage systems with each system sized to serve 110 seasonal campsites (165 patrons) with a 16,500 gallon per day capacity. The sewerage system will entail an activated sludge treatment with an onsite septic system for disposal. The campground will be located north of Cropper Island Road. This campground amendment was adopted on April 15, 2003 by the WCC by Resolution No. #03-12.

The Maryland Department of Planning (MDP) has advised that both amendments are consistent with the Worcester County Comprehensive Plan. These amendments are approved by the Maryland Department of the Environment. This action completes our review, as required by Section 9-507 of the Environment Article of State law. Mr. Sandy Coyman of your Department of Comprehensive Planning is commended for having prepared these amendments. Enclosed for your information is a copy of the supportive comments from the MDP. Please note that both proposed projects lie outside of the County Priority Funding Area (PFA). Growth related projects located outside of PFAs are not eligible for State funding unless they are considered a special exception in accordance with the Smart Growth - Priority Funding Areas Act of 1997. Thank you for giving us this review opportunity. Should you have any questions regarding the amendments, please feel free to call Ray Anderson at (410) 537-3726.

RECEIVED
JUL 31 2003

Sincerely,

Robert M. Summers, Director
Water Management Administration

enclosure

cc: Mr. Sandy Coyman
Mr. James T. Noonan



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230

410-537-3000 • 1-800-633-6101

Robert L. Ehrlich, Jr.
Governor

Kendal P. Philbrick
Acting Secretary

Michael S. Steele
Lt. Governor

JAN 28 2004

03-31

RECEIVED

The Honorable John E. Bloxom
President
Worcester County Commissioners
Government Office Center, Suite 1103
1 West Market Street
Snow Hill MD 21863

Dear Mr. Bloxum:

We have completed our review of an amendment to the 1994 Worcester County Water and Sewerage Plan to expand the capacity, from 8,500 gpd to 35,000 gpd, of the existing water system which serves the Ocean Landing Retail Area to include the Ocean Landing Commercial Center (OLCC). The OLCC amendment was adopted by the Worcester County Commissioners by Resolution #03-31 on September 16, 2003.

During the State's review of the amendment, no adverse comments were received. The Maryland Department of the Environment approves the amendment. This action completes our review, as required by Section 9-507 of the Environment Article of State law.

Thank you for giving us this review opportunity. Mr. Robert Nelson, Department of Comprehensive Planning is commended for preparing the amendment. If you have questions regarding the amendment, please call Ray Anderson at (410) 537-3726.

Sincerely,

Robert M. Summers, Director
Water Management Administration

cc: Mr. Robert Nelson
Mr. James T. Noonan



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230

410-537-3000 • 1-800-633-6101

03-39

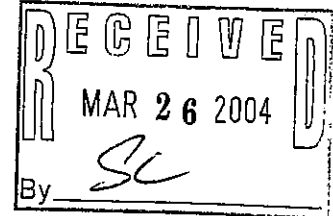
Robert L. Ehrlich, Jr.
Governor

Kend P. Philbrick
Acting Secretary

Michael S. Steele
Lt. Governor

MAR 23 2004

The Honorable John E. Bloxom, President
Board of County Commissioners of Worcester County, Maryland
County Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195



Dear Mr. Bloxom:

We have completed our review of an amendment to the 1994 Worcester County Water and Sewerage Plan, to expand the capacity from 1.5 mgd to 2.3 mgd, of the Ocean Pines waste water treatment plant. This expansion will serve the build out of the Ocean Pines community and the proposed YMCA. The Ocean Pines amendment was adopted by the Worcester County Commissioners by Resolution #03-39 on December 16, 2003.

The amendment is approved by the Maryland Department of the Environment (MDE). This action completes our review, as required by Section 9-507 of the Environment Article of State law. Mr. Sandy Coyman of your Department of Comprehensive Planning is commended for having prepared the amendment.

We are pleased to learn that the County is moving forward with revising your Water and Sewer Plan and Comprehensive Plan. Based upon the March 19, 2004 meeting between the County, Maryland Department of Planning (MDP), and MDE, the County has agreed to make its best effort to complete these two plans as quickly as possible. This effort takes into consideration MDP's State Clearinghouse comments for State financial assistance of the project. Please refer to their enclosed March 23, 2004 letter to us which transmits their comments. We are pleased that the County has also agreed to continue to apprise MDP and MDE on the progress with these plans.

Thank you for giving us this review opportunity. Should you have any questions regarding the amendment, please call Ray Anderson at (410) 537-3726.

Sincerely,

Robert M. Summers, Director
Water Management Administration

enclosure

cc: Mr. Sandy Coyman
Mr. James T. Noonan

*Sewer File = Rate Payors Into
Protection Policy*



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230

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04-03

Robert L. Ehrlich, Jr.
Governor

Michael S. Steele
Lt. Governor

Kendal P. Philbrick
Secretary

JUN 08 2004

RECEIVED
JUN 17 2004
By G. Ross

cc: J. Tustin
S. Coyman
E. Tucker

The Honorable John E. Bloxom, President
Board of County Commissioners of Worcester County, Maryland
County Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195

Dear Mr. Bloxom:

We have completed our review of an amendment to the 1994 Worcester County Water and Sewerage Plan, adopted by Resolution No. 4-3 on January 20, 2004. The amendment adds a policy known as the "Existing Ratepayers Financial Protection Policy". The action was taken for the purpose of protecting existing ratepayers from costs unrelated to the provision of service to them and requiring new development to bear responsibility for all facility and other costs associated with sanitary system expansion to accommodate such development.

During our review of the amendment, the Maryland Department of Planning (MDP) advised that this amendment is consistent with the Worcester County Comprehensive Plan. Enclosed for your review is a copy of the comments from the MDP.

This amendment is approved by the Maryland Department of the Environment. This action completes our review, as required by Section 9-507 of the Environment Article of State law. Your Mr. Sandy Coyman, Director of your Department of Comprehensive Planning is commended for having prepared the amendment. Thank you for giving us this review opportunity. Should you have questions, please call Ray Anderson at (410) 537-3726.

Sincerely,

Virginia F. Kearney

Robert M. Summers, Director
Water Management Administration

enclosure

cc: Mr. Sandy Coyman
Mr. James T. Noonan



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230

410-537-3000 • 1-800-633-6101

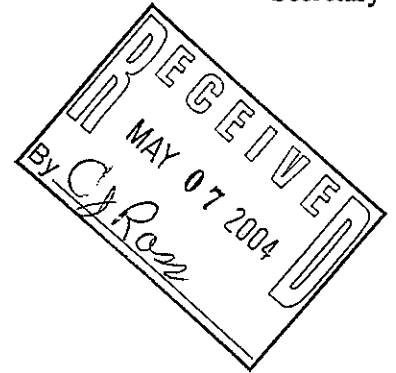
04-05

Robert L. Ehrlich, Jr.
Governor

Kendl P. Philbrick
Secretary

Michael S. Steele
Lt. Governor

MAY 5 2004



The Honorable John E. Bloxom, President
Board of County Commissioners of Worcester County, Maryland
County Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195

Dear Mr. Bloxom:

We have completed our review of an amendment to the 1994 Worcester County Water and Sewerage Plan, adopted by Resolution No. 04-5. The amendment allows the Town of Pocomoke City to extend sewer service from the Town's southern boundary, at the Upper Deck Restaurant, to the Maryland Tourism and Visitor's Center and intervening properties. The center's wastewater system has failed. This area includes the Dun Swamp Road area and US Route 13 corridor south to Virginia. Collection and treatment facilities would be provided and owned by Pocomoke City. The amendment simply changes the S-2 sewer service category (2-5 years, as shown on Figure 4-27, dated June, 1990, 1994 Worcester County Water and Sewerage Plan) to S-1 (existing service to service in less that 2 years). The Worcester County Commissioners adopted the amendment, by their administrative procedure, as a minor amendment.

During our review of the amendment, the Maryland Department of Planning (MDP) advised that this amendment, as an extension of sewer service to correct an existing health problem, is consistent with the Worcester County Comprehensive Plan. Enclosed for your review is a copy of the comments from the MDP. Please note that MDP advises that some of the land subject to this amendment is not located in a designated Priority Funding Area (PFA). Any State financial assistance will require that the service area for this project either be located inside a certified PFA or that an exception for service is granted in accordance with procedures specified in the Finance and Procurement Article, Section 5-7B of the Annotated Code of Maryland.

The amendment is approved by the Maryland Department of the Environment. This action completes our review, as required by Section 9-507 of the Environment Article of State law. Mr. Sandy Coyman of your Department of Comprehensive Planning is commended for having prepared the amendment. Thank you for giving us this review opportunity. Should you have questions, please call Ray Anderson at (410) 537-3726.

Sincerely,

Virginia F. Kearney
Robert M. Summers, Director
Water Management Administration

enclosure

cc: Mr. Sandy Coyman
Mr. James T. Noonan



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230
410-537-3000 • 1-800-633-6101

04-15

Robert L. Ehrlich, Jr.
Governor

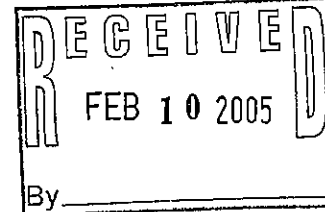
Kendl P. Philbrick
Secretary

Michael S. Steele
Lt. Governor

FEB 7 2005

Jonas A. Jacobson
Deputy Secretary

The Honorable John E. Bloxom, President
Board of Worcester County Commissioners
Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195



Dear Mr. Bloxom:

The Maryland Department of the Environment (MDE) has completed its review of an amendment to the Worcester County Water and Sewerage Plan for water service to Baypointe Plantation, and has reconsidered a disapproval of an amendment to allow the use of a septic system there. The water service amendment allows water service to be provided from the Ocean Pines water system for 33 EDUs, identified on Tax Map 21, as Parcel 257, and located directly south of Ocean Pines on the north side of Gum Point Road at its east end. The amendment was adopted by the County Commissioners (CC) on October 5, 2004 by Resolution No. 04-43. The septic system amendment allows the use of a septic system with a capacity of 9,900 gallons per day. This amendment was adopted by the CC by Resolution No. 04-15 on May 18, 2004.

During a review of water system amendment, the Maryland Department of Planning (MDP) advised that the amendment is consistent with the Worcester County Comprehensive Plan. Enclosed is a copy of the MDP comments. MDE approves the water system amendment. For the septic system amendment, you may recall that the amendment was not approved, as stated in MDE's letter dated November 30, 2004 to the County. Enclosed is a copy of that letter. Recently, the County asked MDE to reconsider that decision. A reconsideration has been made. The septic system amendment is approved.

This action completes our review, as required by Section 9-507 of the Environment Article of State law. If you have any questions, please call me at (410) 537-3567 or Ms. Virginia F. Kearney, Deputy Director at (410) 537-3512.

Sincerely,

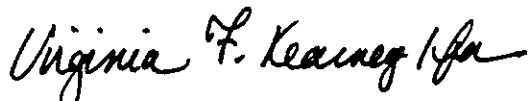
Robert M. Summers, Director
Water Management Administration

enclosures

The Honorable Virgil L. Shockley
Page 2

This action completes our review, as required by Section 9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance, please contact Virginia F. Kearney, Deputy Director at 410-537-3512, toll-free at 800-633-6101 or by e-mail at vkearney@mde.state.md.us.

Sincerely,



Jay G. Sakai, Director
Water Management Administration

Enclosures

cc: Sandy Coyman, Worcester County Department of Comprehensive Planning
Edward A. Potetz, Director, Envir. Health, Worcester County Health Department
La Verne Gray, MDP
Virginia F. Kearney, Deputy Director
Gary Setzer, MDE, WWP
Roby Hurley, CAC



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230
410-537-3000 • 1-800-633-6101

INF. State

S. Coyman

Robert L. Ehrlich, Jr.
Governor

RECEIVED
NOV 08 2004
WOR CO ADMIN

Kend P. Philbrick
Secretary

Michael S. Steele
Lt. Governor

NOV 5 2004

Jonas A. Jacobson
Deputy Secretary

04-28

The Honorable John E. Bloxom, President
Board of Worcester County Commissioners
Government Center
Room 1103
One West Market Street
Snow Hill MD 21863-1195

Copy: Sewer Committee

Dear Mr. Bloxom:

The Maryland Department of the Environment (MDE) has completed a review of two amendments to the 1994 Worcester County Water and Sewerage Plan (Plan). The first amendment amends the Pennington Commons Community Sewer System to provide sewer service to the existing First Shore Federal Savings and Loan property. The property is identified on Worcester County Tax Map 21 as Parcel 274 (lots 1,2,4, and 6A), and Tax Map 21, Parcels 61, 62, 93, and 144. The amendment also adds to the Plan the Pennington Commons Community Water System, incorporating the same area as specified above, in which potable water service will be contractually provided from the existing Ocean Pines Water Service Area. The second amendment adds to the Plan the Pennington Commons Water Service Area, which comprises the property specified above.

The first amendment was adopted by the Worcester County Commissioners on June 15, 2004 by Resolution #04-28. The second amendment was also adopted on June 15, 2004 by Resolution #04-29. During our review of the amendments, the Maryland Department of Planning (MDP) advised MDE that the amendments are consistent with the Worcester County Comprehensive Plan. Enclosed for your review is a copy of the MDP comments. The amendments are approved. This action completes our review, as required by Section 9-507 of the Environment Article of State law. Mr. Sandy Coyman, Director, Department of Comprehensive Planning is commended for having prepared the amendments. If you have any questions, please call Ray Anderson at (410) 537-3726.

Sincerely,

Virginia F. Keamey
Robert M. Summers, Director

Water Management Administration

enclosure

cc: Mr. Sandy Coyman
Mr. James T. Noonan

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NOV 09 2004
By: SAO



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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04-47

Coyman

Robert L. Ehrlich, Jr.
Governor

RECEIVED
MAR 14 2005
WOR CO ADMIN

MAR 8 2005

Kend P. Philbrick
Secretary

Michael S. Steele
Lt. Governor

Jonas A. Jacobson
Deputy Secretary

The Honorable John E. Bloxom, President
Board of Worcester County Commissioners
Government Center
Room 1103
One West Market Street
Snow Hill MD 21863-1195

Copy: Sewer Committee
then file

Dear Mr. Bloxom:

The Maryland Department of the Environment (MDE) has completed its review of an amendment to the 1994 Worcester County Water and Sewerage Plan, adopted by Resolution No. 4-47 on November 3, 2004. The amendment allows construction of a private water system (a well and water treatment) for the Thee GinaRenee Piazza project.

The amendment seeks to establish water service to the lands identified as Tax Map 26, Parcel 148, which is located directly east of Herring Creek on the south side of U.S. Route 50. The project proposes to create 20 EDUs on 4.18 acres.

During this review, the Maryland Department of Planning (MDP) advised that the amendment is consistent with the Worcester County Comprehensive Plan. Enclosed is a copy of their comments. Also, enclosed are comments from our Water Supply Program.

This action completes our review, as required by Section 9-507 of the Environment Article, Annotated Code of Maryland. If you have questions, please call Ray Anderson (410) 537-3726.

Sincerely,

Virginia F. Kearney

Robert M. Summers, Director
Water Management Administration

enclosures

cc: Mr. Sandy Coyman
Mr. Richard L. Wells
Mr. James T. Noonan

RECEIVED
MAR 17 2005
By _____



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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Info State

04-51

Robert L. Ehrlich, Jr.
Governor

Kendl P. Philbrick
Secretary

Michael S. Steele
Lt. Governor

RECEIVED
APR 04 2005
WOR CO ADMIN

APR 1 2005

Jonas A. Jacobson
Deputy Secretary

Copy: Sewer Committee

The Honorable John E. Bloxom, President
Board of Worcester County Commissioners
Government Center
Room 1103
One West Market Street
Snow Hill MD 21863-1195

Dear Mr. Bloxom:

The Maryland Department of the Environment (MDE) has completed its review of an amendment to the 1994 Worcester County Water and Sewerage Plan, adopted by Resolution No. #04-51 on December 21, 2004. This amendment removes the Snug Harbor community from the Mystic Harbor Sanitary Service Area and adds the community to the Assateague Point Sanitary Service Area (APSSA). Sewer service from the APSSA will eliminate the existing, on-site systems in the Snug Harbor community as well as prevent any future use there of on-site systems.

During this review, no adverse comments were received. The amendment is approved.

This action completes our review, as required by Section 9-507 of the Environment Article, Annotated Code of Maryland. If you have questions, please call Ray Anderson (410) 537-3726.

Sincerely,

Robert M. Summers, Director
Water Management Administration

cc: Mr. Sandy Coyman
Mr. Richard L. Wells
Mr. James T. Noonan



MARYLAND DEPARTMENT OF THE ENVIRONMENT

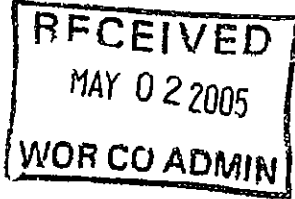
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Coyman

Info State

Robert L. Ehrlich, Jr
Governor

Michael S. Steele
Lt Governor



APR 26 2005

Kendal P. Philbrick
Secretary

Jonas A. Jacobson
Deputy Secretary

05-01

copy - Sewer Committee

The Honorable John E. Bloxom, President
Board of Worcester County Commissioners
Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195

Dear Mr. Bloxom

The Maryland Department of the Environment has completed its review of an amendment to the 1994 Worcester County Water and Sewerage Plan. The amendment was adopted by the Worcester County Commissioners on January 18, 2005 by Resolution #05-1. The amendment creates an interim, privately-owned, multi-use water system (5,320 gpd for 19 EDUs) for the Sunations commercial project.

During the review, no adverse comments were received. The amendment is approved.

Enclosed for your review are comments from our Water Supply Program (WSP). Please direct your representatives to contact the WSP at (410) 537-3702.

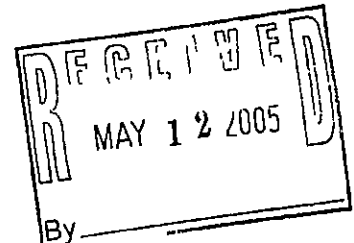
This action completes our review, as required by Section 9-507 of the Environment Article, Annotated Code of Maryland. If you have questions, please call Ray Anderson at (410) 537-3726.

Sincerely,

Virginia M. Keane
Robert M. Summers, Director
Water Management Administration

enclosure

- cc Mr. Sandy Coyman
- Mr. Richard L. Wells
- Mr. James T. Noonan





SEWAGE FINE - GOPSSA
MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230
410-537-3000 • 1-800-633-6101

Robert L. Ehrlich, Jr.
Governor

Kendl P. Philbrick
Secretary

Michael S. Steele
Lt. Governor

JUN 29 2005

Jonas A. Jacobson
Deputy Secretary

The Honorable John E. Bloxom, President
Board of Worcester County Commissioners
Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195

04-50
05-09

Dear Mr. Bloxom:

The Maryland Department of the Environment (MDE) has completed its review of an amendment to the 1994 Worcester County Water and Sewerage Plan. The amendment was adopted by the Worcester County Commissioners (WCC) by Resolution #05-09 on April 5, 2005.

MDE was asked to expedite its review of the amendment, as reconsideration of MDE's March 24, 2005 denial of an amendment adopted by the WCC on December 21, 2004 by Resolution #04-50. That earlier amendment had created the Greater Ocean Pines Sanitary Service Area (GOPSSA). That amendment was denied because the Worcester County Planning Commission (WCPC) had determined that the amendment was not consistent with the Worcester County Comprehensive Plan (WCCP). The new amendment deletes several parcels of land from the GOPSSA. The new amendment states that the WCPC found that the new amendment would be consistent with the WCCP if the proposed "S-3" areas were deleted from the GOPSSA, and if the existing multi-use sewerage service areas for River Run and the Pine Shore Golf Course were also removed from the GOPSSA.

During our review, the Maryland Department of Planning (MDP) advised that the amendment is consistent with the WCCP. MDP expressed concern over the amendment-adoption process and funding for expansion of your wastewater treatment plant. Enclosed for your review is a copy of the MDP comments and County response, which satisfies these concerns. The amendment is approved. This action completes our review, as required by Section 9-507 of the Environment Article, Annotated Code of Maryland. Please call Ray Anderson at (410) 537-3726 if you have any questions.

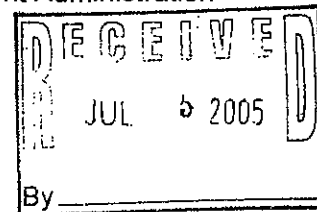
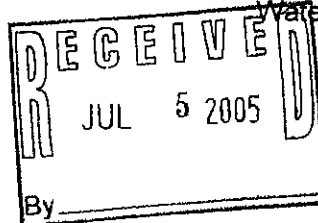
Sincerely,

Virginia F. Kearney

Robert M. Summers, Director
Water Management Administration

enclosures

cc: Mr. Sandy Coyman
Mr. Richard L. Wells
Mr. James T. Noonan





File -> Sewer YMCA
MARYLAND DEPARTMENT OF THE ENVIRONMENT

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To Sandy Coyman
INFO- State

Robert L. Ehrlich, Jr.
Governor

Michael S. Steele
Lieutenant Governor

Kend P. Philbrick
Secretary

Jonas A. Jacobson
Deputy Secretary

RECEIVED
SEP 12 2005
WOR CO ADMIN

SEP 7 2005

05-17

Copy! Sewer Committee
RECEIVED
SEP 2 2005

The Honorable John E. Bloxom, President
Board of Worcester County Commissioners
Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195

Dear Mr. Bloxom:

The Maryland Department of the Environment (MDE) has completed its review of an amendment to the 1994 Worcester County Water and Sewerage Plan. The amendment was adopted by the Worcester County Commissioners on May 17, 2005 by Resolution #05-17. This amendment creates a W-1 water service area and a S-1 sewer service area for the **Northern Worcester YMCA**. The amendment seeks to establish service to the lands identified as Tax Map 21, Parcel 118, which is located on the north side of Gum Point Road, south of Ocean Pines.

During the review, the Maryland Department of Planning (MDP) advised MDE that the amendment is consistent with the Worcester County Comprehensive Plan. Enclosed for your review are comments from the MDP and MDE's Water Supply Program (WSP). Please direct your representatives to contact the WSP at (410) 537-3702. The amendment is approved.

This action completes our review, as required by Section 9-507 of the Environment Article, Annotated Code of Maryland. If you have questions, please call Ray Anderson at (410) 537-3726.

Sincerely,

Virginia F. Kearney

Robert M. Summers, Director
Water Management Administration

enclosures

cc: Mr. Sandy Coyman
Mr. Richard L. Wells
Mr. James T. Noonan, MDP
Ms. Janice Outen, MDE, WSP



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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05-22

Robert L. Ehrlich, Jr.
Governor

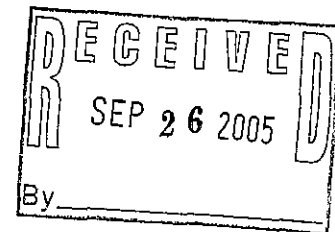
Kendl P. Philbrick
Secretary

Michael S. Steele
Lieutenant Governor

SEP 20 2005

Jonas A. Jacobson
Deputy Secretary

The Honorable John E. Bloxom, President
Board of Worcester County Commissioners
Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195
Dear Mr. Bloxom:



The Maryland Department of the Environment (MDE) has completed its review of an amendment to the Worcester County Water and Sewerage Plan (County Plan). The amendment allows expansion of the water and sewer systems as well as the companion proposed water and sewer service area (service area) of the Town of Snow Hill (Town) to provide water and sewer service for the proposed **Summerfield** development (development).

The development is to be annexed into the Town. The amendment seeks to provide water and sewer service to the lands identified as Tax Map 63, Parcels 3, 4, 5, 20, 21, 25, 67, 88, 89, 90, 91, 94, 102, 106, 107, 108, 144, 153, 161, 171, 177, and 183; and, Tax Map 71, Parcels 1 and 49, not including areas within the Chesapeake Bay Critical Area.

The water system is to be increased from 2,000 Equivalent Dwelling Units (EDUs) to 4,800 EDUs with 3 wells and a 1 MG water tank. The existing 0.5 MGD wastewater treatment plant (WWTP) is to be replaced by a 1.2 MGD oxidation ditch (WWTP).

During the review, the Maryland Department of Planning (MDP) recommended that the amendment be approved. The MDP expects the Town to proceed with annexation of the service area, presently located outside of the Town's delineated growth area, into the Town. Enclosed for your review are comments from the MDP.

MDE's Water Supply Program (WSP) WSP advised that additional information is needed to describe the improvements to be added to the Town's water system to assure a safe and adequate water system to serve the development. Please direct your representatives to contact the WSP at (410) 537-3702.



The amendment, as presented in its adopted format, has been modified by MDE in order for an approval to be made. MDE has modified the amendment, in D. 2. Sewer System Development, page 4-36. The text there has been deleted and replaced with the following language:


The Town of Snow Hill (Town) must treat the wastewater effluent from its replacement WWTP to meet an annual average nitrogen waste load allocation of 6,091 pounds per year and an annual average phosphorus waste load allocation of 457 pounds per year. This is to be accomplished by the design and construction of an Enhanced Nutrient Removal WWTP, in combination with implementation of nutrient removal offsets as necessary to meet the loading limits, and by complying with all applicable Town, Worcester County, and State of Maryland standards, regulations, and permits.

Please direct your staff to modify the amendment text on page 4-36 as shown above, attach my letter with that modified amendment text, and incorporate all of this information into your current County Plan. In this way, your County Plan will display the necessary revised language in D. 2., page 4-36.

After the Town has determined what specific action is to be taken to meet its waste load allocation and what water system improvements are to be made, the County Plan should be updated to reflect these determinations. MDE approves the Summerfield development amendment, as modified in the discussion above. This action completes our review, as required by Section 9-507 of the Environment Article, Annotated Code of Maryland.

Thank you for giving MDE this opportunity to review the amendment. If you have any questions, please call me at (410) 537-3567 or Virginia Kearney, Deputy Director at (410) 537-3512.

Sincerely,


Robert M. Summers, Director
Water Management Administration

enclosures

cc: The Honorable Stephen Mathews, Mayor, Town of Snow Hill
Ms. Kelly Brewington, Town Manager
Mr. Sandy Coyman, Worcester County Comprehensive Planning
Mr. Richard L. Wells, Director, Worcester County Environmental Health
Mr. James T. Noonan, MDP
Ms. Janice Outen, MDE, WSP



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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06-23

Robert L. Ehrlich, Jr.
Governor

Kendl P. Philbrick
Secretary

Michael S. Steele
Lieutenant Governor

JAN 08 2007

Jonas A. Jacobson
Deputy Secretary

The Honorable John E. Bloxom, President
Board of Worcester County Commissioners
Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195

Dear Mr. Bloxom:

The Maryland Department of the Environment (MDE) has completed its initial review of two amendments to the 1994 Worcester County Water and Sewerage Plan (Plan). The first amendment adds water and sewer service area map designations (W/S-4, 5, and 6) to the Plan. The amendment was approved by the Worcester County Commissioners by **Resolution #06-19**. The second amendment expands the Lighthouse Sound sewer planning area to include the proposed Salt Grass Subdivision (Tax Map 10, Parcels 31 and 33 as well as Tax Map 16, Parcel 1); and, septic tank connections at the following properties: Grove Market (Tax Map 10, Parcel 244), properties owned by Hemphill (Tax Map 16, Parcels 2, 3, and 34), Widgeon (Tax Map 17, Parcel 37), the County's Isle of Wight Office (Tax Map 17, Parcel 20), and Isle of Wight Park (Tax Map 17, Parcels 6 (item 1 only), 17, and 24). This amendment was approved by the Commissioners by **Resolution #06-23**.

During MDE's review of the amendments, MDE's Water Supply Program (WSP) provided the enclosed comments concerning amendment 06-19 and the need for additional information on the proposed interconnection between Ocean Pines and Riddle Farm. Please direct County representatives to contact our WSP by calling 410-537-3702. The review period of amendment 06-19, set to expire on January 8, 2007, has been extended until April 6, 2007. Amendment 06-23 is approved. Please be mindful that the County needs to determine if it is feasible to achieve the NPS TMDL in the Northern Coastal Bays System, considering the potential growth resulting from a consolidation of these area water systems into a unified regional water system, owned and operated by the County.

Please be advised that the 1997 Plan was due in this office by August 23, 1997. Also, be advised that COMAR requires that the County provide a copy of your draft 2006/7 Plan to MDE, prior to adoption. This action will insure that MDE's comments can be incorporated, as appropriate, into the County's final Plan. Thank you for giving MDE this review opportunity. If you have any planning questions on these amendments or your draft Plan, please call Ray Anderson at (410) 537-3726.

Sincerely,

Robert M. Summers, Director
Water Management Administration

enclosure



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230

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06-28
06-29

Martin O'Malley
Governor

Shari T. Wilson
Secretary

Anthony G. Brown
Lieutenant Governor

Robert M. Summers, Ph.D.
Deputy Secretary

April 9, 2007



The Honorable James L. Purnell, President
Board of Worcester County Commissioners
Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195

Dear Mr. Purnell:

The Maryland Department of the Environment (MDE) has completed its initial review of four amendments to the 1994 Worcester County Water and Sewerage Plan (Plan). The amendments were adopted by the Worcester County Commissioners on November 8, 2006.

The first amendment creates the **Nassawango Estates Sewer Planning Area** for the purpose of establishing a shared facility sewerage system. The amendment allows the use of a package wastewater treatment plant with a capacity of 3,300 GPD to serve 11 lots of record. The treated wastewater will be sent to the Nassawango Golf Course for disposal in its spray disposal system. The sewerage system will be owned by Nassawango Golf Course, Inc. Each lot will be served by an privately owned well.

The second amendment expands the Newark Sewer Planning Area on behalf of the Worcester County Department of Education. The expansion will provide public sewer service from the Newark Wastewater Treatment Plant (NWWTP) to the proposed **Worcester Career & Technology Center**. The third amendment expands the **Lewis Road Planning Area** to add property owned by the Town of Ocean City (Tax Map 33, Parcel 122) and a private residence (Tax Map 33, Parcel 121) to the Lewis Road Planning Area. The private residence will be served by The Landings water system so that the privately owned well can be abandoned. The property abuts The Landings wastewater injection well disposal system, and the well is located within 1,000 feet of this system.

The fourth amendment expands the **Lewis Road Water Service Area**, a sub-area of The Landings Water Service Area, to provide public water service for Parcel 122, Tax Map 33, the former Ocean City landfill. Existing wells are the landfill's monitoring wells. The County has indicated that a potable public water source is preferable to another well at the site. The County has indicated that the amendment is consistent with the CP as long as water service is extended to that portion of the landfill designated as Agriculture. The amendment is not consistent with the CP for that portion of the landfill with the Green Infrastructure designation.

The Honorable James L. Purnell
Page 2

During MDE's review of these amendments, the Maryland Department of Planning advised MDE that the Nassawango Estates amendment is not consistent with the CP, the Newark amendment is consistent with the CP, the amendment for Parcel 121 is consistent with the CP, the Lewis Road Planning Area amendment for Parcel 122 (Agriculture) is consistent with the CP, but, for Parcel 122 the amendment (Green Infrastructure) is not consistent with the CP. The County needs to perform an evaluation on any pumping stations and sewers that would be impacted by the proposed connection and verify that the infrastructure has sufficient capacity to accommodate the additional flow to the NWWTP. A copy of the MDP comments is enclosed.

Based on the comments above, the Newark amendment is approved as is the Lewis Road Water Service Area amendment, except for that portion of the service area for Tax Map 33, Parcel 122 that lies within the Green Infrastructure designation. For the Nassawango Estates amendment, since it is inconsistent with the CP, as determined by MDP, the review period set to expire on April 9, 2007 has been extended by an additional 90 days, or until July 6, 2007, to allow the County to amend its CP or take other appropriate action to address this inconsistency.

Please be advised that the 1997 Plan was due in this office by August 23, 1997. Also, be advised that COMAR requires that the County provide a copy of your draft 2007 Plan to MDE, prior to adoption. This action will insure that MDE's comments can be incorporated, as appropriate, into the County's final Plan.

Thank you for giving MDE this review opportunity. If you have any planning questions on these four amendments or your draft Plan, please call Ray Anderson at (410) 537-3726.

Sincerely,



Virginia F. Kearney, Acting Director
Water Management Administration

enclosure

cc: Mr. Sandy Coyman, Director, Worcester County Dept. of Comprehensive Planning
Mr. Richard L. Wells, Director, Worcester County Environmental Programs
Ms. La Verne Gray, MDP
Ms. Janice Outen, MDE, WSP

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**1800 Washington Boulevard • Baltimore MD 21230
410-537-3000 • 1-800-633-610107.02
07.04Martin O'Malley
GovernorShari T. Wilson
SecretaryAnthony G. Brown
Lieutenant Governor

JUN 11 2007

Robert M. Summers, Ph.D.
Deputy SecretaryThe Honorable James L. Purnell, President
Board of Worcester County Commissioners
Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195

Dear Mr. Purnell:

The Maryland Department of the Environment (MDE) has completed its review of two amendments to the Worcester County Water and Sewerage Plan (Plan). The first amendment expands the Riddle Farm Sewer Planning Area and the Riddle Farm Wastewater Treatment Plant (WWTP) for the purpose of providing public sewer service from the WWTP to the Wal-Mart/Home Depot, the proposed Ocean Landing II commercial development and the Berlin Fire Department adjacent to the Wal-Mart/Home Depot. The amendment was approved by the Worcester County Commissioners by **Resolution #07-02**.

The second amendment expands the Riddle Farm Water Planning Area for the purpose of providing public water service from the Riddle Farm water system to the Wal-Mart/Home Depot, the proposed Ocean Landing II commercial development and the Berlin Fire Department adjacent to the Wal-Mart/Home Depot. The amendment was approved by the Commissioners by **Resolution #07-04**.

During MDE's review, no adverse comments were received. These amendments are approved. Mr. Sandy Coyman, Director, Department of Comprehensive Planning is commended for preparing these amendments.

Please be advised that the 1997 Plan was due in this office by August 23, 1997. Also, be advised that COMAR requires that the County provide a copy of your draft 2007 Plan to MDE, prior to adoption. This action will insure that MDE's comments can be incorporated, as appropriate, into the County's final Plan.

Thank you for giving MDE this review opportunity. If you have any planning questions on these amendments or draft Plan, call Ray Anderson at (410) 537-3728.

Sincerely,

Virginia F. Kearney, Acting Director
Water Management Administrationcc: Mr. Sandy Coyman, Director, Worcester County Dept. of Comprehensive Planning
Mr. Richard L. Wells, Director, Worcester County Environmental Programs
Ms. La Verne Gray, MDP
Mr. Ching-Tzone Tien, MDE, MPP



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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07-25

Martin O'Malley
Governor

Shari T. Wilson
Secretary

Anthony G. Brown
Lieutenant Governor

Robert M. Summers, Ph.D.
Deputy Secretary

JAN 16 2008

RECEIVED
1-18-08

The Honorable James L. Purnell, President
Board of Worcester County Commissioners
Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195

Dear Mr. Purnell:

The Maryland Department of the Environment (MDE) has completed its review of an amendment to the Worcester County Water and Sewerage Plan. The amendment provides for an interconnection of the Ocean Pines and Riddle Farm water systems to add redundancy for maintenance purposes and during emergencies.

During MDE's review of the amendment, the Maryland Department of Planning (MDP) advised MDE that the amendment is consistent with the Worcester County Comprehensive Plan. A copy of the MDP comments is enclosed for your review. The amendment is approved. This approval applies only to the existing water service areas and the water line alignment as presented on the enclosed map of the Water Interconnection for Ocean Pines and Riddle Farm.

Please be mindful that the County needs to determine if it is feasible to achieve the NPS TMDL in the Northern Coastal Bays System, considering the potential growth resulting from a consolidation of these two water systems into a unified regional water system, owned and operated by the County. Please be advised that the 1997 Plan was due in this office by August 23, 1997. Also, be advised that COMAR requires that the County provide a copy of your draft Plan to MDE, prior to adoption. This action will insure that MDE's comments can be incorporated, as appropriate, into the County's final Plan.

This action completes our review, as required by Section 9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance, please contact Virginia F. Kearney, Deputy Director at 410-537-3512, toll-free at 800-633-6101, or by e-mail at vkearney@mde.state.md.us.

Sincerely,

Jay G. Sakai, Director
Water Management Administration

Enclosures

MARYLAND DEPARTMENT OF THE ENVIRONMENT
MDE 1800 Washington Boulevard • Baltimore MD 21230
410-537-3000 • 1-800-633-6101

07-32
07-33

Martin O'Malley
Governor

Shari T. Wilson
Secretary

Anthony G. Brown
Lieutenant Governor

Robert M. Summers, Ph.D.
Deputy Secretary

MAR - 7 2008

The Honorable James L. Purnell
President
Board of Worcester County Commissioners
Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195

Dear Mr. Purnell:

The Maryland Department of the Environment (MDE) has completed its review of two amendments to the 1994 Worcester County Water and Sewerage Plan. Each amendment is intended to implement a nutrient removal offset.

One amendment (**Resolution #07-32**) relates to the construction of a 1.2 MGD oxidation ditch by the Town of Snow Hill. Of this total, 533,333 GPD will be land applied (The Spray Irrigation Facility – Summerfield), while the remaining balance of 667,000 GPD will use the existing surface point of discharge into the Pocomoke River. The current municipal discharge permit allows for a discharge of 500,000 GPD.

The other nutrient removal offset amendment (**Resolution #7-33**) pertains to the Town of Snow Hill's Sewer Planning Area (Snow Hill – Summerfield planning area) expansion to serve failing septic systems (33 EDUs – 8,250 GPD) at the Maryland Department of Natural Resources property, Pocomoke River State Park - Shad Landing Area. The sewer line from Snow Hill to the State Park will follow U.S. Route 113. All intervening properties along the route of the sewer line have been designated as No Planned Sewer Service areas.

During MDE's review of the amendment, the Maryland Department of Planning (MDP) advised MDE that these amendments are consistent with the Worcester County Comprehensive Plan. A copy of the MDP comments is enclosed for your review.

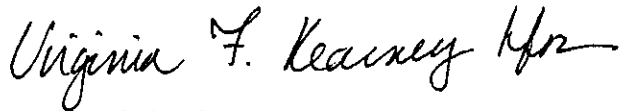
Based on these comments and MDE's review, the amendment (Resolution #07-32) is approved subject to the following condition on the planned wastewater treatment capacity of 667,000 GPD. This planned capacity is approved, contingent on the Town of Snow Hill meeting its nitrogen waste load allocation of 6,100 pounds per year and phosphorus waste load allocation of 457 pounds per year. Also, the amendment (Resolution #07-33) is approved.

The Honorable James L. Purnell
Page 2

Please be advised that the 1997 Plan was due in this office by August 23, 1997. Also, be advised that COMAR requires that the County provide a copy of your draft Plan to MDE, prior to adoption. This action will insure that MDE's comments can be incorporated, as appropriate, into the County's final Plan.

This action completes our review, as required by Section 9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance, please contact Virginia F. Kearney, Deputy Director at 410-537-3512, toll-free at 800-633-6101, or by e-mail at vkearney@mde.state.md.us.

Sincerely,



Jay G. Sakai, Director
Water Management Administration

Enclosures

cc: Mr. Sandy Coyman, Director, Worcester County Dept. of Comprehensive Planning
Mr. Joe Tassone, MDP
Mr. John G. Leocha, MDP
Ms. Virginia F. Kearney, Deputy Director
Mr. Barry O'Brien, MDE, WSP



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230

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07-35

Martin O'Malley
Governor

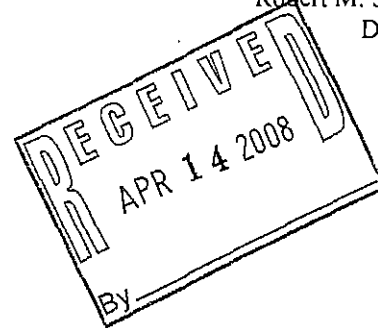
Shari T. Wilson
Secretary

Anthony G. Brown
Lieutenant Governor

Robert M. Summers, Ph.D.
Deputy Secretary

APR 10 2008

The Honorable James L. Purnell, President
Board of Worcester County Commissioners
Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195



Dear Mr. Purnell:

The Maryland Department of the Environment (MDE) has completed its review of an amendment to the 1994 Worcester County Water and Sewerage Plan. The amendment (**Resolution #07-35**) changes the zoning consistency policy to allow for long-term water and sewer planning without requiring immediate zoning consistency.

During MDE's review of the amendment, the Maryland Department of Planning advised MDE (comments enclosed) that the amendment is consistent with the Worcester County Comprehensive Plan. The amendment is approved.

Please be advised that the 1997 Plan was due in this office by August 23, 1997. Also, be advised that COMAR requires that the County provide a copy of your draft Plan to MDE, prior to adoption. This action will insure that MDE's comments can be incorporated, as appropriate, into the County's final Plan.

This action completes our review, as required by Section 9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance, please contact Virginia F. Kearney, Deputy Director at 410-537-3512, toll-free at 800-633-6101, or by e-mail at vkearney@mde.state.md.us.

Sincerely,

Jay G. Sakai, Director
Water Management Administration

Enclosures

cc: Mr. Sandy Coyman, Director, Worcester County Dept. of Comprehensive Planning
Mr. Joe Tassone, MDP
Ms. Virginia F. Kearney, Deputy Director



5
JK (STEWART FILE)
MARYLAND DEPARTMENT OF THE ENVIRONMENT

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To: SANDY
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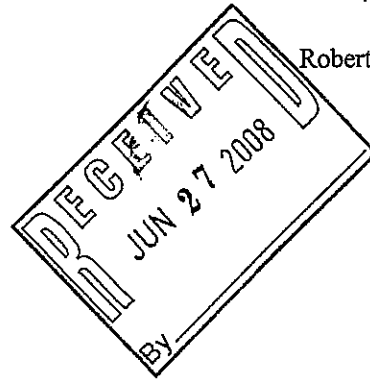
Martin O'Malley
Governor

Shari T. Wilson
Secretary

Anthony G. Brown
Lieutenant Governor

Robert M. Summers, Ph.D.
Deputy Secretary

JUN 18 2008



08-01

The Honorable James L. Purnell, President
Board of Worcester County Commissioners
Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195

Dear Mr. Purnell:

The Maryland Department of the Environment (MDE) has completed its review of an amendment to the 1994 Worcester County Water and Sewerage Plan. The amendment is for the Town of Pocomoke City (Town) to install a fourth production well to serve as a supplement to the diminishing capacity of the Town's three existing wells. The capacity of the water treatment plant will not increase; and, the fourth well is not for the purpose of serving future expansions of the Town.

The location of the new well is identified on Tax Map 83 as Parcel 103 on which 0.2 acres of this 3-acre Parcel will be disturbed for this well. The properties adjacent to the waterline which are not currently planned for public water service have a water planning designation of W-6 (no planned service).

During MDE's review of the amendment, the Maryland Department of Planning (MDP) advised MDE that the amendment is consistent with the Worcester County Comprehensive Plan (enclosed comments). MDE's Water Supply Program (WSP) has indicated that current water demand is within the limits of the Town's Groundwater Appropriation Permit (GAP).

By copy of this letter, Town officials are advised to contact the WSP by calling 410-537-3702 in order for the WSP to modify the GAP to reflect this additional production well. The amendment is approved.

Please be advised that the 1997 Plan was due in this office by August 23, 1997. Also, be advised that COMAR requires that the County provide a copy of your draft Plan to MDE, prior to adoption. This action will insure that MDE's comments can be incorporated, as appropriate, into the County's final Plan.

The Honorable James L. Purnell
Page 2

This action completes our final review, as required by Section 9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance, please contact Virginia F. Kearney, Deputy Director at 410-537-3512, toll-free at 800-633-6101 or by e-mail at vkearney@mde.state.md.us.

Sincerely,



Jay G. Sakai, Director
Water Management Administration

Enclosures

cc: The Honorable Michael A. McDermott, Mayor, Pocomoke City
Sandy Coyman, Director, Worcester County Dept. of Comprehensive Planning
La Verne Gray, MDP
Virginia F. Kearney, Deputy Director
Barry O'Brien, MDE, WSP
Brigid Kenny, MDE, Director of Planning



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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Info - State

07-36

08-02

Martin O'Malley
Governor

Shari T. Wilson
Secretary

Anthony G. Brown
Lieutenant Governor

Robert M. Summers, Ph.D.
Deputy Secretary

RECEIVED
JUL 10 2008
WOR CO ADMIN

JUL 08 2008

The Honorable James L. Purnell, President
Board of Worcester County Commissioners
Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195.

RECEIVED
JUL 11 2008
By _____

Copy! Sewer Committee
Sandy Coymen

Dear Mr. Purnell:

The Maryland Department of the Environment (MDE) has completed its review of two amendments to the 1994 Worcester County Water and Sewerage Plan. The first amendment expands the Town of Berlin's (Berlin) Sewer Planning Area, and it increases the capacity of Berlin's wastewater treatment plant (WWTP).

Originally, Berlin had requested that the Worcester County Commissioners (WCC) adopt an amendment for an upgrade and expansion of its WWTP from 0.600 MGD to 1.400 MGD, to serve an increase of 3,200 EDUs. If adopted by the WCC, the capacity of the WWTP was proposed to be increased in two phases of 0.400 MGD.

Instead, the WCC approved a modified version of the amendment on February 20, 2007 by **Resolution #07-36**. The WCC determined that it was in the best interest of Berlin and the County to limit Berlin's expansion to a capacity of only 0.750 MGD. That reduced capacity would be provided by a new WWTP, to be located at the site of Berlin's existing WWTP. Also, the WCC approved an additional 600 EDUs above the current design capacity of Berlin's WWTP (0.600 MGD) and will allow the new WWTP to only have an ultimate design capacity of 1.000 MGD. The WCC expect that the new WWTP will be operating within a timeframe of 3-5 years.

The second amendment (**Resolution #08-2**) expands Berlin's Water Planning Area and increases the capacity of Berlin's water treatment plant (WTP) from 0.600 MGD to 1.000 MGD, to serve an increase of 1,600 EDUs. Also, the Town will construct a new 0.500 million gallon water storage tank for emergency storage needs.

During MDE's review of these amendments, the Maryland Department of Planning (MDP) advised MDE that the amendments are consistent with the Worcester County Comprehensive Plan (enclosed comments). Also, MDP advised MDE that the County had addressed some of MDP's concerns in the adopted, revised amendment, and that MDP acknowledges the intent of the County to further address MDP's concerns in the upcoming revisions to the County's Comprehensive Plan and their Water and Sewer Plan.

The Honorable James L. Purnell
Page 2

You may recall that in MDE's letter dated April 9, 2008 to you, you were advised that MDE had some planning concerns with the revised amendment, and that the review period, set to expire on April 9, 2008, had been extended until July 8, 2008. During that time those concerns have been satisfied. Also, during this extended time frame, Berlin was asked by MDE for a written response to these two amendments. Recently, Berlin advised MDE that these amendments are acceptable. The amendments are approved. *

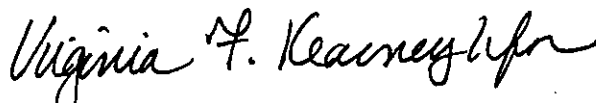
By copy of this letter, Berlin must be mindful of the need to meet, under for the TMDL for Newport Bay and its current NPDES permit, its nitrogen waste load allocation of 30,050 pounds per year and phosphorus waste load allocation of 375 pounds per year. The loads are based on a capacity of 1.0 MGD. A surface discharge is allowed from November through March only. This is to be accomplished by implementation of nutrient removal offsets. After Berlin has determined what specific action is to be taken to meet its waste load allocation, the Plan should be updated to reflect this action. *

Also, Berlin is advised that its water use is approaching the permitted use in its Groundwater Appropriation Permit (GAP), and that Title 9, Subtitle 5, Section 9-512 mandates that building permits cannot be issued when these limits are exceeded. Comments from our Water Supply Program are enclosed. Berlin may discuss these matters with our WSP by calling 410-537-3702.

Please be advised that the 1997 Plan was due in this office by August 23, 1997. Also, be advised that COMAR requires that the County provide a copy of your draft Plan to MDE, prior to adoption. This action will ensure that MDE's comments can be incorporated, as appropriate, into the County's final Plan.

This action completes our final review, as required by Section 9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance, please contact Virginia F. Kearney, Deputy Director at 410-537-3512, toll-free at 800-633-6101 or by e-mail at vkearney@mde.state.md.us.

Sincerely,



Jay G. Sakai, Director
Water Management Administration

Enclosures



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230
410-537-3000 • 1-800-633-6101

08-21

Martin O'Malley
Governor

Shari T. Wilson
Secretary

Anthony G. Brown
Lieutenant Governor

Robert M. Summers, Ph.D.
Deputy Secretary

JAN - 6 2009

The Honorable Virgil L. Shockley, President
Board of Worcester County Commissioners
Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195

Dear Commissioner Shockley:

The Maryland Department of the Environment (MDE) has completed its review of two amendments to the 1994 Worcester County Water and Sewerage Plan (Plan). The first amendment, adopted by Resolution No. 08-21, is for Ocean Landings II. The second amendment, adopted by Resolution No. 08-23, is for Mystic Harbour.

During State agency review of these amendments, the Maryland Department of Planning (MDP) advised MDE that the Ocean Landings II amendment is consistent with the Worcester County Comprehensive Plan. **The Ocean Landings II amendment is approved.**

The Department of Planning has advised MDE that the Mystic Harbour amendment is not consistent with the County Comprehensive Plan (comments enclosed). If you would like to discuss these comments with the MDP, please contact Joe Tassone, Director, Land and Water Resource Conservation Unit at 410-767-4547.

Regarding the Mystic Harbour amendment, MDE has operational and maintenance concerns with the current system, including treated wastewater clogging the well screens and aquifers and movement of well casings move from their moorings. These movements can compromise the stability and integrity of the wells to perform at optimal conditions. The County is therefore encouraged to explore alternative wastewater disposal options including perhaps drip-irrigation as a more suitable means to reliably dispose of treated wastewater than with groundwater injection.

The existing groundwater discharge permit has an effluent limitation of 3 mg/l total nitrogen prior to discharging into the injection wells. The County must be mindful of the need to meet its nitrogen waste load allocation of 2,283 pounds per year for an expansion of the wastewater treatment plan capacity from 0.250 MGD to 0.450 MGD.

The Honorable Virgil L. Shockley
Page Two

After the County has determined what specific actions are needed to address the current Mystic Harbour wastewater disposal system and meet the waste load allocation with the proposed expansion, the Plan can be updated to reflect this action. **Therefore, the Mystic Harbour amendment is not approved.** The Department will continue to work with Worcester County to address this situation.

Please be advised that the County's Water and Sewerage Plan was not been updated in many years. This situation must be addressed to ensure timely reviews by the State agencies and to provide a clear and accurate plan for the County's water and sewerage systems. Please be advised that COMAR requires that the County provide a copy of your draft Plan to MDE, prior to local adoption. This action will ensure that MDE and the other State agencies' comments can be incorporated, as appropriate, into the County's final Plan.

This action completes our review, as required by Section 9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance, please contact Virginia F. Kearney, Deputy Director at 410-537-3512, toll-free at 800-633-6101 or by e-mail at vkearney@mde.state.md.us.

Sincerely,



Jay G. Sakai, Director
Water Management Administration

Enclosures

cc: Sandy Coyman, Director, Worcester County Department of Comprehensive Planning
Robert J. Mitchell, Director, Envir. Health, Worcester County Health Department
LaVerne Gray, MDP
Virginia F. Kearney, Deputy Director
Jay Prager, MDE, MPP



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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08-24
08-37

Martin O'Malley
Governor

Shari T. Wilson
Secretary

Anthony G. Brown
Lieutenant Governor

Robert M. Summers, Ph.D.
Deputy Secretary



MAR 11 2009

The Honorable Virgil L. Shockley, President
Board of Worcester County Commissioners
Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195

Dear Commissioner Shockley:

The Maryland Department of the Environment (MDE) has completed its review of two amendments to the 1994 Worcester County Water and Sewerage Plan (Plan). The first amendment, adopted by **Resolution No. 08-24**, is for the **Deer Run Water and Wastewater Treatment Systems** which are intended to serve the proposed Deer Run Golf Course and the Recreational Vehicle seasonal campground. The Worcester County Commissioners approved the amendment by Resolution 08-24 at their September 2, 2008 public hearing. The second amendment is for the upgrade and expansion of the **Assateague Island National Seashore Wastewater Treatment Plant** and for the land application of the treated effluent. The Worcester County Commissioners approved the amendment by **Resolution 08-37** at their December 16, 2008 public hearing.

During MDE's review of these amendments, the Maryland Department of Planning (MDP) advised MDE that the amendments are consistent with the Worcester County Comprehensive Plan (comments enclosed). MDE's Water Supply Program (WSP) provided the enclosed comments for the Deer Run amendment. Your representatives may contact the WSP by calling 410-537-3702. For the Assateague Island amendment, the Critical Area Commission (CAC) provided the enclosed comments. Your representatives may contact the CAC by calling Roby Hurley at 410-260-3468.

Please be advised that the 1997 Plan was due in this office by August 23, 1997. Also, be advised that COMAR requires that the County provide a copy of your draft Plan to MDE, prior to adoption. This action will ensure that MDE's comments can be incorporated, as appropriate, into the County's final Plan. These amendments are approved.

The Honorable Virgil L. Shockley

Page 2

This action completes our review, as required by Section 9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance, please contact Virginia F. Kearney, Deputy Director at 410-537-3512, toll-free at 800-633-6101 or by e-mail at vkearney@mde.state.md.us.

Sincerely,



Jay G. Sakai, Director
Water Management Administration

Enclosures

cc: Sandy Coyman, Worcester County Department of Comprehensive Planning
Edward A. Potetz, Director, Envir. Health, Worcester County Health Department
La Verne Gray, MDP
Virginia F. Kearney, Deputy Director
Gary Setzer, MDE, WWP
Roby Hurley, CAC



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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09-06

Martin O'Malley
Governor

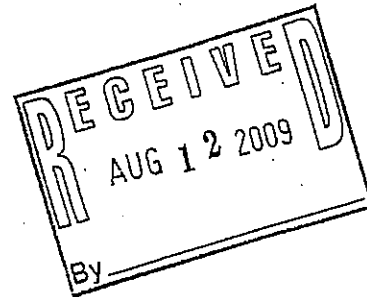
Shari T. Wilson
Secretary

Anthony G. Brown
Lieutenant Governor

Robert M. Summers, Ph.D.
Deputy Secretary

AUG 11 2009

The Honorable Louise L. Gulyas, President
Board of Worcester County Commissioners
Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195



Dear Commissioner Gulyas:

The Maryland Department of the Environment (MDE) has completed its review of an amendment to the 1994 Worcester County Water and Sewerage Plan. The amendment allows the **Fort Whaley Campground** to be expanded from 177 to 210 campsites. All campsites will be served by the existing septic system. Portions of the campground comprising wetlands and forested areas will remain undeveloped.

During MDE's review of the amendment, the Maryland Department of Planning advised MDE that the amendment is consistent with the Worcester County Comprehensive Plan (comments enclosed). MDE's Municipal Permits Program (MPP) advised that the campground owner has contacted the MPP about replacing a portion of the septic system and was informed of the need to obtain a groundwater discharge permit from the MPP.

A new design flow, as determined by the MPP, exceeds the value indicated in the amendment (31,500 Gallons Per Day). This privately-owned campground resides on one lot.

The amendment is approved with the understanding that the campground is an existing multi-use sewerage system, and by definition in COMAR 26.03.01 Planning Water Supply and Sewerage Systems, with a design flow greater than 5,000 Gallons Per Day. This approval condition will allow the MPP to process the permit application and issue a suitable groundwater disposal permit for the campground.

Please be advised that the 1994 County Plan was due in this office by August 23, 1997. Also, be advised that COMAR requires that the County provide a copy of your draft Plan to MDE, prior to adoption. This action will ensure that MDE's comments can be incorporated, as appropriate, into the County's final Plan.

The Honorable Louise L. Gulyas
Page 2

Thank you for giving MDE this review opportunity. If you need additional assistance, please contact Virginia F. Kearney, Deputy Director, at 410-537-3512, toll-free at 800-633-6101 or by e-mail at vkearney@mde.state.md.us.

Sincerely,

A handwritten signature in cursive script that reads "Virginia F. Kearney". The signature is written in black ink and is positioned above the typed name of the signatory.

Jay G. Sakai, Director
Water Management Administration

Enclosures

cc: Sandy Coyman, Worcester County Department of Comprehensive Planning
La Verne Gray, MDP
Virginia F. Kearney, Deputy Director
Barry Glotfelty, MPP, MDE



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230
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Into 09-16

Bob Mitchell

Martin O'Malley
Governor

Shari T. Wilson
Secretary

Anthony G. Brown
Lieutenant Governor

Robert M. Summers, Ph.D.
Deputy Secretary

JAN 27 2010

cc: Sewer Committee

The Honorable Louise L. Gulyas, President
Board of Worcester County Commissioners
Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195

Dear President Gulyas:

The Maryland Department of the Environment (MDE) has completed its review of an amendment to the 1997 Worcester County Water and Sewerage Plan (Plan) for the expansion and upgrade of the existing **Mystic Harbour Waste Water Treatment Plant** from 0.250 to 0.450 MGD. The Worcester County Commissioners approved the amendment by **Resolution #09-16** at their July 7, 2009 public hearing.

During MDE's review of the amendment, the Maryland Department of Planning advised MDE that the amendment is consistent with the Worcester County Comprehensive Plan (comments enclosed). During the review of the amendment, water resource issues arose requiring more time for MDE to complete its review of the amendment and the MDE comment period was extended by an additional ninety days, or until January 27, 2010.

The Department is concerned that the groundwater injection system may not be able to accommodate the 250,000 gallons per day (GPD) for which the existing plant is permitted, even with the work the County is doing to replace several injection wells to improve the operation of the system. The Department supports the ultimate goal of the County to replace the aging plant and abandon the injection wells. The Department is aware that the County is working with the Town of Ocean City to identify potential land application sites, but is concerned that while the amendment calls for a plant with a capacity of 450,000 GPD, adequate disposal area is not assured at this time.

RECEIVED

JAN 28 2010

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DIANE

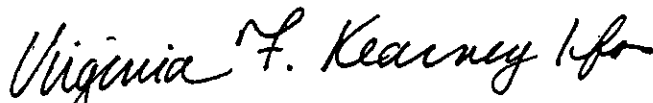
The Honorable Louise L. Gulyas
Page 2

The amendment indicates that when upgraded and expanded, the Mystic Harbour system would serve 1,666 equivalent dwelling units (EDUs), of which 666 EDUs would be for new connections as a result of the expansion. The Department cautions that given the limitations of the injection wells and the current uncertainty of land available for land application of the wastewater, the actual number of new EDUs realized may be less than 666. In addition, please be reminded that the Mystic Harbour plant has a total nitrogen waste load allocation of 2,283 pounds per year and a total phosphorus waste load allocation of 228 pounds per year.

For these reasons and in accordance with Environment Article 9-507(a)(4), the Department hereby modifies the text amendment created by Resolution 09-16 to state that the new wastewater treatment facility may serve up to an additional 666 EDUs, and result in a treatment capacity of up to 450,000 GPD. The modified amendment is enclosed and should be incorporated into the County's Water and Sewerage Plan.

This action completes the Department's final review, as required by Section 9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance, please contact Virginia F. Kearney, Deputy Director at 410-537-3512, toll-free at 800-633-6101 or by e-mail at vkearney@mde.state.md.us.

Sincerely,



Jay C. Sakai, Director
Water Management Administration

Enclosures

cc: Ed Tudor, Worcester County Department of Comprehensive Planning
Robert J. Mitchell, Worcester County Health Department
John Ross, Worcester County Department of Public Works
La Verne Gray, MDP
Virginia F. Kearney, Deputy Director
Jay Prager, MDE, WPP
Barry O'Brien, MDE, WSP
Gary Setzer, MDE, W&WP
Walid Saffouri, MDE, OB



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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09.27

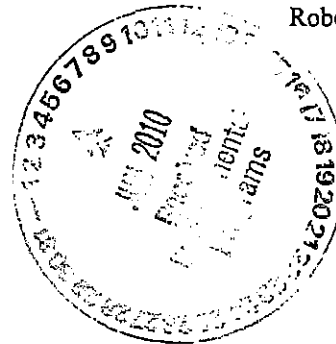
Martin O'Malley
Governor

Shari T. Wilson
Secretary

Anthony G. Brown
Lieutenant Governor

MAY 24 2010

Robert M. Summers, Ph.D.
Deputy Secretary



The Honorable Louise L. Gulyas, President
Board of Worcester County Commissioners
Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195

Dear President Gulyas:

The Maryland Department of the Environment (MDE) has completed its review of an amendment to the 1994 Worcester County Water and Sewerage Plan for a 0.500 MG water storage tank to be located on Tax Map 27, Parcel 11, Lot F to serve the Mystic Harbour planning area and for an amendment for a 0.050 MG water storage tank to serve the privately-owned water system for the Ocean Landings II Development (Tax Map 26, Parcels 30.1, 303, 305, and 455), which includes a Wal-Mart, and a Home Depot. The Worcester County Commissioners approved the Mystic Harbour amendment at their November 17, 2009 public hearing by Resolution #09-27 and the Ocean Landings II amendment at their December 17, 2009 public hearing by Resolution #09-28.

During MDE's review of the amendments, the Maryland Department of Planning advised MDE that each amendment is consistent with the Worcester County Comprehensive Plan (comments enclosed). The amendments are approved.

Please be mindful that the County needs to determine if it is feasible to achieve the NPS TMDL in the Northern Coastal Bays System, considering the potential growth resulting from a consolidation of these area water systems into a unified regional water system, owned and operated by the County. Please be advised that the Update of the 1994 County Plan was due in this office by August 23, 1997. Also, be advised that COMAR requires that the County provide a copy of your draft Plan to MDE, prior to adoption. This action will ensure that MDE's comments can be incorporated, as appropriate, into the County's final Plan.

The Honorable Louise L. Gulyas
Page 2

Thank you for giving MDE this review opportunity. If you need additional assistance, please contact Virginia F. Kearney, Deputy Director, at 410-537-3512, toll-free at 800-633-6101 or by e-mail at vkearney@mde.state.md.us.

Sincerely,

A handwritten signature in cursive script that reads "Virginia F. Kearney hfa".

Jay G. Sakai, Director
Water Management Administration

Enclosures

cc: Bob Mitchell, Worcester County Department of Development Review and Permitting
John Ross, Worcester County Department of Public Works
La Verne Gray, MDP
Virginia F. Kearney, Deputy Director



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230

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10-11

10-12

Martin O'Malley
Governor

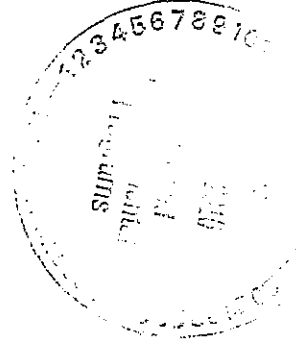
Shari T. Wilson
Secretary

Anthony G. Brown
Lieutenant Governor

Robert M. Summers, Ph.D.
Deputy Secretary

JUL 14 2010

The Honorable James C. Church, President
Board of Worcester County Commissioners
Government Center, Room 1103
One West Market Street
Snow Hill MD 21863-1195



Dear President Church:

The Maryland Department of the Environment (MDE) has completed its review of two amendments to the 1994 Worcester County Water and Sewerage Plan (Plan). One amendment proposes sewer service from Pocomoke City to the **VDOT'S New Church Rest Station** to eliminate an aging wastewater treatment plant located south of Pocomoke City on U.S. Route 13 in Virginia with a point of discharge into the Pocomoke River Watershed.

The other amendment allows Berlin to add a second spray irrigation site. The new site is to be located on Five Mile Branch Road (**Bounds Property – Parcel 23, Tax Map 48**) and south of Berlin's existing spray irrigation site at Lee Road. The intent is to use both of these land application sites exclusively for all wastewater disposal, including the two planned expansions from a present permitted design capacity of 0.600 MGD up to a future design capacity of 1.000 MGD.

During MDE's review of these amendments, the Maryland Department of Planning (MDP) advised MDE that the VDOT amendment is not consistent with either the Worcester County Comprehensive Plan (WCCP) or the Pocomoke City Comprehensive Plan. The MDP advised MDE that the spray site amendment is consistent with the WCCP (comments enclosed).

Pocomoke City has granted a sewer allocation of only 40 EDUs with a limit of up to 10,000 GPD to Virginia for the VDOT Rest Stop. After taking into account this small allocation, there remains adequate capacity at the Pocomoke City Wastewater Treatment Plant to accommodate planned growth. The designation of S-6 (No Planned Sewer Service) in Virginia from the Maryland-Virginia State line to the VDOT Rest Stop will deny access to the sewer line for all intervening Virginia property owners. The State of Virginia is to pay for all expenses for this service.

The Honorable James C. Church
Page 2

Although not specifically shown in either Comprehensive Plan, the proposed sewer project does meet many environmental, economic, and planning goals in these CPs for the Pocomoke River Watershed. The route of the proposed force main to the Maryland-Virginia State line lies within the municipal limits of Pocomoke City which is a planned sewer service area. The VDOT amendment is approved with a limit of 10,000 GPD.

The Berlin spray site amendment is approved. A portion of the proposed spray site appears to lie within the Resource Conservation Area of the Chesapeake Bay Critical Area for the Pocomoke River and also within wetlands. By copy of this letter, Berlin is advised to contact the Critical Area Commission (CAC) by calling Carrie Gallo, Regional Program Chief at 410-260-3482 to determine if a review is required by the CAC.

Please be advised that a CAC approval of the project may be required before construction can occur in the Critical Area there. In addition, Berlin is advised that any disturbance to wetlands or wetland buffers may require a permit from MDE's Wetlands and Waterways Program.

Please be advised that an update of the Plan is over-due. Also, be advised that COMAR requires that the County provide a copy of your draft Plan to MDE, prior to adoption. This action will ensure that MDE's comments can be incorporated, as appropriate, into the County's final Plan.

By copy of this letter representatives of the Town of Berlin and Pocomoke City are advised of the approval of these amendments by MDE. Thank you for giving MDE this review opportunity.

This action completes our review, as required by Section 9-507 of the Environmental Article, Annotated Code of Maryland. If you need additional assistance, please contact Virginia F. Kearney, Deputy Director at 410-537-3512, toll-free at 800-633-6101 or by e-mail at vkearney@mde.state.md.us.

Sincerely,



Jay G. Sakai, Director
Water Management Administration

Enclosures



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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16-37
11-17

Martin O'Malley
Governor

Robert M. Summers, Ph.D.
Secretary

Anthony G. Brown
Lieutenant Governor

September 30, 2011

The Honorable James C. Church, President
Worcester County Commissioners
Government Center
One West Market Street, Room 1103
Snow Hill, MD 21863-1195

Dear President Church:

The Maryland Department of the Environment (MDE) has completed its final review of the **Snow Hill Amendment** (Amendment) to the "1994 Worcester County Comprehensive Plan for Water and Sewerage Systems (Plan)." This Amendment, adopted by the Worcester County Commissioners on December 21, 2010 by Resolution No. 10-37 and amended on June 21, 2011 by Resolution No. 11-17, consists of a text amendment and two map amendments for the Town of Snow Hill.

The original Resolution (No. 10-37) would remove planned water and sewer service areas located west of the Town along the MD Route 12 corridor from the Water and Sewerage Plan in order for the Plan to be consistent with the Town's Comprehensive Plan. The Amendment would also delete a planned 1.20 mgd WWTP project from the Capital Improvement Program, and instead would add a project to upgrade the existing 0.500 mgd WWTP to BNR/ENR capabilities.

During MDE's initial review of the proposed Amendment, planning issues arose and the Department extended the review period until October 1, 2011. The County addressed those planning issues by submitting supplemental material, primarily consisting of Resolution No. 11-17 and accompanying maps. Resolution No. 11-17, adopted by the Worcester County Commissioners on June 21, 2011, would revise the Town's proposed water and sewer service areas in order to comply with requirements for Priority Funding Areas. After reviewing the supplemental material, the Maryland Department of Planning advised MDE that the revised Amendment was consistent with the Worcester County Comprehensive Plan and the 2010 Snow Hill Town Comprehensive Plan (comments enclosed).


The Honorable James C. Church
Page 2

The Department completed its review of the proposed Amendment and modified it to incorporate the supplemental material submitted by the County. In accordance with Environment Article 9-507(a)(4), the Department hereby approves the modified Amendment. The enclosed, modified Amendment must be incorporated into the County's Water and Sewerage Plan before the Town applies for construction permits.

Please be advised that the Update of the County Water and Sewerage Plan is overdue. COMAR requires that the County provide a copy of the draft Plan to MDE prior to adoption. This action will ensure that MDE's comments can be incorporated, as appropriate, into the County's final Plan.

This action completes the Department's review, as required by Section 9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance, please contact Virginia F. Kearney, Deputy Director at 410-537-3512, toll-free at 800-633-6101 or by e-mail at vkearney@mde.state.md.us.

Sincerely,


Jay G. Sakai, Director
Water Management Administration

Enclosures

cc: Robert J. Mitchell, Worcester County Dept. of Development Review and Permitting
La Verne Gray, MDP
Brigid Kenney, Planning Director, MDE
Virginia F. Kearney, Deputy Director, WMA, MDE

WORCESTER COUNTY MASTER WATER & SEWERAGE PLAN

**Snow Hill: Revised Water and Sewer Service Areas
WWTP Capacity Limitations
CIP for 2010-2016**

September 2011

AMENDMENT MODIFICATION

In accordance with Environment Article 9-507(a)(4) and as stated in the letter of September 30, 2011 to Commissioner James C. Church, President of the Worcester County Commissioners, from Jay G. Sakai, Director of the Water Management Administration, the Maryland Department of the Environment hereby modifies the amendment entitled "Worcester County Master Water and Sewer Plan: Chapter 4 – Section 4.4.6 – Town of Snow Hill" (including Figure No. 3-22: Proposed Water Planning Areas and Figure No. 4-22: Proposed Sewer Planning Areas) that was adopted by the Commissioners of Worcester County on December 21, 2010 and on June 21, 2011.

**Effective Date of Amendment Modification:
September 30, 2011**

**WORCESTER COUNTY, MARYLAND
1994 MASTER WATER & SEWERAGE PLAN**

NOTE: The modified Water and Sewerage Plan amendment for “Snow Hill” includes both Plan text and two maps. The modified text is highlighted in yellow. This modified amendment includes both additions and revisions to the 1994 Master Water & Sewerage Plan and subsequent amendments.

Effective date of Amendment Modification: September 30, 2011

CONTENTS

	<u>PAGE NUMBERS</u>
4.4.6 Town of Snow Hill	4-34 to 4-35.3
Appendix A: Snow Hill Water and Wastewater CIP Projects: 2010-2016	4-35.4
Revised Figure 3-22: Snow Hill Water Planning Areas	Included
Revised Figure 4-22: Snow Hill Sewer Planning Areas	Included

*Worcester County MWSP – Snow Hill
Amendment Modification – September 30, 2011*

Adequacy

The existing treatment facility is more than adequate to accommodate the flows from the existing service area. The 1989 addition of Cl₂ and SO₂ treatment should aid in keeping the discharged effluent well within the NPDES limitations. Infiltration/inflow may cause a temporary overloading to the existing pipe capacities and prohibit extensive growth. However, this is not an area of planned intense development at this time.

B. Potential Service Area

Geographically, the Newark service area is not in an area of targeted development. However, if any development were to occur it would probably be along US Rt. 113. The service area could be extended to include a portion of US Rt. 113 and any concentration of new homes adjacent to existing served areas. Also, it is evident that not all of the 250 residents of Newark are tied into the municipal sewage system, as there are presently only 65 connections. Should it occur that any of the on-site sewage disposal systems fail, connections would be made to the community facility.

C. Sewer System Development

Sewer system development may include an infiltration/inflow study to determine the magnitude, causes and significant locations of infiltration/inflow. If infiltration/inflow is considered to be a major problem, correction of the problem is more cost-effective than providing for its treatment. However, there are no current plans for upgrading, extension or replacement of the existing sewer system.

4.4.6 TOWN OF SNOW HILL

A. Existing Sewer Facilities and Service Area

Area Served

The Town of Snow Hill municipal sewer service area is identified in Revised Figure 4-22.

Capacity

The rated plant capacity of the Town of Snow Hill sewer system is 500,000 gallons of sewage per day, enough to accommodate 2,000 EDUs (using the 250 gallons per EDU planning figure that the Town of Snow Hill used in its February 28, 2005 amendment application to calculate expected demand for sewer in 2010 and 2020).

Discharge Limitations

Through an NPDES permit, MDE allows 500,000 gallons of treated sewage discharge per day into the Pocomoke River (MDE Sewage Flow Allocation Table. 2003. Worcester County).

*Worcester County MWSP – Snow Hill
Amendment Modification – September 30, 2011*

Specifications

The following specifications for the Town of Snow Hill sewer facilities were listed in the February 28, 2005 amendment application and have been modified by the August 14, 2007 and September 13, 2007 amendment applications. On November 20, 2007, the Worcester County Commissioners approved resolutions #07-32 and #07-33, which amended the *1994 Comprehensive Plan for Water and Sewerage Systems, Worcester County, Maryland* as specified in the amendment applications. Amendment 2010-37 and 2011-17 reaffirmed the treatment capacity will remain at 0.500 MGD with potential for future expansion to 0.667 MGD.

Ownership

Town of Snow Hill

Population

2,000 EDUs served in 2011

Sewage Flows

Average Flow: 320,000 gallons per day
Peak Flow: 417,000 gallons per day

Collection System

Mains: 62,000 linear feet of sewer 4" to 18" (1% combined),
interceptor sewer along river, 3 lift stations.

Pumping Stations: not applicable

Treatment Facilities

Type of Treatment: Biological treatment using Bardenpho and utilizing existing structures and associated systems to meet BNR and ENR requirements. This is an upgrade of the existing system with expansion potential to 0.667 MGD.

Rated Plant Capacity: 500,000 gallons per day

Site Size: 4 acres occupied; 0 acres vacant

Point of Discharge: Pocomoke River / Tax Map 56, Parcels 25 & 83

Type of Discharge: surface water

NPDES Permit: MD0022764; #00-DP-0717A - Town reapplied Feb. 2009 for new permit.

Sludge Disposal: Worcester County landfill (500 tons per year)

*Worcester County MWSP – Snow Hill
Amendment Modification – September 30, 2011*

Problems Recorded

Generally the sewage collection system is adequate, but because of deterioration, due to age and tree root growth, many of the collection mains are subject to ground water infiltration and blockage problems. The Willow Street pump station is in need of rehabilitation or replacement due to deterioration from age.

B. Costs and Financing

The annual operation costs for the Town of Snow Hill sewer service area were \$231,639 in fiscal year 2003 (Town of Snow Hill Budget Report as of October 25, 2004).

Previous improvements to the Town of Snow Hill sewer system have been financed through direct budget allocations, Community Development Block grants and grants from the Maryland Department of Environment.

Costs for the currently proposed improvements to the Town of Snow Hill sewer system and the spray irrigation facility will be financed by the developer of the proposed Summerfield development. Extension of sewer service to Pocomoke River State Park (Shad Landing) will be financed by the Maryland Department of Natural Resources.

C. Potential Service Area

The potential service area for the Town of Snow Hill is indicated in Revised Figure 4-22.

D. Sewer System Development

Previously proposed improvements to the Town of Snow Hill sewer system include the following:

1. Modify the sewer system by constructing a new 1.2 MGD oxidation ditch (Bardenpho) wastewater treatment plant (WWTP) with 667,000 gpd discharged to the Pocomoke River and 533,000 gpd applied to land identified on Tax Map 56 as parcels 25 and 83.
2. The Town of Snow Hill (Town) must treat the wastewater effluent from its replacement WWTP to meet an annual average nitrogen waste load allocation of 6,091 pounds per year and an annual average phosphorus waste load allocation of 457 pounds per year. This is to be accomplished by the design and construction of an Enhanced Nutrient Removal WWTP, in combination with implementation of nutrient removal offsets as necessary to meet the loading limits, and by complying with all applicable Town, Worcester County, and State of Maryland standards, regulations, and permits.

*Worcester County MWSP – Snow Hill
Amendment Modification – September 30, 2011*

3. The Town specified two nutrient removal offsets and Worcester County Resolutions #07-32 and #07-33 have updated the County Plan in order to implement these efforts. One nutrient removal offset is the construction of a spray irrigation facility on Parcels 25 and 83 identified on Tax Map 56 for land application of 533,000 gpd of treated effluent. Another nutrient removal offset is the removal of the failing septic systems at the Pocomoke River State Park (Shad Landing) by providing public sewer service.
4. Construct a collection system for the Summerfield development, which will deliver wastewater to the existing WWTP until the new plant is constructed and then connecting the collection system to the upgraded WWTP.
5. Decommission and demolish the existing WWTP.
6. Construct the new WWTP and spray irrigation facility and have it in operation within three years from the annexation date.

Current planned improvements to the Town of Snow Hill sewer system include the following:

1. Amendment 10-37 refined the service areas, added the capital plan and reestablished a treatment plant capacity set at 0.500 MGD with capability to expand to 0.667 MGD in the future.
2. Amendment 11-17 further refined the service areas to be more in line with State Priority Funding Area (PFA) designations.

E. Amendment History

- ***1994 Comprehensive Plan for Water and Sewerage Systems, Worcester County, Maryland (“1994 Plan”)***. In 1994, the Town of Snow Hill municipal service area served a portion of Snow Hill and the Snow Hill sewer system had a rated plant capacity of 500,000 gallons per day.
- **1995 Resolution (July 11, 1995)**. Extended sewer service along MD Rt. 394 (Market Street) to US Rt. 113.





*Worcester County MWSP – Snow Hill
Amendment Modification – September 30, 2011*



- **Resolution 02-22 (June 18, 2002).** Expanded the boundaries of the Town of Snow Hill sewer service area to include all proposed W-2, W-3, S-2, and S-3 parcels within the existing Enterprise Zone, and all proposed W-1 and S-1 parcels. MDE, in its October 24, 2002 amendment approval letter, approved the portion of the amendment which MDP advised to be consistent with the Snow Hill Comprehensive Plan and the Worcester County Comprehensive Plan (the versions of the two plans that existed at the date of the MDE amendment approval letter), and did not approve the portion of the amendment for which MDP advised was not consistent with these plans. The consistent portion of the amendment included all proposed W-2, W-3, S-2, and S-3 parcels within the existing Enterprise Zone, and all proposed W-1 and S-1 parcels. The inconsistent portion of the amendment included all proposed W-2, W-3, S-2, and S-3 parcels not within the existing Enterprise Zone.
- **Resolution 05-22 (June 7, 2005).** Expanded the Town of Snow Hill sewer service area to serve the proposed Summerfield development south of the Town of Snow Hill.
- **Resolution 07-32 (November 20, 2007).** Planned for land application disposal of 533,000 gpd of treated wastewater effluent on Parcels 25 and 83 identified on Tax Map 56.
- **Resolution 07-33 (November 20, 2007).** Expanded the Town of Snow Hill sewer service area to serve the Pocomoke River State Park (Shad Landing) to address a public health concern resulting from the failing septic systems at Shad Landing.
- **Resolution 10-37 (December 21, 2010)** Sanitary Service Area and WWTP Refinements and Addition of a Capital Plan. Also set plant capacity at only 0.500 MGD with potential expansion in future to 0.667 MGD.
- **Resolution 11-17 (June 21, 2011)** Refining the service area planning maps from Resolution 10-37.

Appendix A : Snow Hill Water and Wastewater Capital Improvements Program Projects 2010-2016				
Project	Phase	Projected Cost	Description	Reason/ Other info
WWTP Upgrade		\$14,400,000.00	500,000 GPD upgrade to BNR/ENR	Water quality
Market (Bay) Street Gravity Sewer		\$ 1,180,000.00	Replace gravity sewer line ranging in 8 to 12 in. with 12 inch pipe starting at Burroughs St. on E. Market Street, then beneath E. Green St. and down middle of Town parking lot toward Gateway Park and then turn left in front of Pocomoke Canoe Company.	I & I issues
Ironshire Street	Phs. I	\$109,000.00	Replace, water, sewer, gas lines from Washington Street to Snow St.	Poor Condition and leaks, I & I
Ironshire street	Phs. II	\$100,000.00	Replace water, sewer and gas lines from Snow St. to Rt. 12 (Church St.)	Poor condition, I & I
Federal Street	Phs. II	\$104,000.00	Replace water, sewer, gas lines from Morris Street to Ross Street	Poor condition
Federal Street	Phs. III	\$140,000.00	Replace water, sewer, gas lines from Ross Street to Market Street	Poor condition
Federal Street	Phs. IV	\$131,000.00	Replace water, sewer, gas lines from Rt. 12 (Church St) to Franklin Street	Poor condition
Federal Street	Phs. V	\$66,000.00	Replace water, sewer, gas lines from Franklin Street to Washington St.	Poor condition
Federal Street	Phs. VI	\$86,000.00	Replace water, sewer, gas lines from Washington St. to Collins St.	Poor condition
Martin Street	Phs. II	unknown	Complete to Ironshire Street	Poor condition
Federal Street	Phase VII	\$ 115,000.00	Replace water, sewer, gas lines from Morris St. to W. Market St.	Poor condition
Duck In-McDonald's/ E. Market St.		unknown	Upgrade lines to accommodate future commercial development	Projected growth area



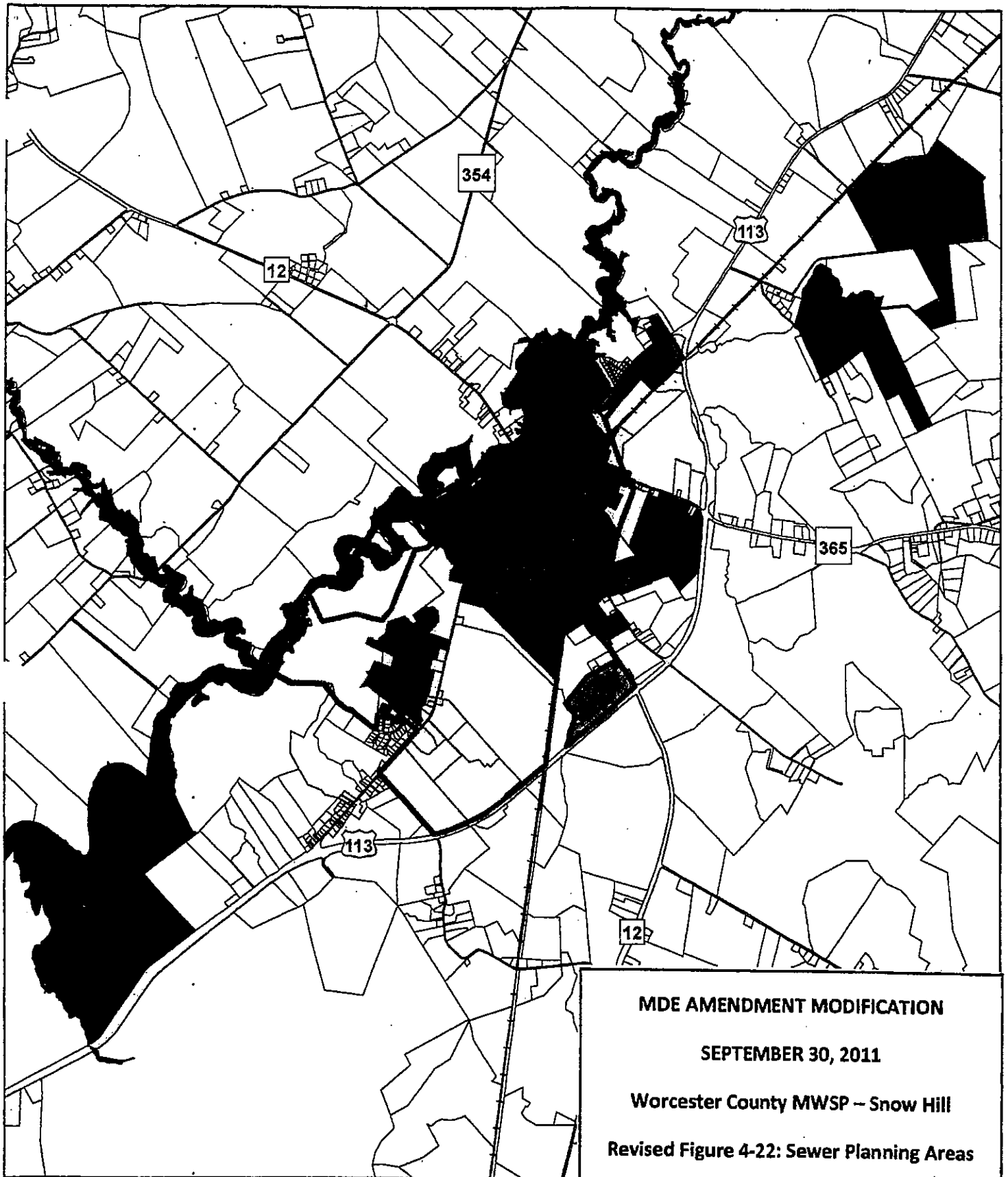
MDE AMENDMENT MODIFICATION
SEPTEMBER 30, 2011
Worcester County MWSP – Snow Hill
Revised Figure 3-22: Water Planning Areas

-  Corporate Limits
- Water Planning Areas**
-  W1
-  W2
-  W3








 1 inch = 2,000 feet
 Drawn By: MDD Reviewed By: KLH



Proposed Water Planning Areas
 Snow Hill and Environs

Prepared by Worcester County Department of Development Review and Permitting, May 26, 2011.
 Source: 1994 Comprehensive Water and Sewerage Plan, Worcester County, 1994 (as amended).
 H(MDD):GIS Data\Sanitary Services\Planning Areas



MDE AMENDMENT MODIFICATION
SEPTEMBER 30, 2011
Worcester County MWSP – Snow Hill
Revised Figure 4-22: Sewer Planning Areas

-  Corporate Limits
- Sewer Planning Areas**
-  S1
-  S2
-  S3
-  Spray Site



 1 inch = 4,000 feet
 Drawn By: MDD Reviewed By: KLH

Proposed Sewer Planning Areas
 Snow Hill and Environs

Prepared by Worcester County Department of Development Review and Permitting, May 26, 2011.
 Source: 1994 Comprehensive Water and Sewerage Plan, Worcester County, 1994 (as amended).
 H(MDD):GIS Data\Sanitary Services\Planning Areas



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Tab
11-9

Martin O'Malley
Governor

Robert M. Summers, Ph.D.
Secretary

Anthony G. Brown
Lieutenant Governor

October 25, 2011

The Honorable James C. Church, President
Worcester County Commissioners
Government Center
One West Market Street, Room 1103
Snow Hill, MD 21863-1195

Dear President Church:

The Maryland Department of the Environment (MDE) has completed its review of the **Ocean Landings II Increased Sewage Capacity Amendment** to the 1994 Worcester County Water and Sewerage Plan. This Amendment, adopted by the Worcester County Commissioners on June 7, 2011 by Resolution No. 11-9, is a text amendment expanding the capacity of the treatment system for the Ocean Landings II Sewer Planning Area. The Amendment would expand the existing treatment capacity of 23,000 gpd (77 EDUs) to 30,000 gpd (100 EDUs). This Amendment would provide an additional 23 EDUs to the CAMBR Company, Inc. development area in addition to the previously allotted 50 EDUs; the allocations to Wal-Mart and Home Depot would remain unchanged at a total of 27 EDUs.

During MDE's review of the Amendment, the Water Supply Program noted that the holder of the Water Appropriation Permit may need to apply for an increase in their permit (comments enclosed). More significantly, the Maryland Department of Planning advised MDE that the sewer service area maps accompanying this Amendment are not consistent with the Worcester County Comprehensive Plan (comments enclosed). For the Amendment to be consistent with the approved Comprehensive Plan, the previously approved service area boundaries must remain unchanged. The Department requested supplemental information and maps from the County to verify the location of the sewer service area. After reviewing the proposed Amendment and supplemental information, the Department modified the Amendment to ensure that it would be consistent with the Worcester County Comprehensive Plan. The modified Amendment indicates that the sewer service area for Ocean Landings II consists of Tax Map 26 – Parcel 301, Parcel 455, a portion of Parcel 302, and a portion of Parcel 303, as indicated in Revised Figure 4-33.

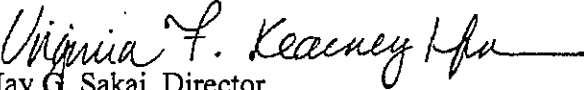
The Honorable James C. Church
Page 2

In accordance with Environmental Article 9-507(a)(4), the Department hereby approves the modified text and map Amendment for Ocean Landings II Increased Sewage Capacity (enclosed). The approved, modified Amendment must be incorporated into the County's Water and Sewerage Plan before the owner of Ocean Landings II applies for discharge or construction permits.

Please be advised that the Update of the County Water and Sewerage Plan is overdue. COMAR requires that the County provide a copy of the draft Plan to MDE prior to adoption. This action will ensure that MDE's comments can be incorporated, as appropriate, into the County's final Plan.

This action completes the Department's review, as required by Section 9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance, please contact Virginia F. Kearney, Deputy Director at 410-537-3512, toll-free at 800-633-6101 or by e-mail at vkearney@mde.state.md.us.

Sincerely,


Jay G. Sakai, Director
Water Management Administration

Enclosures

cc: Robert J. Mitchell, Worcester County Dept. of Development Review and Permitting
La Verne Gray, MDP
Brigid Kenney, Senior Policy Advisor, MDE
Virginia F. Kearney, Deputy Director, WMA, MDE

WORCESTER COUNTY MASTER WATER & SEWERAGE PLAN

Ocean Landings II: Increased Sewage Capacity and Sewer Service Area

October 2011

AMENDMENT MODIFICATION

In accordance with Environment Article 9-507(a)(4) and as stated in the letter of October 25, 2011 to Commissioner James C. Church, President of the Worcester County Commissioners, from Jay G. Sakai, Director of the Water Management Administration, the Maryland Department of the Environment hereby modifies the amendment entitled "Worcester County Master Water and Sewer Plan: Chapter 4 – Section 4.4.11 and Table 4-6 (Ocean Landings II Increased Sewage Capacity)" that was adopted by the Commissioners of Worcester County on June 7, 2011.

Effective Date of Amendment Modification:

October 25, 2011

**WORCESTER COUNTY, MARYLAND
1994 MASTER WATER & SEWERAGE PLAN**

NOTE: The modified Water and Sewerage Plan amendment for “Ocean Landings II Increased Sewage Capacity” includes both Plan text and a map. The modified text is highlighted in yellow. This modified amendment includes both additions and revisions to the 1994 Master Water & Sewerage Plan and subsequent amendments.

Effective date of Amendment Modification: October 25, 2011

CONTENTS

	<u>PAGE NUMBERS</u>
4.4.11 Ocean Landings II	4-38.7 to 4-38.8
Revised Information for Table 4-6: Immediate, 5 and 10 Year Priorities for Sewerage Development	4-88
Revised Figure 4-33: Ocean Landings II Sewer Service Area Map	Included

4.4.11 OCEAN LANDINGS II

A. Existing Sewer Facilities

Area Served

The Ocean Landings II (Revised Figure 4-33) sewer facility serves a multi-unit commercial center identified as Tax Map 26, Parcels 301, 302, 303, 305 and 455, located on the south side of US Rt.50 at its intersection with MD Rt. 589 (Resolution 02-32, September 3, 2002).

Sewer service is currently approved for Tax Map 26 - Parcel 301, Parcel 455, a portion of Parcel-302, and a portion of Parcel 303, as indicated on Revised Figure 4-33.

Capacity

The plant capacity of the Ocean Landing II sewer facility is 30,000 gallons of sewage per day.

Discharge

Through a groundwater discharge permit, MDE allows 23,000 gallons of effluent per day. (Per Worcester County Department of Environmental Programs, June 2004.)

Specifications

The following specifications for the Ocean Landing II sewer facility were listed in the June 11, 2002 amendment application. On September 3, 2002, the Worcester County Commissioners passed resolution 02-32, which amended the *1994 Comprehensive Plan for Water and Sewerage Systems, Worcester County, Maryland* as specified in the amendment application. Updated specifications are noted.

Ownership

CAMBR Company, Inc. (Allen & Connie LLC)

Sewage Flows

Average Flow: data not yet available

Peak Flow: data not yet available

Collection System

Mains: self contained—gravity collection with forced main to disposal site
(additional specifications not yet available)

Pumping Stations: data not yet available

*Worcester County MWSP – Ocean Landings II Increased Sewage Capacity
Amendment Modification – October 25, 2011*

Treatment Facilities

Type of Treatment: ENR treatment with a Zenon Membrane Filter (lagoon system with spray irrigation and nutrient management plan)
Rated Plant Capacity: 30,000 gallons per day
Site Size: data not yet available
Point of Discharge: onsite
Type of Discharge: groundwater via spray irrigation
Groundwater Discharge
Permit: 02DP3401

Problems Recorded

None

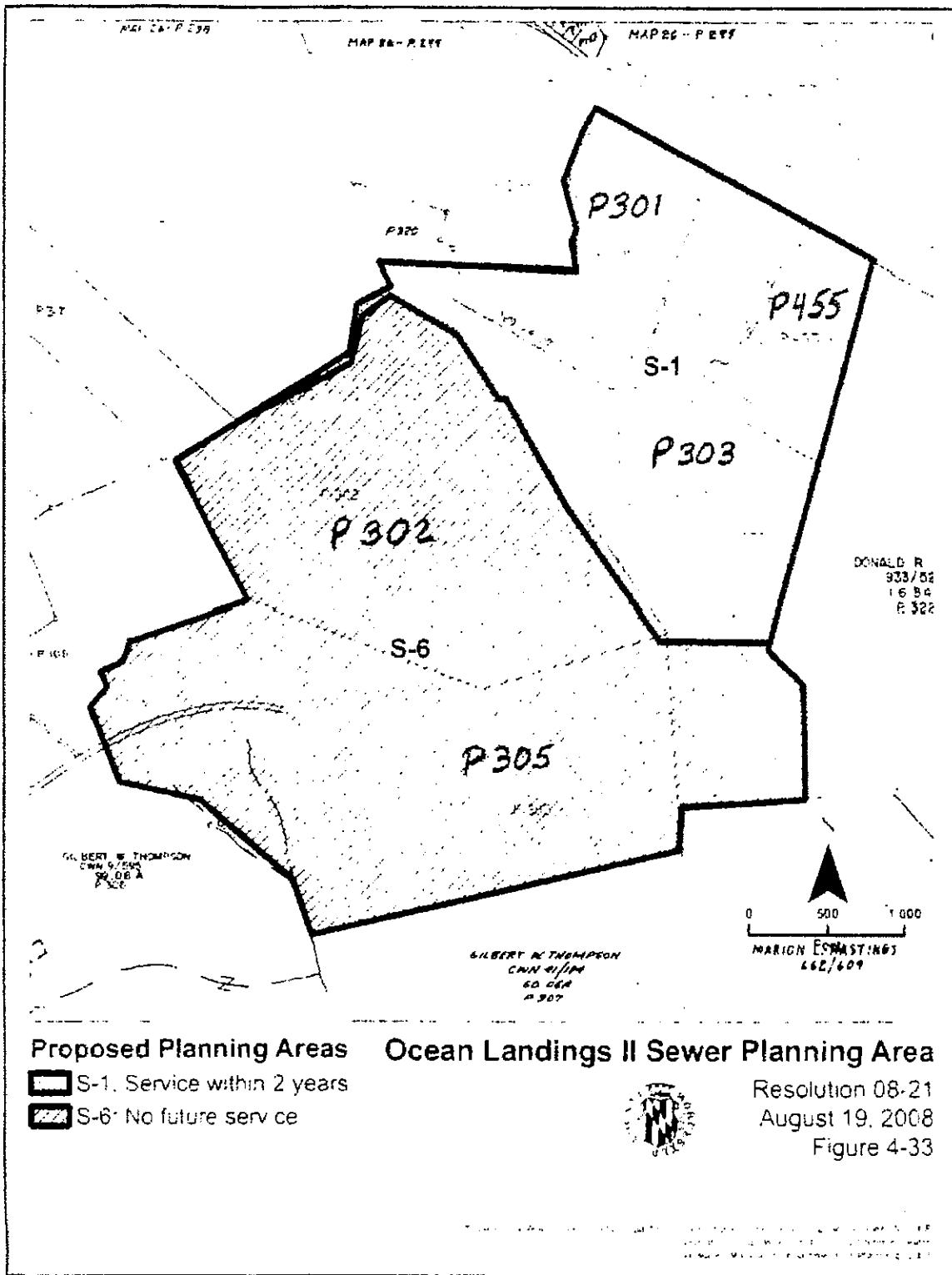
B. Amendment History

- **Resolution 11-9 (June 7, 2011).** Approved that the system's sanitary capacity would increase from 23,000 gpd to 30,000 gpd.
- **Resolution 09-28 (December 15, 2009).** Approved that the system would stay in private ownership.
- **Resolution 08-22 (August 19, 2008).** Approved the establishment of the Ocean Landings II water and sewer service area, which shall comprise all of the real property located on the south side of US Route 50 (Ocean Gateway), east of MD Route 580 (Racetrack Road), and identified on Worcester County Tax Map 26 as Parcels 301, 302, 303, 305, and 455.
- **Resolution 08-21 (August 19, 2008).** Added the Ocean Landings II water and wastewater treatment system to serve Ocean Landings II and Wal-Mart / Home Depot. Included Construction of a 0.023 mgd wwtp to serve 76 EDUs at 300 gpd/edu.
- **Resolution 02-32 (September 3, 2002).** Added the Ocean Landings II sewer system to the *1994 Comprehensive Plan for Water and Sewerage Systems, Worcester County, Maryland.*

*Worcester County MWSP – Ocean Landings II Increased Sewage Capacity
Amendment Modification – October 25, 2011*

Revised Information for Table 4-6: Immediate, 5 and 10 Year Priorities for Sewerage Development

Ocean Landings II (SW2011-1)		
		County Commissioner Resolution/Date: 11-09 June 7, 2011
Planned Sewer System Profile (July 26, 2011)		Table No.
System Name:	Ocean Landings II	4-6
Priority Category:	S-1	4-6
Area to be Served:	Tax Map 26 - Parcels 301, 455, a portion of Parcel 302, and a portion of Parcel 303 (a proposed multi-unit commercial center), south of US Rte. 50 at intersection with MD Rte. 589	4-6
Population Served:	n/a (capacity of sewer system equals 30,000 gpd)	
Constructed by:	CAMBR, Inc.	
Owned by:	CAMBR, Inc.	
Operated by:	CAMBR, Inc. and Certified operator	
Planned Collection System:	self-contained—gravity collection with forced main to disposal site	4-6
Planned Treatment Facility:		
Type:	Zenon MBR ENR treatment (lagoon system with spray irrigation and nutrient management plan)	
Capacity:		
Demand:		
Planned:	30,000 gpd	
Design:		
Permitted:	23,000 gpd, groundwater permit #02DP3401	
Discharge:		
Type:	groundwater via spray irrigation	
Location:	onsite	
Estimated Cost and Source of Funding:		
Cost:	\$850,000	4-6
Funding:		4-6
Estimated Construction Dates:		
Begin:	June 2002	4-6
Complete:	not constructed as of 7/26/2010	4-6
Comments:		
Agreements:	MDE discharge permit # for spray irrigation: 02-DP-3401	
Policies:		
Facility Plan:		



MDE Amendment Modification – October 25, 2011

Worcester County MWSP – Ocean Landings II Increased Sewage Capacity

Revised Figure 4-33



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11-24

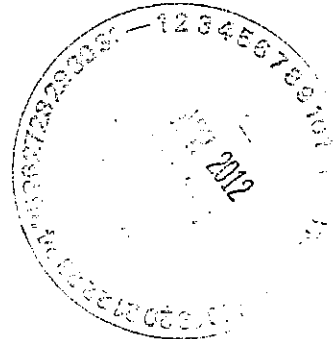
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Governor

Robert M. Summers, Ph.D.
Secretary

Anthony G. Brown
Lieutenant Governor

APR 05 2012

The Honorable James C. Church
President, Worcester County Commissioners
Worcester County Government Center
1 West Market Street, Room 1103
Snow Hill, MD 21863



Dear President Church:

The Maryland Department of the Environment (MDE) has completed its review of the **Steen Property Water and Sewer Service Area Expansion Amendment (Amendment)** to the 1994 Worcester County Water and Sewerage Plan (Plan). The Worcester County Commissioners adopted the Amendment on September 6, 2011 by Resolution No. 11-24.

The Amendment revises the Water Service Area and Sewer Service Area maps for Ocean Pines to change the Steen Property Subdivision from W-6 / S-6 (no planned service) to W-1 / S-1 (existing service or service within two years) for a portion of Parcel 67-Tax Map 21 and a portion of Parcel 74-Tax Map 21. The Amendment will provide the subdivision with 60 EDUs of water and sewer service from the Ocean Pines Sanitary Service System.

During MDE's review of the Amendment, the Maryland Department of Planning advised MDE that the Amendment is consistent with the Worcester County Comprehensive Plan (comments enclosed). MDE's Water Supply Program noted that the water use reported in 2010 for the Ocean Pines Service System was about 83 percent of the permitted allocation (comments enclosed). Please be advised that Worcester County should prepare a Water Supply Capacity Management Plan for Ocean Pines and may need to apply for an increase in the Ocean Pines water appropriation permit. Please contact the Water Supply Program at 410-537-3702 for assistance with these matters. The Steen Property Water and Sewer Service Area Expansion Amendment as set forth on the attached maps is hereby approved.

Please also be advised that a portion of proposed service area is located within the Chesapeake Bay Critical Area Resource Conservation Area (RCA). Any development occurring as a result of the approval of this Amendment must adhere to all Critical Area restrictions associated with the RCA. Please contact the Critical Area Commission at 410-260-3476 concerning Critical Area requirements

The Worcester County Water and Sewer Plan update is overdue. Please be advised that COMAR requires that the County provide a copy of the draft Water and Sewer Plan to MDE prior to County adoption. This action ensures that MDE's comments can be incorporated, as appropriate, in the County's final plan.

This action completes MDE's review, as required by §9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance on these matters, please contact Virginia F. Kearney, Deputy Director, at 410-537-3512, toll free at 800-633-6101 or by email at vkearney@mde.state.md.us.

Sincerely,


Jay Sakai, Director
Water Management Administration

Enclosures

cc: Robert Mitchell, Department of Environmental Programs, Worcester County
Rich Josephson, Planning Services, MDP
La Verne Gray, MDP
Brigid Kenney, Senior Policy Advisor, MDE
Saied Kasraei, Water Supply Program, WMA, MDE
Virginia F. Kearney, Deputy Director, WMA, MDE



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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11-27

Martin O'Malley
Governor

Robert M. Summers, Ph.D.
Secretary

Anthony G. Brown
Lieutenant Governor

APR 05 2012

The Honorable James C. Church
President, Worcester County Commissioners
Worcester County Government Center
1 West Market Street, Room 1103
Snow Hill, MD 21863



Dear President Church:

The Maryland Department of the Environment (MDE) has completed its review of the **Ocean Pines Commercial Sub-area (Pines Plaza) Water Service Amendment (Amendment)** to the 1994 Worcester County Water and Sewerage Plan (Plan). The Worcester County Commissioners adopted the Amendment on November 1, 2011 by Resolution No. 11-27. The Amendment revises the Water Service Area map for Ocean Pines to include the Pines Plaza commercial area in the W-1 (existing service to service within two years) service category. The Amendment will provide the commercial area with 125 EDUs of water service from the Ocean Pines Sanitary Service System. MDE approved these same parcels for sewer service from the Ocean Pines Sanitary Service System with the approval of Resolution No. 05-09 by letter dated June 29, 2005.

During MDE's review of the Amendment, the Maryland Department of Planning advised MDE that the Amendment is consistent with the Worcester County Comprehensive Plan (comments enclosed). MDE's Water Supply Program noted that the water use reported in 2010 for the Ocean Pines Service System was about 83 percent of the permitted allocation (comments enclosed). Please be advised that Worcester County should prepare a Water Supply Capacity Management Plan for Ocean Pines and may need to apply for an increase in the Ocean Pines water appropriation permit. Please contact the Water Supply Program at 410-537-3702 for assistance with these matters. The Ocean Pines Commercial Sub-area (Pines Plaza) Water Service Amendment is hereby approved (see enclosed map).

The Worcester County Water and Sewer Plan update is overdue. Please be advised that COMAR requires that the County provide a copy of the draft Water and Sewer Plan to MDE prior to County adoption. This action ensures that MDE's comments can be incorporated, as appropriate, in the County's final plan.

The Honorable James C. Church
Page 2 of 2

This action completes MDE's review, as required by §9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance on these matters, please contact Virginia F. Kearney, Deputy Director, at 410-537-3512, toll free at 800-633-6101 or by email at vkearney@mde.state.md.us.

Sincerely,


Jay Sakai, Director
Water Management Administration

Enclosures

cc: Robert Mitchell, Department of Environmental Programs, Worcester County
Rich Josephson, Planning Services, MDP
La Verne Gray, MDP
Saied Kasraei, Water Supply Program, WMA, MDE
Virginia F. Kearney, Deputy Director, WMA, MDE



MARYLAND DEPARTMENT OF THE ENVIRONMENT 12-21
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Martin O'Malley
Governor

Robert M. Summers, Ph.D.
Secretary

Anthony G. Brown
Lieutenant Governor

JAN 22 2013



The Honorable James C. Church
President, Worcester County Commissioners
Worcester County Government Center
1 West Market Street, Room 1103
Snow Hill, MD 21863

Dear President Church:

The Maryland Department of the Environment (MDE) has completed its review of the **Water and Sewer Plan Amendment Establishing the Ocean Downs Sewer Planning Area (Amendment)**, which amends the 1994 Worcester County Water and Sewerage Plan (Plan). The Worcester County Commissioners adopted the Amendment on September 4, 2012 through Resolutions No. 12-21 and No. 12-22.

Resolution 12-21 amends the Worcester County sewer service map for the Ocean Downs Property (Tax Map 21, Parcel 99) from S-6 (no planned service) to S-1 (service present to 2 years). Resolution 12-22 establishes the Ocean Downs Sanitary Service Area for Tax Map 21, Parcel 99. This Resolution establishes the Ocean Downs Service Area with an initial allocation of 63 Equivalent Dwelling Units (EDUs) at a rate of 300 gallons per EDU, and an ultimate allocation of 333 EDUs (99,900 gpd). Resolution 12-22 also establishes that the wastewater will be conveyed to the existing Ocean Pines sewer collection system for treatment and discharge.

During MDE's review of the Amendment, the Maryland Department of Planning advised MDE that the Amendment is consistent with the Worcester County Comprehensive Plan (comments enclosed). The Water and Sewer Plan Amendment establishing the Ocean Downs sewer service area as set forth on the attached map is hereby approved. This approval is limited to the establishment of the Ocean Downs service area as shown on the attached map; the initial allocation of 63 EDUs and an ultimate allocation of 333 EDUs to the Ocean Downs service area; the designation of the Ocean Downs service area as S-1; and the connection of the Ocean Downs service area to the Ocean Pines sewer collection system via a sewer line under Turville Creek. This approval does not include consideration of nutrient credits. Please be advised that any request for nutrient credits must be included in an application to revise the NPDES discharge permit for

the Ocean Pines Wastewater Treatment Plant. The County is encouraged to contact Yen-Der Chang of the Wastewater Permits Program at 410-537-3671 for guidance concerning nutrient credits. Please be advised that the discharge permit limits for the Ocean Pines wastewater treatment plant remain at 73,056 pounds per year for total nitrogen and 9,132 pounds per year for total phosphorus.

Please be further advised that a portion of proposed service area is located within the Chesapeake Bay Critical Area Resource Conservation Area (RCA). Any development occurring as a result of the approval of this Amendment must adhere to all Critical Area restrictions associated with the RCA. Please contact the Critical Area Commission at 410-260-3476 concerning Critical Area requirements.

The Worcester County Water and Sewer Plan update is overdue. Please be advised that COMAR requires that the County provide a copy of the draft Water and Sewer Plan to MDE prior to County adoption. This action ensures that MDE's comments can be incorporated, as appropriate, in the County's final plan.

This action completes MDE's review, as required by §9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance on these matters, please contact Virginia F. Kearney, Deputy Director, at 410-537-3512, toll free at 800-633-6101 or by email at vkearney@mde.state.md.us.

Sincerely,


Jay Sakai, Director
Water Management Administration

Enclosures

cc: Robert Mitchell, Department of Environmental Programs, Worcester County
Rich Josephson, Planning Services, MDP
La Verne Gray, MDP
Yen-Der Chang, Wastewater Permits Program, WMA, MDE
Virginia F. Kearney, Deputy Director, WMA, MDE



INFO



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13-12

Martin O'Malley
Governor

Robert M. Summers, Ph.D.
Secretary

Anthony G. Brown
Lieutenant Governor

RECEIVED

OCT 25 2013

October 22, 2013

WOR CO ADMIN

The Honorable James C. Church
President, Worcester County Commissioners
~~Worcester County Government Center~~
1 West Market Street, Room 1103
Snow Hill, MD 21863

Copy! Sewer Committee

Dear President Church:

The Maryland Department of the Environment (MDE) has completed its review of **Resolution No. 13-12 – Ocean Pines WWTP Expansion (Amendment)**, which amends the 1994 Worcester County Water and Sewerage Plan (Plan). The Worcester County Commissioners adopted the Amendment on May 21, 2013 through Resolution No. 13-12. Resolution No.13-12 expands the design capacity of the Ocean Pines WWTP from 2.5 mgd to 2.6 mgd.

During MDE's review of the Amendment, the Maryland Department of Planning advised MDE that the Amendment is consistent with the Worcester County Comprehensive Plan (see enclosed comments). The **Ocean Pines WWTP Expansion Amendment** (Resolution No. 13-12), which expands the design capacity of the plant to 2.6 mgd, is hereby approved.

The County is reminded that although the approval of this Water and Sewer Plan Amendment allows for the expansion of the WWTP capacity to 2.6 mgd, the current NPDES discharge permit is approved for a capacity of 2.5 mgd. An NPDES permit modification is necessary before the plant can begin operating at the expanded capacity of 2.6 mgd. Please contact Yen-Der Cheng, of the Department's Wastewater Permits Program, at 410-537-3363 for more information regarding the requirements for an NPDES permit modification. Please also contact Walid Saffouri, of the Department's Engineering and Capital Projects Program, at 410-537-3757 for more information on any necessary design requirements associated with a modified NPDES permit.


Please also be advised that a portion of proposed service area is located within the Chesapeake Bay Critical Area Resource Conservation Area (RCA). Any development

occurring as a result of the approval of this Amendment must adhere to all Critical Area restrictions associated with the RCA. Please contact the Critical Area Commission at 410-260-3476 concerning Critical Area requirements.

The Worcester County Water and Sewer Plan update is overdue. Please be advised that COMAR requires that the County provide a copy of the draft Water and Sewer Plan to MDE prior to County adoption. This action ensures that MDE's comments can be incorporated, as appropriate, in the County's final plan.

This action completes MDE's review, as required by §9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance on these matters, please contact Virginia F. Kearney, Deputy Director, at 410-537-3512, toll free at 800-633-6101 or by email at virginia.kearney@maryland.gov.

Sincerely,



Jay Sakai, Director
Water Management Administration

Enclosure

cc: Robert Mitchell, Department of Environmental Programs, Worcester County
Rich Josephson, Planning Services, MDP
La Verne Gray, MDP
Walid Saffouri, Engineering and Capital Projects Program, OB, MDE
Yen-Der Cheng, Wastewater Permits Program, WMA, MDE
Virginia Kearney, Deputy Director, WMA, MDE

WS

RIDDLE FARM
SW 2013-4

COMES



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13-26
13-27

Martin O'Malley
Governor

Robert M. Summers, Ph.D.
Secretary

Anthony G. Brown
Lieutenant Governor

July 10, 2014

The Honorable James C. Church
President, Worcester County Commissioners
Worcester County Government Center
1 West Market Street, Room 1103
Snow Hill, MD 21863

Dear President Church:

The Maryland Department of the Environment (MDE) has completed its final review of the **Worcester County Water and Sewer Amendment for the Riddle Farm Water and Sewer Service Area Expansion**, which amends the Worcester County 1994 Water and Sewerage Plan. The Worcester County Commissioners adopted the Amendment on December 17, 2013 through Resolution No. 13-26 (Sewer Map Amendment) and Resolution No. 13-27 (Water Map Amendment). The Amendment expands the water and sewer service areas of the Glen Riddle Farms development area. The Amendment also allows for the expansion of the Water Treatment Plant and the Wastewater Treatment Plant (WWTP) by an additional 80,000 gpd from 197,500 gpd to 277,750 gpd. The review period, set to expire on April 15, 2014, was extended by an additional 90 days. During this time, the County provided supplemental information about the existing and proposed service areas and plant expansions (see enclosed water service area map and sewer service area map).

The Maryland Department of Planning (MDP) advised MDE that the Water and Sewer service area expansions are consistent with the Worcester County Comprehensive Plan, but had some concerns as to the necessity of the additional 80,000 gpd (see enclosed comments).

In accordance with Environment Article §9-507(a), the Department hereby approves in part and modifies in part the **Riddle Farm Water and Sewer Service Area Expansion Amendment**. Specifically, the Department approves the expansion of the Water Treatment Plant and the Wastewater Treatment Plant from 197,500 gpd to 277,750 gpd. In addition, the Department modifies the water and sewer service areas



as shown on the attached service area maps. However, the Department has determined that there are several significant issues associated with this Amendment, as set forth below, which the County must address:

- The current design of the WWTP can not be re-rated for the additional requested capacity. Therefore, the WWTP must be expanded and upgraded.
- The existing storage lagoon was designed for 150 days of storage at 0.200 mgd (30 million gallons). The County must provide the appropriate storage for 150 days at 0.220 mgd (33 million gallons) while maintaining the required three-foot freeboard.
- The County must delineate on a map the specific locations for spray irrigation of the additional 80,000 gpd of wastewater.
- The County must apply for and be issued a construction permit and a modification to the discharge permit before any expansion to the WWTP can take place.

The County is reminded that no permits will be issued until the Department is satisfied that all technical aspects of the expansion of the spray irrigation operation and the expansion and upgrade of the WWTP have been thoroughly addressed by the County.

Please be advised that the Maryland Office the Attorney General (OAG) recently notified the County of outstanding violations in regards to the NPDES Permit for the Riddle Farm WWTP (see attached July 8, 2014 letter from Lawrence A. Thrower). The County is advised to contact the OAG as soon as possible.

Please also be advised that portions of the proposed service area are located within the Chesapeake Bay Critical Area Resource Conservation Area (RCA). Any development occurring as a result of the approval of this Amendment must adhere to all Critical Area restrictions associated with the RCA. Please contact the Critical Area Commission at 410-260-3476 concerning Critical Area requirements.

The Worcester County Water and Sewer Plan update is overdue. Please be advised that COMAR requires that the County provide a copy of the draft Water and Sewer Plan to MDE prior to County adoption. This action ensures that MDE's comments can be incorporated, as appropriate, in the County's final plan.

This action completes MDE's review, as required by §9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance on these matters, please contact Virginia F. Kearney, Deputy Director, at 410-537-3512, toll free at 800-633-6101 or by email at virginia.kearney@maryland.gov.

The Honorable James C. Church
Page 3

Sincerely,


Jay Sakai, Director
Water Management Administration

Enclosures

cc: Robert Mitchell, Department of Environmental Programs, Worcester County
Rich Josephson, Planning Services, MDP
La Verne Gray, MDP
Nick Kelly, Chesapeake Bay Critical Area Commission
Lawrence Thrower, OAG
Walid Saffouri, ECCP, MDE
Ching-Tzone Tien, Discharge Permits Program, WMA, MDE
Virginia Kearney, Deputy Director, WMA, MDE

WS

ISLAND RESORT 2014

COMES



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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14-7

Larry Hogan
Governor

Ben Grumbles
Secretary

Boyd Rutherford
Lieutenant Governor



May 6, 2015

The Honorable Madison J. Bunting, Jr.
President, Worcester County Commissioners
Worcester County Government Center
1 West Market Street, Room 1103
Snow Hill, MD 21863

Dear President Bunting:

The Maryland Department of the Environment (MDE) has completed its review of the **Island Resort Amendment**, which amends the 1994 Worcester County Comprehensive Plan for Water and Sewerage Systems. The Worcester County Commissioners adopted the Amendment on March 18, 2014 through Resolution No. 14-7.

The Amendment expands the existing Island Resort Campground system from 110 sites to 142 sites. The Amendment also expands the Water Service Area and the Sewer Service Area to accommodate the expansion of the campground (please see attached Service Area Map). Subsequent to the initial submittal, the County provided supplemental information to correct a misidentified parcel reference. The initial submittal incorrectly referenced Tax Map 40, Parcel 93; the supplemental information correctly referenced Tax Map 40, Parcel 241.

During MDE's review of the Amendment, the Maryland Department of Planning (MDP) advised the Department that the Amendment is consistent with the Worcester County Comprehensive Plan (see enclosed comments).

In accordance with §9-507(a) of the Environment Article, Annotated Code of Maryland, the Department hereby approves the **Island Resort Amendment** in part and modifies the Amendment in part. Specifically, the Department approves the service area map change. The Department modifies the Amendment text to reflect the correct parcel reference of Tax Map 40, Parcel 241 (see attached text modification).

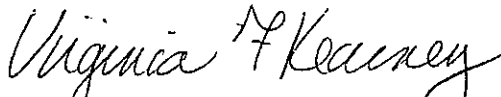
The Honorable Madison J. Bunting, Jr.
Page 2 of 2

The Department of Natural Resources (DNR) advised MDE that the Island Resort service area is within a Rare, Threatened, and Endangered (RTE) species area. RTE areas are places where rare, threatened, or endangered native Maryland flora and fauna occur. Please be advised that special protection of these areas is necessary to ensure the persistence of these imperiled flora and fauna throughout the State. Portions of the service areas are also in the vicinity of designated Nontidal Wetlands of Special State Concern. For guidance concerning the protection of RTE areas, please contact Greg Golden of DNR's Project Review Division at 410-260-8331, who will further coordinate with Lori Byrne of the Wildlife and Heritage Service at 410-260-8573. Please also contact Denise Clearwater of MDE's Wetlands and Waterways Program at 410-537-3781 for guidance concerning the protection of Nontidal Wetlands of Special State Concern.

Please also be advised that a portion of the Amendment area is located within the Chesapeake Bay Critical Area Resource Conservation Area (RCA). Any development occurring as a result of the approval of this Amendment must adhere to all Critical Area restrictions associated with the RCA. Please contact the Critical Area Commission at 410-260-3476 concerning Critical Area requirements.

This action completes MDE's review, as required by §9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance, please contact me at 410-537-3567, toll-free at 800-633-6101; or by email at virginia.kearney@maryland.gov.

Sincerely,



Virginia F. Kearney, Acting Director
Water Management Administration

Enclosures

cc: Robert Mitchell, Department of Environmental Programs, Worcester County
John Ross, Deputy Director, Department of Public Works, Worcester County
Charles Boyd, Deputy Director, Planning Services, MDP
La Verne Gray, MDP
Nick Kelly, Chesapeake Bay Critical Area Commission



3.2.18 ISLAND RESORT CAMPGROUND

A. Existing Water Facilities

Area Served

The Island Resort Campground (Figure 3-32) water facility, planned for construction in 2005, will serve 110 seasonal campsites located north of Cropper Island Road and identified as the portion of Tax Map 40, Parcel 241, extending from the southeastern side bound by Bassett Creek and Porter Creek and the Forest Conservation Area on the northwestern portion of the parcel

Capacity

The planned capacity of the Island Resort Campground water system is 16,500 gallons, which is sufficient to accommodate 55 EDUs.

Groundwater Appropriation Permit

The MDE groundwater appropriation permit allows 5,500 gallons per day (annual average) and a monthly maximum of 11,000 gallons per day for the Island Resort Campground water system¹. It is not expected that expansion will utilize more water than is authorized in this permit.

Specifications

The following specifications for the Island Resort Campground facility were listed in the January 30, 2003 amendment application. On April 15, 2003, the Worcester County Commissioners passed resolution 03-12, which amended the *1994 Comprehensive Plan for Water and Sewerage Systems, Worcester County, Maryland* as specified in the amendment application. Updated specifications are noted. The Commissioners updated the *Plan* with Resolution No. 14-7, which allowed expansion of the existing campground from 110 lots to 142 lots.

Ownership

Island Management, Inc.

Population Served

55 EDUs

Water Supply

¹ MDE Groundwater Appropriation Permit WO1996G007(02).

4.4.9 ISLAND RESORT CAMPGROUND

A. Existing Sewer Facilities

Area Served

The Island Resort Campground (Figure 4-32) sewer facility, planned for construction in, will serve 110 seasonal campsites located north of Cropper Island Road and identified as the portion of Tax Map 40, Parcel 241, extending from the southeastern side bound by Bassett Creek and Porter Creek and the Forest Conservation Area on the northwestern portion of the parcel .

Capacity

The plant capacity of the Island Resort Campground sewer facility will be 16,500 gallons of sewage per day, enough to accommodate 55 EDUs.

Discharge

MDE has issued a groundwater discharge permit to Island Resort Campground (No. 09-OP-3471).

Specifications

The following specifications for the Island Resort Campground sewer facility were listed in the original January 30, 2003 amendment application. On April 15, 2004, the Worcester County Commissioners passed resolution 03-12, which amended the *Comprehensive Plan for Water and Sewerage Systems, Worcester County, Maryland* as specified in the original amendment application. The Commissioners updated the *Plan* with Resolution No. 14-7, which allowed expansion of the existing campground from 110 lots to 142 lots.

Ownership

Island Management, Inc.

Population Served

55 EDUs

Sewage Flows

Average Flow:	0.005
Peak Flow:	0.012

Collection System

**MDE Modification to the Island Resort Amendment - Resolution 14-7
Modified by MDE by letter dated May 6, 2015**

**Island Resort
Planned Water System
Profile**

County Commissioner Resolution/Date: 14-7

Table No.

System Name: Island Resort Campground

3-6

Priority Category: W-1

3-6

Area to be Served: 142 seasonal campsites located at Tax Map 40, the part of Parcel 241 from the southeastern side bound by Bassett Creek and Porter Creek and the forest conservation area on the northwestern portion of the parcel.

3-6

Population Served: 165 (55 EDU's)

Constructed by: Island Resort Campground
Owned by: Island Management, Inc.
Operated by: Island Management, Inc.

Planned Distr. System: 7,500 linear feet, small diameter water main

3-6

System Description:

Well Location (N/E): 158,000N/1,304,000E¹

Well Depth/Aquifer: 280 feet¹/Manokin²

Treatment Facilities: water conditioner/hypochlorinator

Storage Facilities: hydropneumatic tank

Distribution System: 4" or small PVC standard dimensional ratio (SDR) 18

Estimated Cost and

Source of Funding:

Cost: \$200,000

Funding: private

3-6

3-6

Estimated Construction

Dates:

Begin: April 2003

Complete: July 2003

Actual Completion Date: July 2005

3-6

3-6

Comments:

Expansion Plans

(MGD/Dates): Expansion to 142 Lots

Problems:

Planned Improvements: Expansion to 142 Lots

Agreements, Policies:

3-4, 3-6

1. MDE Well Construction Permit WO-94-3111.
2. MDE Groundwater Appropriation Permit WO1996G007(02).

MDE Modification to the Island Resort Amendment - Resolution 14-7
Modified by MDE by letter dated May 6, 2015

Island Resort

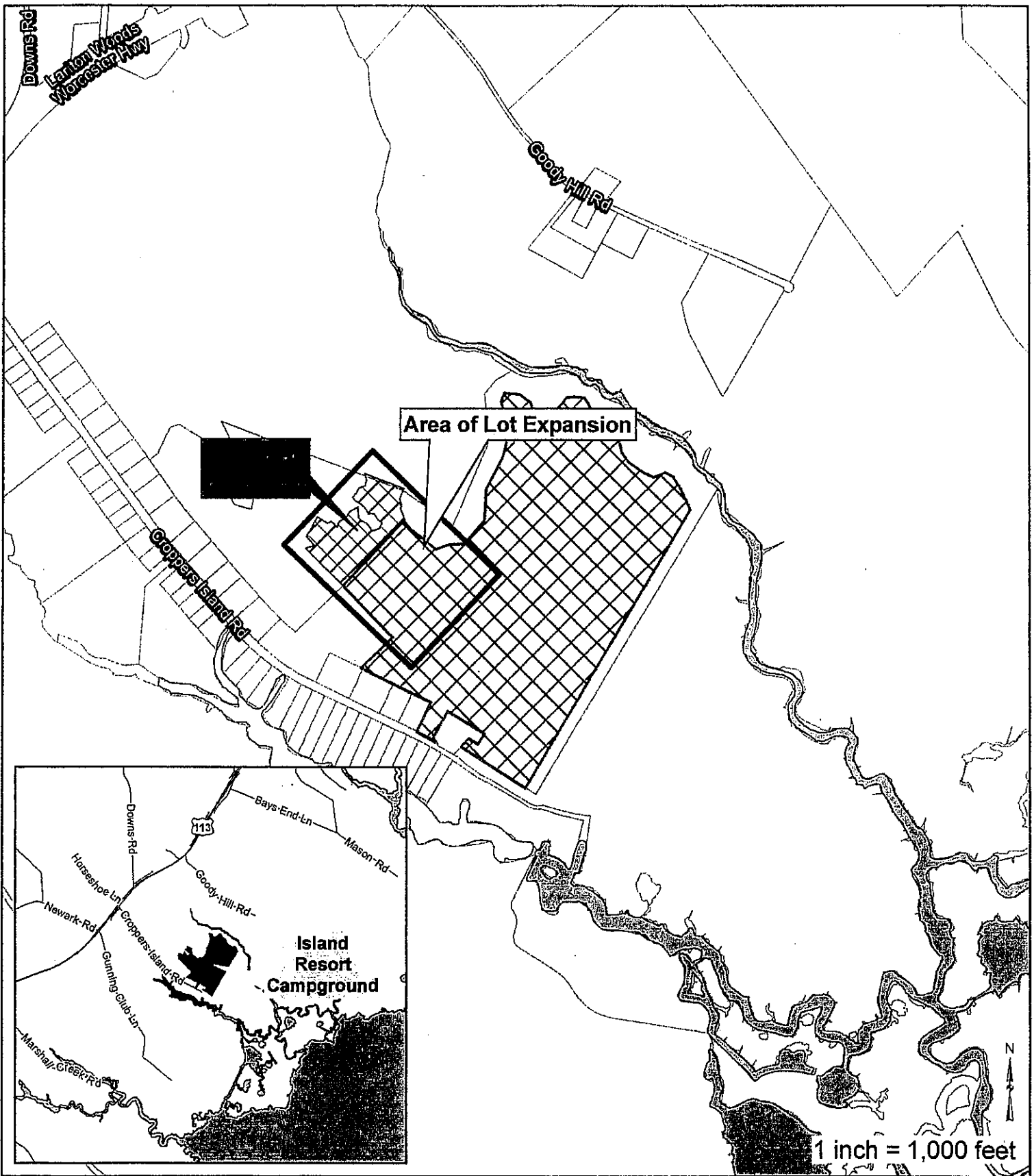
Planned Sewer System Profile




County Commissioner Resolution/Date: 14-7

Table No.

System Name: Island Resort Campground	4-6
Priority Category: S-1	4-6
Area to be Served: 142 seasonal campsites located at Tax Map 40, the part of Parcel 241 from the southeastern side bound by Bassett Creek and Porter Creek and the forest conservation area on the northwestern portion of the parcel.	4-6
Population Served: 165 (55 EDU's)	
Constructed by: Island Resort Campground	
Owned by: Island Management, Inc.	
Operated by: Island Management, Inc.	
Planned Collection	
System: small diameter force main, gravity sewer, pump station	4-6
Planned Treatment	
Facility:	
Type: advanced wastewater treatment (fixed activated sludge treatment and additional technology to limit nitrogen discharge to 8 mg/L) ¹	
Capacity:	
Demand:	
Planned: 0.0165 MGD	
Design:	
NPDES Permitted: n/a	
Discharge:	
Type: conventional onsite septic system w/treatment (above)	
Location: east side of project	
Estimated Cost and Source of Funding:	
Cost: \$300,000	4-6
Funding: private	4-6
Estimated Construction	
Dates:	
Begin: April 2003	4-6
Complete: July 2003	4-6
Actual Completion Date: July 2005	
Comments:	
Planned Expansion: Expansion to 142 lots	
Alteration, Abandonment	
if interim (indicate date),	
or Other Changes: Expansion to 142 lots	
Problems:	

1. Worcester County Department of Environmental Programs



-  Proposed Expansion
- Sewer Planning Areas**
-  Sewer - Private
- Water Planning Areas**
-  Water - Private

General Location
 Island Resort Campground
 Water and Sewer Update
 Case 2013-03



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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14-23

Larry Hogan
Governor

Ben Grumbles
Secretary

Boyd Rutherford
Lieutenant Governor

November 25, 2015

Mr. Robert J. Mitchell, Director
Worcester County Department of Environmental Programs
One West Market Street, Room 1306
Snow Hill, MD 21863

Dear Mr. Mitchell:

Thank you for your letter requesting the Department's reconsideration of the disapproval of the Water and Sewer Plan Amendment for the Mystic Harbour Sanitary Area Expansion. The Amendment was disapproved by the Department on July 31, 2015.

This Amendment includes three parts. Part 1 of the Amendment would allow the Mystic Harbour Wastewater Treatment Plant (WWTP) to increase its permitted capacity from 250,000 gallons per day (gpd) to 450,000 gpd and Part 2 would allow the County to add two additional outfalls to the permitted outfalls for the discharge from the Mystic Harbour WWTP. The additional outfalls include the Eagles Landing Golf Course, which would reuse treated effluent from the Mystic Harbour WWTP for irrigation, and the Ocean City WWTP, which would receive treated effluent redirected from the Mystic Harbour WWTP when sufficient capacity does not exist in the injection wells or the golf course irrigation system. In addition, Part 3 of the Amendment would allow the Town of Ocean City to connect three properties currently designated S-1 (the Eagle's Landing Golf Course, the Animal Shelter and the Ocean City Airport) to the Mystic Harbour sewer collection system.

During the Department's re-examination of the Mystic Harbour Amendment, your office submitted the *Mystic Harbour Sanitary Service Area Environmental Report (Environmental Report)* to address the Department's concerns. The *Environmental Report* addressed the seven issues outlined in the Department's July 31, 2015 disapproval letter. The Department recognizes the County's efforts in preparing the *Environmental Report* to satisfy the Department's concerns.

In light of this re-examination, and in accordance with §9-507 and §9-508 of the Environment Article, *Annotated Code of Maryland*, the Department hereby approves the Mystic Harbour Sanitary Area Amendment in part and modifies the Amendment in part. Specifically, the Department hereby approves Part 2 and Part 3 of the Amendment. (The Department had previously approved Part 1 of the Amendment by letter dated January 20, 2010.) In addition, the Department hereby modifies the Amendment to incorporate the *Mystic Harbour Sanitary Service Area Environmental Report* into the County Water and Sewer Plan. This incorporation will modify the Mystic Harbour Sanitary Service Area and the allocation table for Equivalent Dwelling Units (EDUs) as shown in the *Environmental Report*.



Mr. Robert J. Mitchell

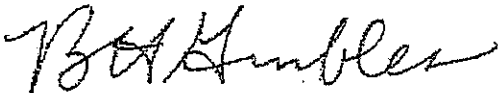
Page 2

The Department will send the approved Amendment and the Amendment Modification to the County under separate cover. The County should ensure that the approved Amendment and the elements of the Amendment Modification are fully integrated into the County's updated Water and Sewer Plan.

The County is reminded that the approval of the Amendment for the Mystic Harbour Sanitary Area Expansion does not affect the Department's requirements for a Discharge Permit. The County is encouraged to contact the Groundwater Permits Program at 410-537-3662 for further guidance.

Thank you again for your letter. If you would like to discuss this further, please call me at 410-537-3084 or Ms. Lynn Buhl, Director of the Water Management Administration, at 410-537-3567 or by email at lynn.buhl@maryland.gov.

Sincerely,



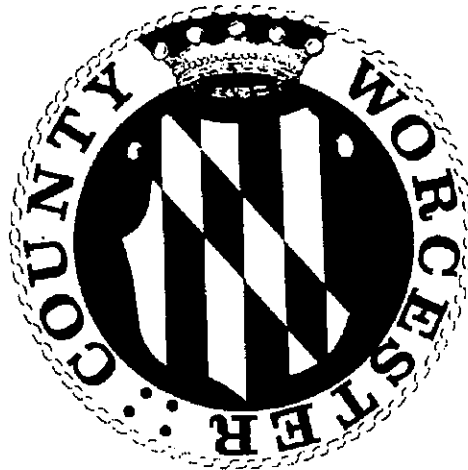
Ben Grumbles
Secretary

cc: The Honorable Madison J. Bunting, Jr., President, Worcester County Commissioners
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Mystic Harbour Sanitary Service Area

**Water & Sewerage Plan, Case No. SW-2014-1
Supplemental Information
Environmental Report for Planned Project**



PREPARED FOR:

**Maryland Department of the Environment
Water Management Administration**

PREPARED BY:

Worcester County Water and Sewer Committee

**September 28, 2015
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Mystic Harbour Sanitary District
Worcester County, MD
Water & Sewerage Plan Amendment, Case No. SW-2014-1
Addition of Two Outfalls and Increase in Discharge Permit
Flow
Supplemental Information and Environmental Report
Prepared in Support of the Amendment

1. Introduction:

The Mystic Harbour Wastewater Treatment Plant (WWTP) serves the Mystic Harbour Water and Wastewater Sanitary Service Area in eastern Worcester County, Maryland, just to the west of Ocean City, Maryland. The Mystic Harbour WWTP is newly upgraded with construction completed in 2014. This upgrade and expansion to the Mystic Harbour Wastewater Treatment Plant replaced a facility that was in very poor shape with the latest treatment technology and the upgrade has allowed the plant to meet its effluent limits and expand its service capacity. The system has historically served the Mystic Harbour Community that has a total of 469 parcels, most of which are single family residential.

With this upgrade, the system will serve existing lots to the north in areas that overlap with the West Ocean City Service Area. The West Ocean City section was originally planned to be served by the Ocean City system, but an expansion of the Mystic Harbour plant to serve this area is far more desirable. In fact, during the original planning for the West Ocean City Area, it was determined that many developable parcels (mostly in the 500 year floodplain) would not be able to be served by the initial amount of capacity that was provided by the grant secured to assist with the funding provided to construct the sewerage improvements noted in the Consent Order.

The plant currently discharges to shallow injection wells that are not reliable, and are planned to be renovated and/or replaced in conjunction with this spray project to recover their former capacity. Although the plant has a treatment capacity of 450,000 GPD, the current disposal capacity is 250,000 GPD. In order to take full advantage of the upgraded treatment plant, new outfalls for plant effluent disposal are needed. Eagle's Landing Golf Course, located south of the plant, is proposed for effluent disposal reuse through spray irrigation. The proposed upgrade would serve two seasonal campgrounds (Castaways and Frontiertown) and three smaller facilities currently served by conventional on-site septic systems (Ocean City Airport, Eagle's Landing Golf Course and the Humane Society). The proposed project includes construction of the pipeline,

reconstruction of the golf course irrigation system, and other infrastructure improvements.

Again, from an historical standpoint, the existing Mystic Harbour Wastewater Treatment Plant was originally constructed in the mid 1970's. It was built by the developer of the Mystic Harbour community for service to seasonal homeowners in this modular home community. Originally, the wastewater facility was a conventional secondary treatment plant with an effluent filtration system and disposal to on-site rapid infiltration basins.

This system did not work properly and MDE revoked the discharge permit. At that point, the houses were moved and the developer filed for bankruptcy. In 1986 the development was revived and the wastewater treatment system was reconstructed and permitted by MDE. The existing secondary plant was reused and two manmade wetlands were added for nutrient removal. Also installed was a slow rate sand filter and ultraviolet disinfection prior to effluent disposal by shallow ground water injection. In 1998 the plant was again upgraded and two additional wetlands and sand filters were added.

The location of the treatment plant, the land proposed for effluent disposal (Eagle's Landing Golf Course), the proposed pathway of the pipeline, the proposed outfalls, and the boundary of the service area are shown in Figures J and H. The current service area includes commercial and residential properties north of the plant and the Mystic Harbour Community. Proposed additions are the Castaway's Campground which is already within the approved service area, and Frontier Town Campground. (Please note that Assateague Point and the Landings are served by their own, well-functioning facilities, so they are not part of the Mystic Harbour Service Area

Construction of the disposal system will include reconstruction of the golf course's current irrigation system, conversion of an existing effluent storage tank located at the Castaways Campground facility (365,000 gallon capacity), piping connections and effluent pumping. Storage ponds at the golf course are planned to serve as back-up storage. These ponds may be re-shaped if needed (higher berms or additional excavation). Also, the pump house at the Golf Course may be re-built/upgraded as part of this project.

Construction of a disposal system able to handle this larger treatment capacity will allow the plant to function at its intended capacity. Furthermore, treatment and disposal at the two aforementioned campground facilities is no longer adequate. Disposal at Frontiertown is accomplished by dosing multiple, conventional, subsurface disposal fields which is not considered environmentally acceptable for facilities of this size within the Critical Area and in close proximity to Maryland's Coastal Bays. The Castaways Campground system was unable to meet effluent standards and adequately dispose of their effluent. The system was initially approved as a repair of a former failing large flow, multi-use, conventional septic system at loading rates higher than would be typically allowed for newly permitted drip systems in Maryland. Ultimately the problems could only be overcome with a full-time, skilled operator on site. The Maryland Department of the Environment ordered them to either correct

the problems or connect to the Mystic Harbour Wastewater Treatment Plant. Extension of sewer service to these existing facilities will reduce water quality impacts by eliminating potential sources of groundwater contamination

As part of the impacts this report is written to examine, it can be demonstrated that the project will have minimal environmental impact. Extension of service will be limited to existing commercial parcels and limited new residential uses, and will not be opening up new land to commercial development. The environmental impacts of this project are short term, can be mitigated by regulations currently in effect, and are primarily associated with the project's construction period.

2. Environmental Assessment:

A. Tidal and Non-tidal Wetlands

Wetlands are generally areas that are temporarily, seasonally or always inundated or saturated by water. Wetlands are identified by their hydric soils, and plants that are adapted to wet conditions. Functions of wetlands include, but are not limited to, fish and wildlife habitat, food chain support, storage of flood waters, erosion control, groundwater recharge, nutrient cycling and storage, and pollutant removal. Worcester County contains extensive wetland areas of varying types performing diverse functions. Wetland are separated by being either tidal or nontidal in nature.

Tidal wetlands includes salt water areas that are influences by the daily ebb and flow of the tide and may be further separated into State and/or Private Tidal Wetlands. These areas include ecosystems such as salt marshes, bogs, tributaries, beaches, and created wetlands. Dredging, filling and other alterations to tidal wetlands are also regulated jointly by Maryland Department of the Environmental (MDE) and the United States Army Corps of Engineers (USACOE). Buffers for these tidal areas are established by numerous programs that are administered and enforced by numerous local, State, and Federal agencies that will further outlined within this document. Tidal Wetlands Inventory Maps (1971) and on-site delineations are utilized for determining the boundaries of tidal wetlands that are regulated by the State of Maryland. These maps may be viewed at the Department of Environmental Programs. Copies of these maps are available from the Maryland Department of Natural Resources, Geological Survey Publications Office.

Nontidal wetlands are commonly known as marshes, swamps, bogs, wet meadows and bottomland forests. These areas usually exist inland and are a freshwater ecosystem that are not tidally influenced and are usually saturated with water throughout the year. There are approximately 287,420 acres of nontidal wetlands within the State. In 1989, the Maryland General Assembly adopted legislation which directed authority to the Department of Natural Resources, which later was transferred to the Maryland Department of the Environment (MDE) Water Management Administration, Nontidal Wetlands and Waterways Division. That Division has specific regulations and has setup procedural requirements to handle applicable permits. Their goal is to achieve a no net loss of wetlands. The U.S. Army Corps of Engineers (USACOE) are also

involved with the regulatory process of nontidal wetlands that fall within their jurisdictional authority.

As mentioned previously, both MDE and ACOE are tasked with the administration and enforcement of nontidal wetlands and the associated impacts and development that routinely occur in these areas. Activities that occur within nontidal wetlands, the 25' standard buffer or the 100' expanded buffer, all require permits, letters of exemptions, or are exempted based upon the type of impact. Regulated activities may include filling, grading, excavating, dredging, or altering existing drainage patterns. Exempted activities include mostly agricultural, forestry, surveying practices, and exploratory activities that have a minimal impact. There are nontidal wetlands which are classified as a Wetland of Special State Concern (WSSC) which often contain rare or endangered plant or animal species, and are designated for special protection under the State's nontidal wetlands regulations, including increased buffering requirements. Maryland Nontidal Wetland Guidance Maps identify the general locations of wetlands, including those of Special State Concern, in Maryland, and may be viewed at the Department of Environmental Programs. These maps were created for regional-level planning, and are only suitable for general guidance for the individual landowner as they are based upon aerial photograph interpretation. Many more wetlands exist than are mapped. Wetland delineation at any specific site requires an on-site study by a qualified professional.

B. Floodplains

Floodplains (lands subject to flooding) are often described in terms of flood frequency. A 100-year flood refers to a flood with a 1% possibility of occurring in any given year. There are financial and social burdens associated with flooding that should be considered when building within floodplains. The coastal zone is constantly changing. Sea level rise and sinking of land causes coastal lands to become slowly inundated, and the area of land flooded or subject to flooding migrates landward. Roads and structures within a floodplain generally reduce the capacity of the floodplain to absorb flood waters, thus increasing the size of the floodplain and the duration of a flooding event. In other words, floodplains change both because of natural "aging" and human activity -- thus new areas may become prone to flooding over time. Landowners may determine whether land they own falls within a mapped floodplain by inspecting FEMA floodplain maps.

The Worcester County Floodplain Management Law applies to development in both tidal and non-tidal floodplains. The law is consistent with the minimum requirements of the National Flood Insurance Program, and requires that new structures within the floodplain meet certain flood protection measures. The requirements are enforced by the Building Division of the Department of Development Review and Permitting. The Worcester County Forest Conservation Law requires that forests located in the 100-year floodplain are to be considered "retention priority areas" during the development process. More information about this law may be obtained at the County Government Building and the code is published on ECode.

C. Existing and Projected Development in Relation to Wetlands and Floodplains

As the enclosed Figures C, D and F illustrate, the development potential and redevelopment intensity will be concentrated outside the 100 year floodplains in the area. Figure F shows a delineation of the projected major areas for development and intensification. They include commercial areas north of the Ocean City Airport, centering on the intersection of Sunset Avenue and MD Route 611. They also show a small commercial property in the southern end of the planning area and the commercial area only for the Frontier Town Campground.

D. Projected Development in Relation to Wetlands and Floodplains

As Figures C, D and F show, the projected developable, re-development parcels, and parcels for intensification of existing uses are located primarily outside the 100 year floodplain. Any existing connections within the 100 year floodplain area existing, legally-approved lots that were already developed on septic or sewer (orig. Mystic Plant dates to 1974). It is environmentally preferable to have these properties connected to an ENR plant. These include parcels platted as a building lot proper to 1977 and subjected to existing building restrictions at the time they were originally constructed. Again, reconstruction and renovation of these original structures will be in conformance with current local and state regulations and restrictions.

E. County Regulations for Protection of Wetlands and Floodplains

Protection of Wetlands

Impacts to existing tidal and nontidal wetlands are protected by numerous regulations administered and enforced by County and State agencies.

Tidal wetlands within the Coastal Bay Critical Areas are protected under the more stringent requirements of the State Critical Area Program. Storm water management and sediment and erosion control measures also protect wetlands.

Storm water management protects the water quality of the Coastal Bays, the County's wetlands and other waterways as well as reduces local flooding and stream channel erosion. Effective sediment and erosion control during the development process provides protection both to land and to water bodies including the Coastal Bays. Worcester County law states that any clearing or grading is subject to the County's Sediment and Erosion Control and Storm water Management Regulations. However, there is a blanket exemption for minimal disturbance under both laws. An applicant must submit a Storm water Management Plan and a Sediment and Erosion Control Plan to the Worcester Soil Conservation District for approval. (Depending upon the nature of the project and size of the parcel, the Worcester Soil Conservation District may recommend that the storm water management requirements be waived; waivers are granted by the Department of Environmental Programs.) Storm water Management Plans are valid for a period of one (1) year; while Sediment and Erosion Control Plans are valid for a term of two (2) years

Construction in the Floodplain

A permit is required for all development in any floodplain zone. It shall be granted only after all necessary permit applications are submitted to federal and state agencies. A permit issued by the local permitting agency under this Subtitle is not valid until all necessary permits for development are obtained. Receipt of federal or state permits does not exempt development from the provisions of this Subtitle.

The "Worcester County Floodplain Management Law" governs construction within the floodplain. The purposes of this Subtitle are to protect human life and health, to minimize property damage, to encourage appropriate construction practices to minimize future damage, to protect individuals from unwittingly buying land subject to flood hazards and to protect water supply, sanitary sewage disposal and natural drainage. The prevention of unwise development in areas subject to flooding will reduce financial burdens to the community and the state and will prevent future displacement and suffering of its residents. This protection is achieved through the review of all activities proposed within identified floodplains and by the issuance of permits for those activities that comply with the objectives of this Subtitle. Floodplains are an important asset to the community. They perform vital natural functions such as temporary storage of floodwaters, moderation of peak flood flows, maintenance of water quality, groundwater recharge, prevention of erosion, habitat for diverse natural wildlife populations, recreational opportunities and aesthetic quality. These functions are best served if floodplains are kept in their natural state. Wherever possible, the natural characteristics of floodplains and their associated wetlands and water bodies should be preserved and enhanced. This Subtitle provides a unified, comprehensive approach to floodplain management which addresses these natural floodplain functions and the federal and state programs concerned with floodplain management. These programs are the National Flood Insurance Program (44 CFR 59 - 79); the state's Waterway Construction Permit Program for nontidal floodplains; the state's Tidal and Nontidal Wetlands Permit Programs; the United States Army Corps of Engineers Section 10 and 404 Permit Programs; and the state's Coastal Zone Management Program. Decisions to alter floodplains, especially floodways and stream channels, should be the result of careful planning processes which evaluate resource conditions and human needs.

Worcester County Floodplain Management Code BR 2-301, which became effective 7/16/15, has a provision that if a structure is located in a Special Flood Hazard Area, then special construction requirements will apply.

Critical Area Protections

In 1984, the Maryland General Assembly passed the Chesapeake Bay Critical Area Protection Act. This legislation is codified in Subtitle 18 of the Natural Resources Article, Title 8, of the Annotated Code of Maryland. The Law includes general information about Maryland's Critical Area Program, the Critical Area Commission, and the various elements that must be included in each local Critical Area program. Because the Critical Area Law on private land is primarily implemented and enforced by County and municipal governments,

local programs must be comprehensive and meet certain minimum standards. The minimum standards for local Critical Area programs, entitled "Criteria for Local Critical Area Program Development" are found in Title 27, Subtitle .01 of the Code of Maryland Regulations (COMAR).

Within this subtitle, there are chapters addressing development activities, water-dependent facilities, shore erosion control, habitat protection, and other land use activities and decision-making processes that affect natural resources within the Critical Area. Subtitle .02 addresses development in the Critical Area that results from State and local agency programs. These regulations pertain to government-sponsored development activities or those that take place on land owned by the State or local governments. COMAR also includes provisions, in Subtitle .03, regarding notification to the Commission about certain projects that are authorized by local governments through their Critical Area review processes.

In 2002, the Legislature passed the Atlantic Coastal Bays Protection Act, which added the coastal bays to the Chesapeake Bay Critical Area Program. This extended very similar protections to the coastal bays located within Worcester County. Similar to the original Critical Area Program, a local protection program consistent with the state law is implemented in Worcester County.

Like other State agencies, the Critical Area Commission has the authority to adopt its own regulations. Proposed regulations are first published in the Maryland Register, and then adopted through the Administrative, Executive, and Legislative Review (AELR) process. The AELR Committee reviews the regulations with regard to legislative authority and consistency with the legislative intent of the Natural Resources Article. The Committee also reviews any reported fiscal impacts of the proposed regulations. Following the review process, the final regulations are published in the Maryland Register with an effective date and become part of COMAR.

The local program in Worcester were derived directly from the State regulations located within Title 27 of the Code of Maryland Regulations (COMAR). While specific portions of the State regulation were amended to better fit our local program, provisions within Worcester's adopted program meet or exceeds those established by State legislation. Worcester County adopted the Chesapeake Bay Critical Area program in May of 1990 and subsequently adopted the Atlantic Coastal Bays Program in November of 2002. Both of these programs intent are to establish a resource protection program for each program and their associated tributaries by fostering more sensitive development activity for certain shoreline areas to minimize damage to water quality and natural habitats. These programs also authorize, ordain, and impose a critical area protection program to provide for reasonable restrictions, reasonably enforced on properties located within the Atlantic Coastal and Chesapeake Bay Critical Area boundaries. Specific goals of these programs include minimizing adverse impacts on water quality that result from pollutants that are discharged from structures or runoff from surrounding lands, conserving fish, wildlife, and plant habitat, and establishing land use policies for development in the Atlantic Coastal Bays Critical Area which accommodate growth as well as address the

environmental impacts that the number, movement, and activities of people may have on the area.

General Protections

Worcester County recognizes the value of and is committed to conservation and protection of its natural resources. Wetlands are a source of basic ecological "services" by providing wildlife habitat, food chain support, floodwaters storage, erosion control, groundwater recharge, nutrient cycling, nutrient storage, and pollutant removal. Green infrastructure, such as state and locally designated natural and open greenways, preserve environmentally significant areas and improve water quality, provide flood control and maintain the county's rural and coastal character.

Worcester County Floodplain Management Law, the Worcester County Forest Conservation Law, the Critical Area Law and conservation zoning provide protection of floodplains. In addition, the county has adopted code changes to reduce impervious surface requirements for roads in some kinds of new developments. The Sediment and Erosion Control and Stormwater Management program has been effective in improving water quality and reducing flooding. The county is developing a hazard mitigation plan to address issues dealing with hurricanes and other natural disasters.

Worcester County's objectives for floodplain protection include limiting development in floodplains; reducing imperviousness of existing and future floodplain development where possible; preserving and protecting the biological values and environmental quality of tidal and non-tidal floodplains, where reasonable and possible to do so.

F. State Regulations for Protecting Wetlands and Floodplains

Protection of Wetlands

Maryland has operated a tidal wetland regulatory program since 1970 and a nontidal wetland program since 1991. Through these programs, Maryland has a goal to achieve a baseline of "no net loss" of wetlands. Maryland today seeks to increase wetland acreage through restoration and preservation and operates a variety of non-regulatory programs that include planning, preservation, restoration, and enhancement to help meet these goals.

Maryland defines "waters of the state" under its Water Pollution Act. Maryland state code defines tidal and nontidal wetlands. A "nontidal wetland" is "an area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation." "Tidal wetlands" include "any land under the navigable waters of the State below the mean high tide, affected by the regular rise and fall of the tide." Maryland's rules further define "state tidal wetlands" as "all State and private tidal wetlands, marshes, submerged aquatic vegetation, lands, and open water affected by the daily and periodic rise and fall of the tide within the Chesapeake Bay and its tributaries,

the coastal bays adjacent to Maryland's coastal barrier islands, and the Atlantic Ocean to a distance of 3 miles offshore of the low water mark." "Private tidal wetlands" are defined separately and include "any land not considered 'State wetland' bordering on or lying beneath tidal waters, which is subject to regular or periodic tidal action and supports aquatic growth."

Maryland's nontidal delineation criteria are made "in accordance with the publication known as the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands*, published in 1989 and as may be amended." Tidal delineation criteria are based on the state's 1971/1972 tidal wetland boundary maps and tidal vegetation.

State of Maryland Wetland Related Laws and Regulations:

- *Nontidal Wetlands Protection Act.* The Nontidal Wetlands Protection Act regulates and restricts all activities that could impact nontidal wetlands or waters of the state. The act also helps to ensure "no net loss" of wetlands by requiring mitigation or compensation for any wetland losses. This law differs from federal regulation on issues of "isolated" wetlands, the alteration of vegetation and hydrology, and regulation of a 25-foot buffer. In Maryland, buffer requirements are expanded to 100-feet for "nontidal wetlands of special State concern," which have been designated by regulation as having exceptional ecological or educational value.
- *Tidal Wetlands Act.* Under this act, permits are required for filling or dredging in private tidal wetlands from the Maryland Department of the Environment (MDE) Tidal Wetlands Division, and licenses are required for filling or dredging state-owned wetlands from the State Board of Public Works.
- *Water Pollution Act.* This act contains water quality standards and §401 certification provisions. MDE issues water quality certifications for proposed discharges to waters of the state pursuant to §401 of the Clean Water Act. Certifications are integrated into MDE reviews of activities under tidal and nontidal wetland permit applications.
- *Chesapeake and Coastal Bays Critical Area Act.* This act requires that local jurisdictions adopt zoning regulations for lands within 1,000-feet of the Chesapeake Bay or Coastal Bays in order to improve the water quality and habitat in the Bay. Local jurisdictions must minimize alterations to the drainage area, surface and subsurface flow of water, and water quality to protect the hydrology and water quality of wetlands. Additionally, the act places restrictions on grading, filling, excavating, draining, flooding, and removing vegetation in nontidal wetlands.

Protections for Floodplain Construction

National Flood Insurance Program: The State of Maryland's Coordinating Office for the National Flood Insurance Program (NFIP) is in the Nontidal Wetlands and Waterways Division in the Water Management Administration of MDE. In order to participate in the NFIP, local communities must adopt and enforce a floodplain management ordinance containing minimum requirements specified

by federal law, which apply in floodplain areas mapped by Federal Emergency Management Agency (FEMA). In addition, the ordinance should reflect State laws and policies. The Coordinating Office assists communities in adopting, interpreting, and properly enforcing their floodplain management ordinances under the Community Assistance Program, and facilitates the coordination of federal, State, and local programs.

All of Maryland's counties, cities, and most towns participate in the NFIP. The NFIP requires local jurisdictions to issue permits for all development in the 100-year floodplain, as depicted on maps issued by FEMA. Development is broadly defined to include any man-made change to land, including grading, filling, clearing, dredging, extraction, storage, subdivision of land, and construction and improvement of structures and buildings. For any development to take place, all necessary permits must be obtained, which may include federal and State permits, as well as the local permit. For construction in wetlands and floodplains, a State permit from the Wetlands and Waterways Program, Water Management Administration at MDE is required. Questions regarding local permit requirements should be directed to the permit office of the local jurisdiction where the activity is to take place.

Maryland Model Floodplain Management Ordinance (FPMO): The Maryland Model Floodplain Management Ordinance, developed through a coordinated effort with local communities, integrates NFIP and the State permit requirements. After the devastation of Hurricane Isabel in 2003, additional provisions to enhance floodplain management have been recommended such as coastal communities must implement a minimum two foot freeboard (additional elevation requirement), all new and replaced HVAC units must be elevated, and all fuel storage tanks must be anchored or elevated.

Business Plan for Community Assistance: Maryland has developed a Business Plan for the Community Assistance Program outlining our vision for the next five years (2004-2008). The plan, approved by FEMA, sets the activities and initiative to be undertaken by the State under the Community Assistance Program funded by FEMA.

Floodplain Compliance: To be properly permitted, proposed development may not increase flooding or create a dangerous situation during flooding, especially on another person's property. If a structure is involved, it must be constructed to minimize damage during flooding. In order to document that a structure is compliant with floodplain management ordinance requirements and to properly rate it for flood insurance purposes, structures that are required to be elevated must have an elevation certificate on file. This form must be completed by a surveyor, and attests to certain elevation and venting requirements. To be compliant, an elevated building must be elevated to the Flood Protection Elevation (100-year flood elevation plus additional freeboard specified by the community) and have proper water equalizing venting. All electrical and mechanical equipment, including ductwork and HVAC equipment, must also be elevated. Fuel tanks must be elevated or anchored as specified in the brochure, *Flooding and Fuel Tanks*. The final grade of the interior of the crawl

space must be at or above final finished grade on the exterior on at least one side. Certain buildings accessory to the primary structure (sheds, garages, pavilions, etc.) may not have to be elevated, provided that they do not exceed a certain size, and meet certain provisions, including being anchored, constructed of flood resistant materials, having all mechanical and electrical equipment elevated, and having the proper water equalizing vents. These requirements should be verified with the local permit official when getting a permit for activity in a mapped 100-year floodplain.

G. Summary of Impact of Service Area on Wetlands and Floodplains

Worcester County completed an environmental assessment report for this project and submitted the report to USDA. The report is enclosed in Appendix D and the findings are detailed in Paragraph H.

A summary of impacts found in that report, impacts discussed in this report, and additional commentary regarding our impacts and mitigation measures are detailed below:

- The proposed project's direct and indirect impacts will be minimal and will be mitigated by employing ample existing regulatory oversight on project construction activities.
- There have been updates to laws and new controls in place on development and construction today that were not in existence at the time of the consent order. There are ample environmental protections enforced at the federal, state and local levels on new development projects today. The County has also self-limited ourselves of previously offered capacity in the WOC service area that would of intensified developments in the floodplains. The intent of the consent order was to place controls on development and building to protect the environment. Those controls exist today.
- Our *Comprehensive Plan* notes that the entire subwatershed (Sinepuxent) other than its West Ocean City (northern) portion should not be further developed due to its traffic, environmental sensitivity, and high storm hazard vulnerability characteristics along with its value as a gateway to the federal and state parks on Assateague Island. The intervening properties between the north and south portions of the service area are not intended to be served and intensified in a manner inconsistent with their *Comprehensive Plan* designation and current zoning. The County has previously denied an attempted conversion of a campground for year-round residential purposes because of our planning and zoning controls in the area. We can be expected to continue to apply these controls as required to appropriately locate new growth.
- Enclosed within this report are floodplain maps (Figures B& C) for the service area showing that the proposed "new construction" and infill for the service area will be outside the 100 year floodplains (also Figure F). Any existing connections within the 100 year floodplain are existing, legally-approved lots that were already developed on septic or even sewer (orig. Mystic plant dates to 1974). It is environmentally preferable to have them connected to an ENR plant. These include parcels platted as

a building lot prior to 1977 and subjected to existing building restrictions at the time they were originally built upon.

- In 2009 the County implemented a new zoning ordinance that requires submission of an existing conditions plan as a first step for commercial development and major subdivisions to ensure that sensitive areas and impaired waterbodies are considered at the beginning of the development process.
- The 2009 zoning ordinance also enacted provisions to limit the maximum number of parking spaces provided for commercial development in order to limit impervious areas which will result in water quality benefits.
- Worcester County has two very successful Rural Legacy Area Programs (RLAs) approved and certified by the State (Dividing Creek and Maryland Coastal Bays RLAs). There are properties within this general area that are part of the Coastal Bays RLA.
- Worcester County, without a doubt, has arguably the most effective agricultural zoning provisions in the State with regard to prohibiting major subdivisions in agricultural districts. These provisions have been in effect since 1978 and are primarily responsible for the retention of the County's rural and agricultural nature. Furthermore, these regulations have been used as a model for recent State legislation. (SB 236). The agricultural land in this corridor will have these same protections and the controls referenced above in prior notes.
- In the turnover agreement attached as Appendix F of this report, Worcester County was to be offered additional capacity for West Ocean City sanitary area any time the Town upgraded their treatment plant and increased their capacity. The County was offered 170,000 gpd in the year 2000 and refused that capacity offer. The refusal, in part, came about due to concerns that the additional flow we would accept would cause problems with the conditions of both the consent order and grant. The County acted and self-limited themselves in order to preserve the environmental benefits that were a part of the original intent of the WOC sewer project. In doing so we turned down capacity that nearly equaled the increase in capacity we are requesting with this proposed amendment. This instance should help to demonstrate the commitment the County is willing to make to adhere to the spirit of the original consent order and grant conditions.

H. Project Environmental Assessment Report Submitted to USDA

Worcester County completed an environmental assessment report for this project and submitted the report to USDA. The report is enclosed in Appendix D.

The analysis of environmental consequences resulted in the following:

1. The proposed project will have minimal indirect environmental impact and will result in a reduction of nutrient inputs to surface and groundwater.
2. The minimal direct environmental impact will be mitigated by employing storm water management and erosion control practices, and increasing forest cover as required by law.

3. Projected Demand in the Mystic Harbour Service Area:

A. Service Area Map and Discussion

Enclosed as Figures J and L are the service area maps that were submitted with the amendment and our responses to MDE inquiries.

B. Existing and Projected Population Numbers and EDUs for Summer Months

The development of the service area is projected to have an initial realization of capacity purchases for seasonal properties (campgrounds) and pent-up demand from the existing developed and developable properties, coupled with a sustained purchase of capacity for redevelopment and intensification properties. We are looking at a normalized flow of 250 gpd/EDU for the purposes of examining flows and EDUs between two service areas with different EDU values. This table used the peak summer flow month of July. We have estimated population by using the 2010 Census figure of 2.28 persons per capita for our county households.

Year	Sewer EDU's	Sewered Population
2015	872	1,988
2020	904	2,061
2025	936	2,134
2030	968	2,207
2035	1,000	2,280

Year	Sewer EDU's	Sewered Population
2015	0	0
2020	290	661
2025	400	912
2030	530	1,208
2035	666	1,518

It is important to note that while all Mystic sewer EDU's are assigned and allocated to service area properties, there are a couple of commercial properties that have large allocations unconnected at the present (40 and 70 EDUs).

C. Existing and Projected Population Numbers and EDUs for Offseason Months

Table 2 shows the average and projected flows for the normal offseason flows at approximately 60% of summertime flows. This reflects the historical trend line for the seasonal variations of this service area.

Year	Sewer EDU's	Sewered Population
2015	524	1,194
2020	542	1,236
2025	561	1,279
2030	580	1,322
2035	600	1,368

Note: Off season flows assumed to be approximately 60% of summertime flows.

Year	Sewer EDU's	Sewered Population
2015	0	0
2020	174	397
2025	240	547
2030	318	725
2035	400	912

Note: Off season flows assumed to be approximately 60% of summertime flows.

Again we would note our use of the 250 gal/EDU value to compare flows and EDUs between the two service areas in 2c (above).

D. Existing and Projected Wastewater Demand for Summer Months

There can be no denying the seasonal nature of this service area and there are noticeable differences in that flow as well between July flows and typical summer flows.

Year	Average Summer Daily Flow
2015	218,000
2020	313,000
2025	354,000
2030	401,000
2035	449,800

Note: These are projected flow volumes calculated from the totals of Tables 1b and 1c.

E. Existing and Projected Wastewater Demand for Offseason Months

The offseason flow, as shown in Table 4 is projected to be as follows:

Year	Average Offseason Daily Flow
2015	131,000
2020	187,700
2025	212,250
2030	240,400
2035	270,000

Note: These are projected flow volumes calculated from the totals of Tables 2b and 2c. Offseason average flow is projected to be 60% of summer average flow.

F. Daily Peak Flows for Summer and Offseason Months

The daily peak flows for summer and offseason months is as follows:

Year	Peak Daily Flow Summer	Peak Daily Flow Offseason
2015	272,500	163,750
2020	391,250	234,625
2025	442,500	265,312
2030	501,250	300,500
2035	562,250	337,500

Note: Daily peak flow volumes calculated by multiplying average daily flow by a factor of 1.25.

G. Account for the current and Future Flow Diversions to West Ocean City

We expect that the projected yearly summer redirections of flow will be as follows:

Year	Gallons Redirected - Summer
-------------	------------------------------------

2015	10,856,000
2020	2,277,688
2025	5,679,486
2030	10,003,486
2035	14,493,086

Note: These are projections based on injection well capacity of 100,000 gallons, an average flow for spray irrigation derived from a historical 10 year average of course irrigation readings, spray starting in 2017, and numbers are shown on the spreadsheets in Appendix H.

This figure assumes that no additional land disposal capacity will be secured in the timeframe and that there will be no recovery of original injection well capacity above 100,000 gpd. There are still active investigations into obtaining additional lands for spray in the Rt 611 corridor as well as ongoing injection well reconstruction efforts, and we expect them to be realized within the projected timeframe in this submittal.

Year	Gallons Redirected - Offseason
2015	8,463,000
2020	15,433,577
2025	20,638,177
2030	26,605,977
2035	34,287,741

Note: These are projections based on injection well capacity of 100,000 gallons, an average flow for spray irrigation derived from a historical 10 year average of course irrigation readings, spray starting in 2017, and numbers are shown on the spreadsheets in Appendix H.

While we expect the reconditioning and replacement of some injection wells to enable the plant to realize once again 90% of its original disposal capacity of 250,000 gpd, we have used 100,000 gpd as the projected injection well capacity for this examination. Table 6b reflects that assumption and leaves a cap at 100,000 gpd for the injection wells.

H. Table of Allocations

The following EDU chart, as submitted with the amendment, shows the projection of EDUs and uses for the increased capacity of the plant:

EDUs in MYSTIC HARBOUR SANITARY SERVICE AREA	
North of Airport, North of Antique Road, East and West of Rt 611	
80	Vacant of Multi-lot Properties "Area 1"
80	Commercial Properties - "Area 1"
17	SF Dwellings
154	Infill and intensification of properties in "Areal"
331	Subtotal EDUs

Airport and South of Airport, East of Rt 611	
4	Vacant or multi-lot properties
6	Assateague Greens Executive Golf Course/Range - 9 holes
5	Church
20	SF Dwellings
32	Airport/Clubhouse/Humane Society
88	Castaways Campground
130	Frontier Town Campground
30	Commercial Portion of Frontier Town
20	Additional Commercial Infill South of Airport
335	Subtotal EDUs
666	TOTAL

Note: These EDUs are mapped on Figure M attached to this report.

4. Flow Diversions to West Ocean:

A. Installation of flow meter to determine the current flow being diverted from Mystic Harbour

DPW will install a flowmeter at the diversion point within the Mystic WWTP and will coordinate data examination with MDE, if requested, at periodic intervals. We will also use that data for the assigned costs allocated to the Mystic Sanitary Service Area that will be paid to cover the charges the West Ocean City Sanitary Service Area will be billed by the Town of Ocean City for the sewage they pump over to the town for treatment.

B. Eagles Landing Golf Course Irrigation Capacity and Injection Well Capacity

The golf course has previously been evaluated and data shared with the MDE Groundwater Permits Division for a feasibility letter for the spray project there. This was done in conjunction with the investigation of multiple properties in the Rt 611 corridor

Based on their historical data on water usage, our detailed soil and groundwater investigations on the golf course, and the Town's operational experience with their irrigation system, the course can easily accept 250,000 to 350,000 gpd. There is even more potential in that course and irrigation area as evidenced in Table 7 below.

Table 7						
Eagles Landing Golf Course Irrigation (Reuse)						
TM-P	Location	Owner	Address	Property Acreage	Spray Acreage	Notes
33-32	West OC	Town of Ocean City	Eagles Nest Road	253.88	115.071	

In./Week	Gallons Per Day
.25	93,250
.5	186,501
1	373,002
1.25	559,503
2	746,005

Note: Estimated site capacity figures derived from spray acreage, not total property acreage.

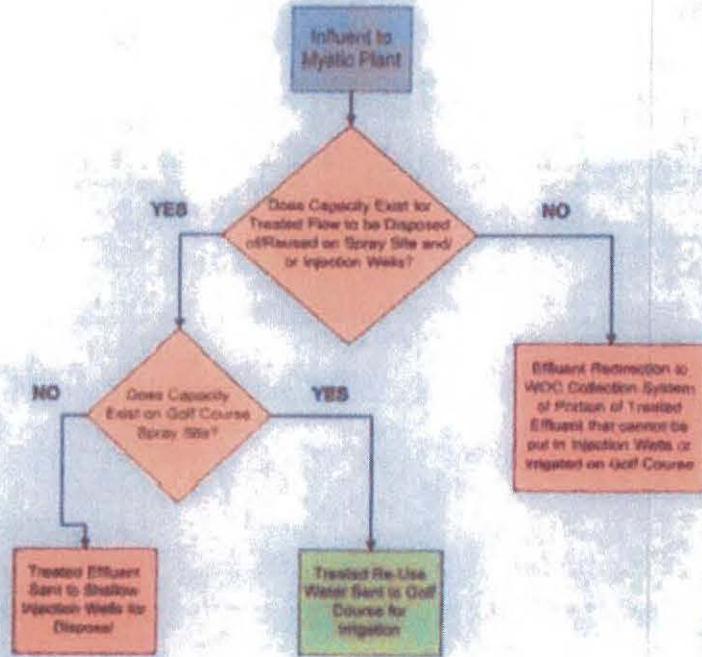
Average Daily Irrigation Water Use - Eagles Landing Golf Course 2005-2015	
Month	Average Water Use
January	0
February	0
March	9,388
April	41,396
May	148,086
June	178,119
July	224,942
August	173,282
September	145,759
October	49,775
November	2,763
December	0

Injection wells were originally permitted at a capacity of 250,000 gpd. They do not, at the present, operate at that level. As a part of this project, we will be looking at ways to recover the injection well capacity and have projected recovering a capacity of 225,000 gpd, or 90% of original capacity by 2020. At the request of MDE, we are only including a capacity of 100,000 for the projections in this report. The options of spray irrigation and wastewater diversion give the service area time to investigate, construct, test, and otherwise rehabilitate those wells to their full potential.

C. Summer balance of flow to be diverted from Mystic Harbour through West Ocean City during the summer

Redirection of flow to WOC SSA will only be done as a last resort in our operating matrix as shown below:

**Schematic Diagram of Proposed Effluent Disposal System for
Mystic Harbour WWTP**



This operating scenario is also referenced in Appendix G, which is the agreement between the Town and the County for flow acceptance by the Town from the Mystic plant.

Regarding the flow diversions for the summer from the Mystic Plant, we have described that in Table 6a above and have inserted that table again below. As we stated above, these figures assume that no additional land disposal capacity will be secured in the timeframe. There are still active investigations into obtaining additional lands for spray in the Rt 611 corridor and we expect any number of these could be realized to obtain additional land disposal capacity within the projected timeframe of this submittal.

Year	Gallons Redirected - Summer
2015	10,856,000
2020	2,277,688
2025	5,679,486
2030	10,003,486
2035	14,493,086

Note: Summer defined as June-July-August. This table is created from totals detailed in Appendix H.

5. Projected Demand For the West Ocean City Sanitary Service Area

A. Service Area Map

Enclosed as Figure I is the service area map for the West Ocean City Sanitary Area

B. Existing and Projected Population Numbers and EDUs for Summer Months

There is a seasonal nature to WOC, and it is evident as shown in Tables 9 and 10 below. The WOC service area is almost completely built out. Only two large commercial, multi-EDU, properties exist that have not connected in at full capacity (19 and 12 EDUs). Besides these two large commercial properties, we expect only a few dozen scattered, and single EDU assignments, to be connected in conjunction with residential construction projects. The assumption is that a total of 120 currently unconnected EDU's (max) will come online in the projected planning period.

Year	Sewer EDU's	Sewered Population
2015	2,628	5,992
2020	2,658	6,060
2025	2,718	6,147
2030	2,748	6,265
2035	2,778	6,333

The above represent an *average* summer flow figure (657,000 gpd) and do not include redirection totals.

C. Existing and Projected Population Numbers and EDUs for Offseason Months

With almost complete build out existing, we see very little change over what we have now. As stated in Paragraph B above, we estimate to only have about 120 EDUs in the WOC that have not been placed in service.

Year	Sewer EDU's	Sewered Population
2015	1,785	4,069
2020	1,815	4,138
2025	1,845	4,206
2030	1,875	4,275
2035	1,905	4,343

The above represent an *average* offseason flow figure and do not include redirection flow.

D. Existing and Projected Wastewater Demand for Summer Months

The average flows for the summer season area shown below in Table 11:

Year	EDU's	Summer Daily Flow
2015	2,628	657,000
2020	2,658	664,500
2025	2,718	679,500
2030	2,748	687,000
2035	2,778	694,500

Again, we are basing EDU flow on a 250 gal/EDU value for the purpose of comparing flows and EDUs for two different service areas that have two different EDU flow values. We expect to realize only a *potential* of an additional 30,000 gallons (250 gal/EDU) or 33,600 gallons (280 gal/EDU) of flow to the WOC Service area over the timeframe in this planning projection. In this planning projection, we assumed total flow would come online when we know that average per EDU flows are actually much lower than the assigned planning figures.

E. Existing and Projected Flows for Offseason Months

Table 12 below shows a gradual increase of the 120 unconnected EDUs remaining in the service area over the planning period in the projected timeframe. These are being detailed at typical average offseason flow.

Year	# of EDUs	Average Offseason Daily Flow
2015	1,785	446,250
2020	1,815	453,750
2025	1,845	461,250
2030	1,875	468,750
2035	1,905	476,250

F. Include Average and Daily Peak Flow for Summer and Offseason Months for WOC

The total projected flow, including the flow redirected from the Mystic WWTP is shown on Table 12.

Year	Average Daily Flow	Peak Daily Flow
2015	657,000	828,520
2020	664,500	836,920
2025	679,500	845,320
2030	687,000	853,720
2035	694,500	862,120

Note: Assumed flow averages in 2015-6 summer were redirected at 122,129 gpd. Spray online in 2017. Peak daily flow is average flow multiplied by a factor of 1.25.

Year	Average Daily Flow	Peak Daily Flow
2015	446,250	557,812
2020	453,750	567,187
2025	461,250	576,662
2030	468,750	585,937
2035	476,250	595,312

Note: Assumed flow averages in 2015-6 offseason were redirected at 92,455 gpd. Spray online in 2017. Peak daily flow is average flow multiplied by a factor of 1.25.

G. Current Flow Diversion from Mystic Harbour to WOC

We are currently not metering redirected flow from Mystic to WOC at the plant.

The installation of the flow meter at the plant will provide the backup needed to provide assurances to MDE on this total. The current total is measured by a pumped total gallons delivered to Ocean City.

H. Use the Numbers from Section 4C and Include the Projected Flow Diversions from Mystic Harbour

Table 14a and 14b detail the projected flows including diversions from the Mystic Harbour WWTP for summer and non-seasonal flow.

Year	Average Daily Gallons of Flow
2015	777,622
2020	689,808
2025	742,605
2030	798,150

2035	855,534
------	---------

Note: Redirection flow projections in Appendix H. Flow limited to 1 MM gallons per day on a yearly average.

Table 14b	
WOC Average Daily Sanitary Wastewater Flow Including Redirection to West Ocean City NONSEASONAL	
Year	Gallons of Flow
2015	478,094
2020	510,911
2025	537,688
2030	567,291
2035	603,242

Note: Redirection flow projections in Appendix L. Flow limited to 1MM gallons per day on a yearly average.

Based on the above information and using conservative injection well capacities and per EDU flow figures, county will not exceed the 1MM gallons/day in the original flow limits placed on the WOC service area by the Consent Order and the Turnover Agreement with the Town of Ocean City.

6. Infrastructure:

A. Map of Existing and Proposed Sewer Lines and Pump Stations

Enclosed as Figure G. is the map of the West Ocean City area sewer infrastructure.

B. Capacities of the Conveyance System and Pumping Stations

Only Stations #1 and #4 would be taking flow redirection from the Mystic Harbour WWTP.

Regarding Pump Station #4, we have a capacity of 550 gallons per minute or 0.792 MM GPD. The following Table 14 shows the distribution of EDU accounts in the WOC sanitary area by pump station and the numbers were allocated by using tax map and GIS locates to produce areas of coverage.

Table 15	
West Ocean City EDU and Pump Station Survey	
Pump Station Number	Potential EDU's for Customers in Pump Station Service Area
1	1,349
2	732
3	851
4	1,091
5	237

With Pump Station #4, if you divide their pumping capacity by four it does appear a future upgrade is desirable and justified. It was noted as an infrastructure item in the amendment and will be part of the engineering and design for the additions/upgrades to the service area equipment.

Regarding Pump Station #1, the station has a design capacity of 1,350 gpm per pump and they have three (3) pumps in that station. With a third pump on standby, the pumping capacity is 2,700 gpm or 3.9MM GPD. With this pumping capacity they have more than sufficient pumping capacity to take existing and future flows. Again, we will include this pump station as part of the engineering and design for the additions/upgrades to the service area equipment.

C. Existing Design Capacities

DPW can provide MDE with backup materials that detail and support the figures provided in Paragraph B above during the permitting and design phase of the infrastructure planned for this project as submitted in the submitted amendment and itemized in Paragraph E below.

D. Capabilities of the Existing Pumping Stations and Estimate for Expansion

It appears that existing pump stations, with the exception of Pump Station #4, will be unnecessary because we are not projected to be diverting during the summer season and we are diverting in the offseason only at the back end of our future estimates.

E. Schedule of Improvements Contemplated in the Proposed Amendment

The following items are contemplated in the project and listed in the amendment:

- Upgrades to effluent pumping and related pipeline infrastructure at the Mystic Harbour WWTP and connections between the plant and the Eagles Landing Golf Course to convey treated effluent for reuse;
- Local storage for treated effluent at the ponds at the Eagles Landing golf course and the existing storage tank at Castaways Campground;
- Reconstruction of the golf course irrigation system;
- Monitoring wells at the golf course.

It is also anticipated that during the engineering and design of the new infrastructure items that examinations for pump station capability, possible telemetry/scada/alarm control upgrades, and an operations plan for the decision management for the three (3) outfalls will be conducted.

7. Agreements with the Town of Ocean City:

A. The 1994 Agreement with Town of Ocean City to Accept Flow from the West Ocean City Sanitary Service Area

Attached as Appendix F, is the agreement between the County and the Town for the turnover of the Ocean City WWTP. Among other significant and relevant parts of this agreement, in Section IX, found on Page 7, the parties anticipated just this kind of arrangement as is described in this project. The payment

arrangements are also contemplated in the agreement as the guarantee of 1 MM gallons per day (assessed as a yearly average) is specified in the attached follow-up letter to the Town from the County about the agreement.

B. Agreement with Town to Accept Redirection of Flow from the Mystic WWTP

Attached as Appendix G, is the agreement between the County and Town for Redirection of treated effluent from the Mystic Plant and spray irrigation of same on the Eagles Landing golf course.

While Paragraph 3(a) mentions redirection on an "as needed" basis, the operating strategy of how this is accomplished is mentioned directly in the same paragraph and agreed to by the parties hereto. That operating strategy is part of the engineering and design for the plant improvements and is further described in Attachment B to this agreement. Under the Paragraph heading: Second Alternative - Effluent Redirection, the method (via email) of the notification for redirection is detailed. As we have asserted this already been contemplated between the parties, it will occur as needed, and will be left to staff to coordinate and bill accordingly as specified in the turnover agreement in Appendix F. It is fully contemplated that County and Town Public Works staff will cooperate in working to refine the operational details of redirection of flow that are to be prepared as part of the engineering and design of the new infrastructure that will accommodate this project.

C. Discussion on Revision of Existing County-Town Agreements

Based on the previous agreements discussed in Sections 7.1 and 7.2 above, Worcester County does not feel that additional agreements or modifications are warranted at this time. The redirection of flow will be kept to a minimum in compliance with the operational framework detailed in the operating scenario found on page 19 of this report. This operating scenario is also referenced as part of the agreement between the Town and the County for flow acceptance by the Town from the Mystic plant. Any redirection will be in compliance with these prior agreements.

Figures

Figure A:	Tidal and Non-Tidal Wetlands
Figure B:	100-Year Floodplain
Figure C:	100-Year Floodplain and Aerial Image
Figure D:	100-Year Floodplain, Wetlands, and Land Use Plan
Figure E:	Census Tracts within the Service Area
Figure F:	Sensitive Areas, Land Use Plan and Projected Development
Figure G:	WOC Pump Stations and Served Areas
Figure H:	WOC Area Sewer Infrastructure
Figure I:	West Ocean City Sanitary Area
Figure J:	Mystic Harbour Planning Area and Proposed Outfalls
Figure K:	Disposal Options and Land Use Plan
Figure L:	Mystic Harbour Sewer Planning Area Existing Mystic Capacity - 1000 EDUs
Figure M:	Mystic Harbour Sewer Planning Area Proposed Mystic Capacity 666 EDUs

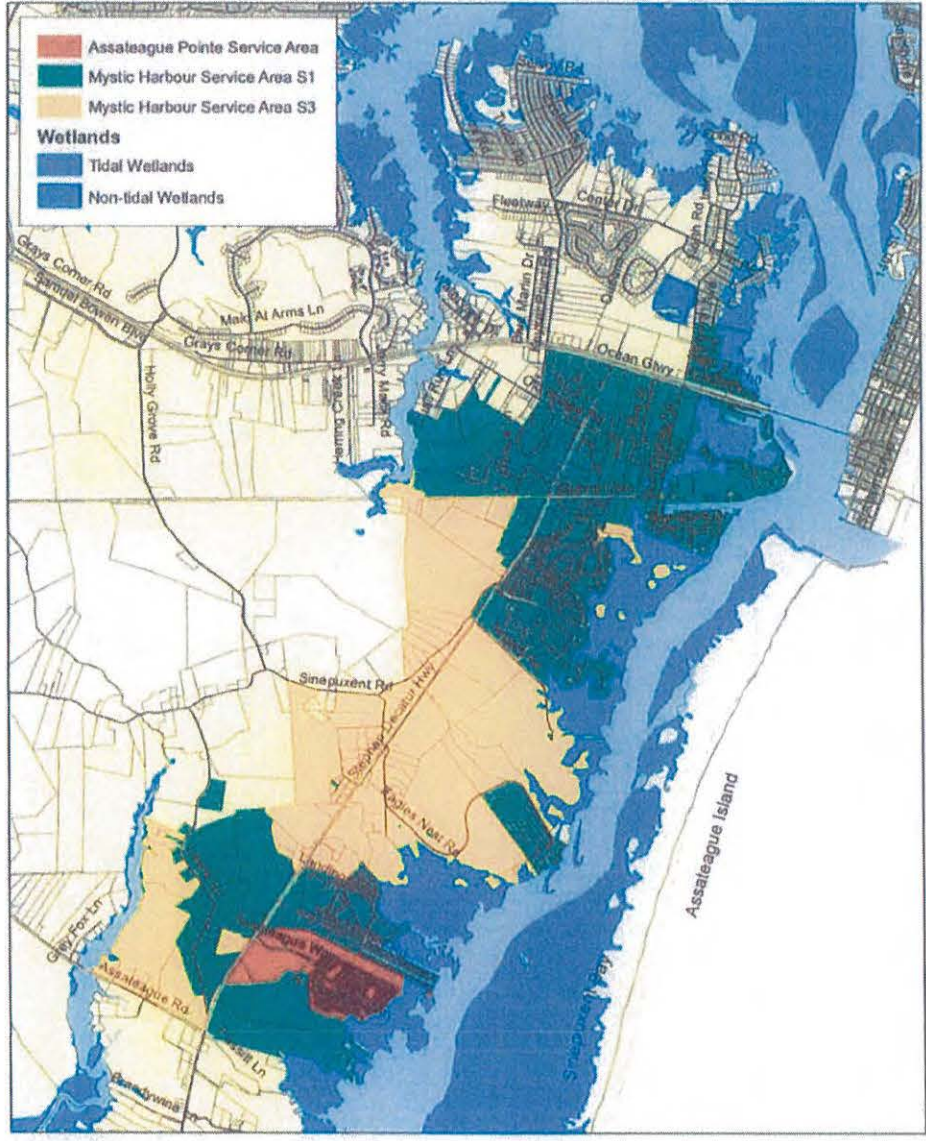
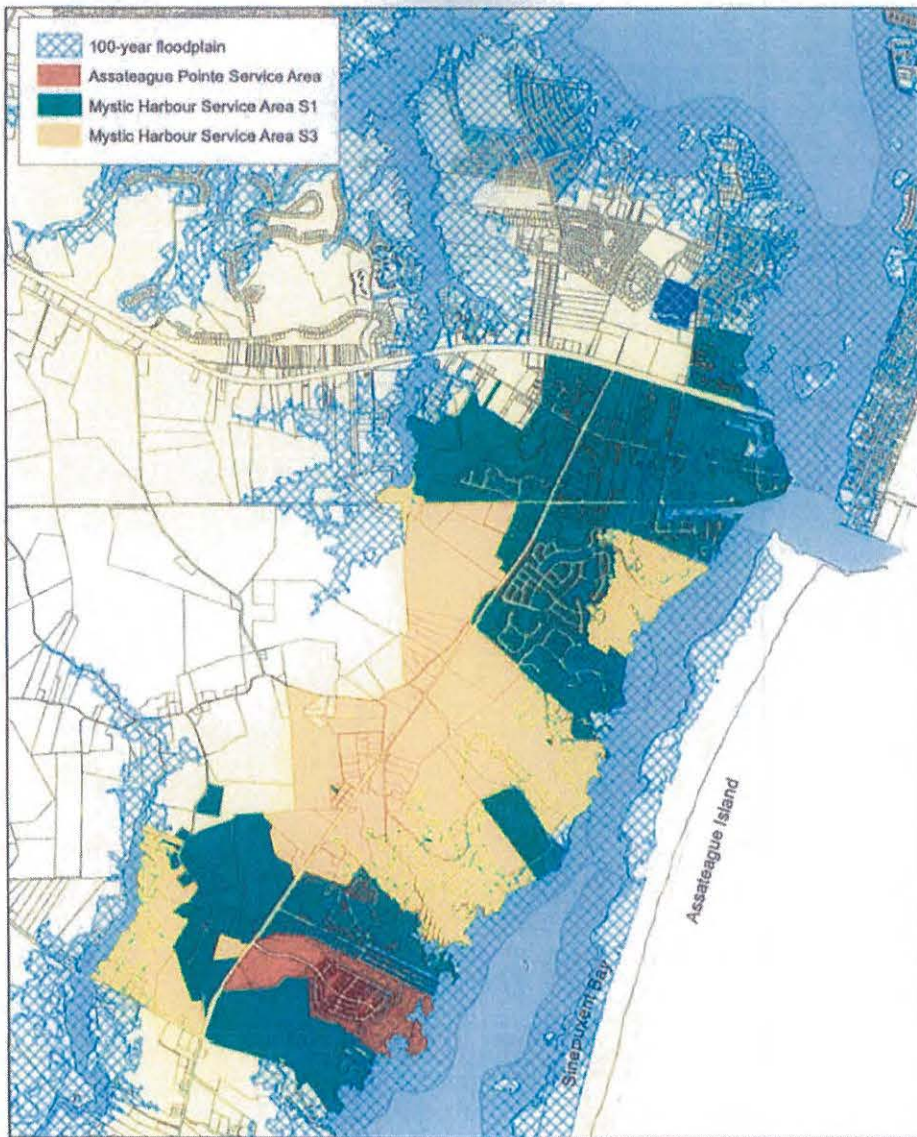


Figure A. Tidal and Non-Tidal Wetlands
 Mystic Harbour Sewer Planning Area
 Case No.2014-2
 Prepared by the Worcester County
 Department of Environmental Programs
 Data source: MD DNR
 August 2015



0.7 0.35 0 0.7 Miles

Figure B. 100-Year Floodplain

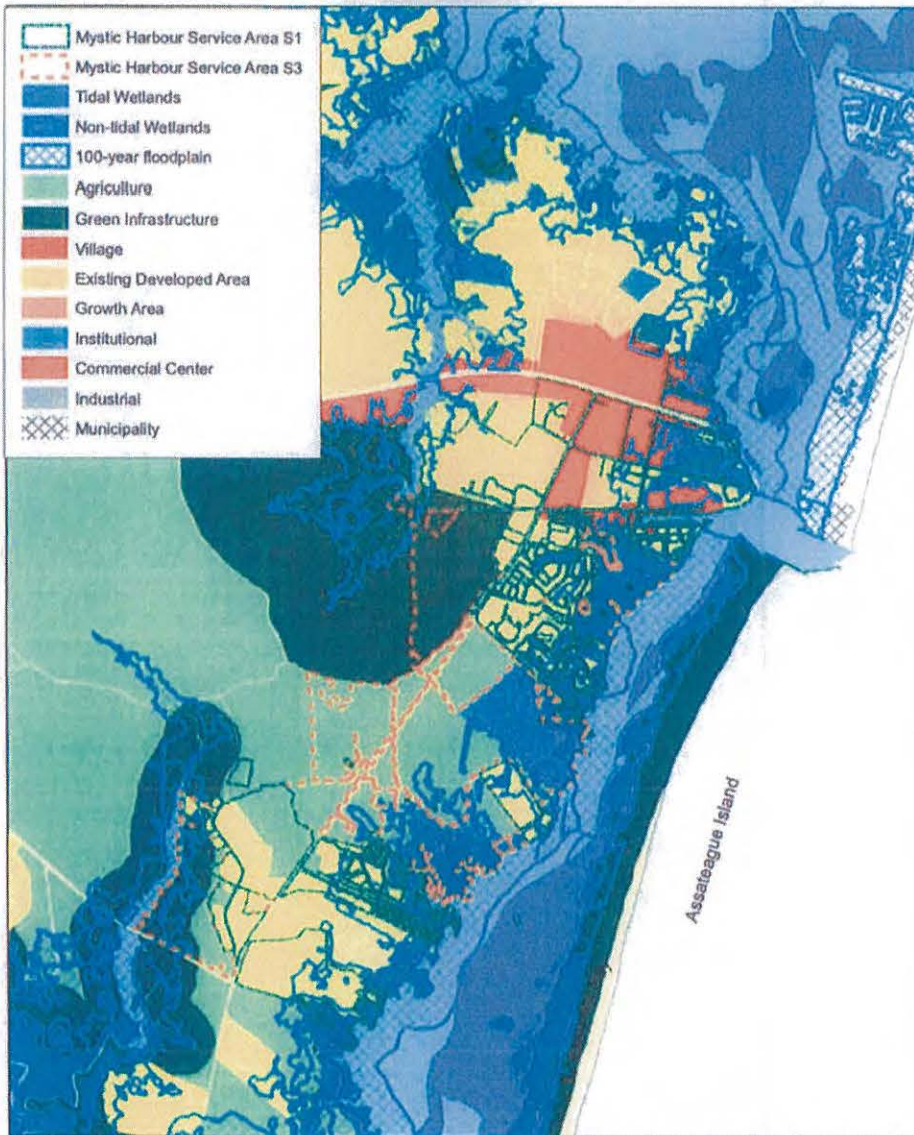
Mystic Harbour Sewer Planning Area
 Case No.2014-2
 Prepared by the Worcester County
 Department of Environmental Programs
 Data source: FEMA
 August 2015



0.7 0.35 0 0.7 Miles

Figure C. 100-Year Floodplain and Aerial Image

Mystic Harbour Sewer Planning Area
Case No. 2014-2
Prepared by the Worcester County
Department of Environmental Programs
Data source: FEMA
August 2015



0.75 0.375 0 0.75 Miles

Figure D. 100-Year Floodplain, Wetlands and 2006 Land Use Plan

Mystic Harbour Sewer Planning Area
 Case No.2014-2
 Prepared by the Worcester County
 Department of Environmental Programs
 Data source: FEMA, MD DNR, Worcester County
 August 2015

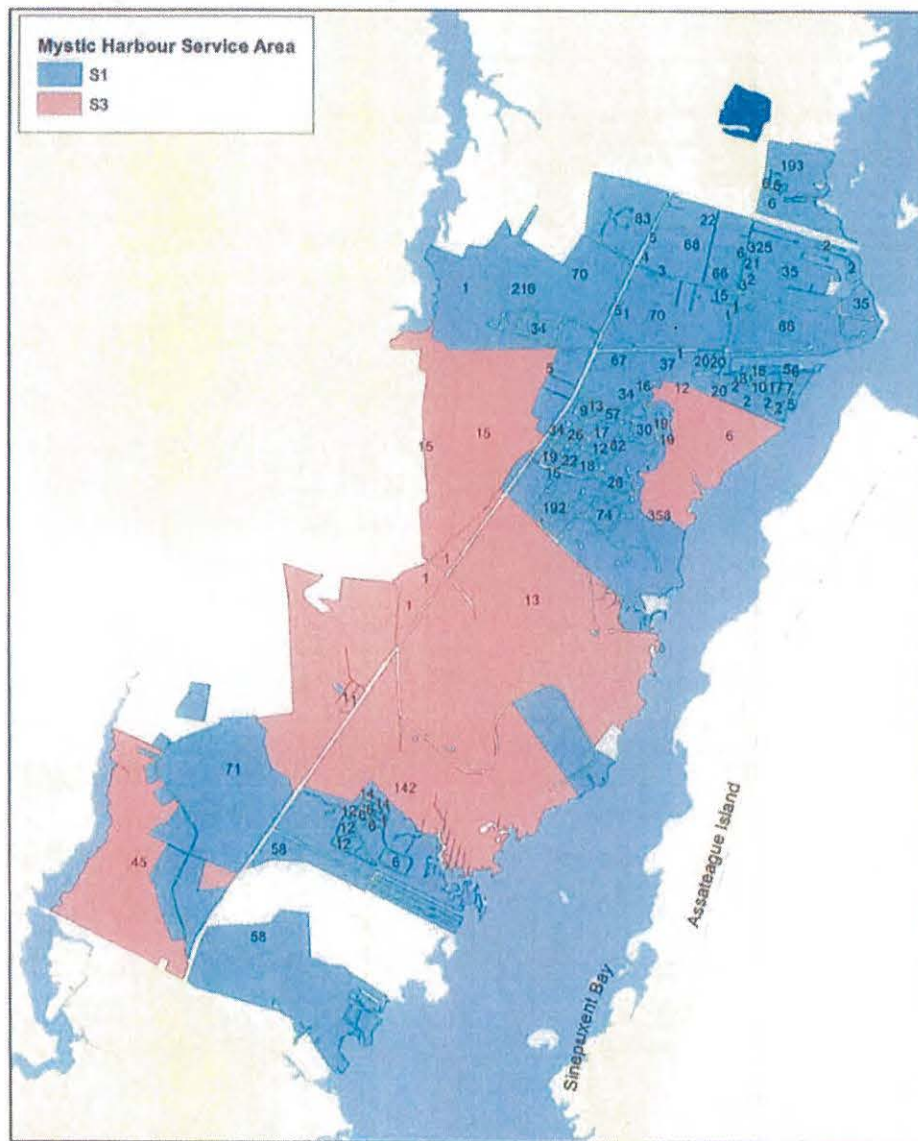


Figure E. Census Tracts within the Service Area
 Mystic Harbour Sewer Planning Area
 Case No.2014-2

Prepared by the Worcester County
 Department of Environmental Programs
 Data source: 2010 Census

Removed by Request from MDE

**Figure F. Sensitive Areas, 2006 Land Use Plan
and Projected Development**
Mystic Harbour Sewer Planning Area
Case No.2014-2
Prepared by the Worcester County
Department of Environmental Programs
Data source: FEMA, MD DNR, Worcester County
August 2015

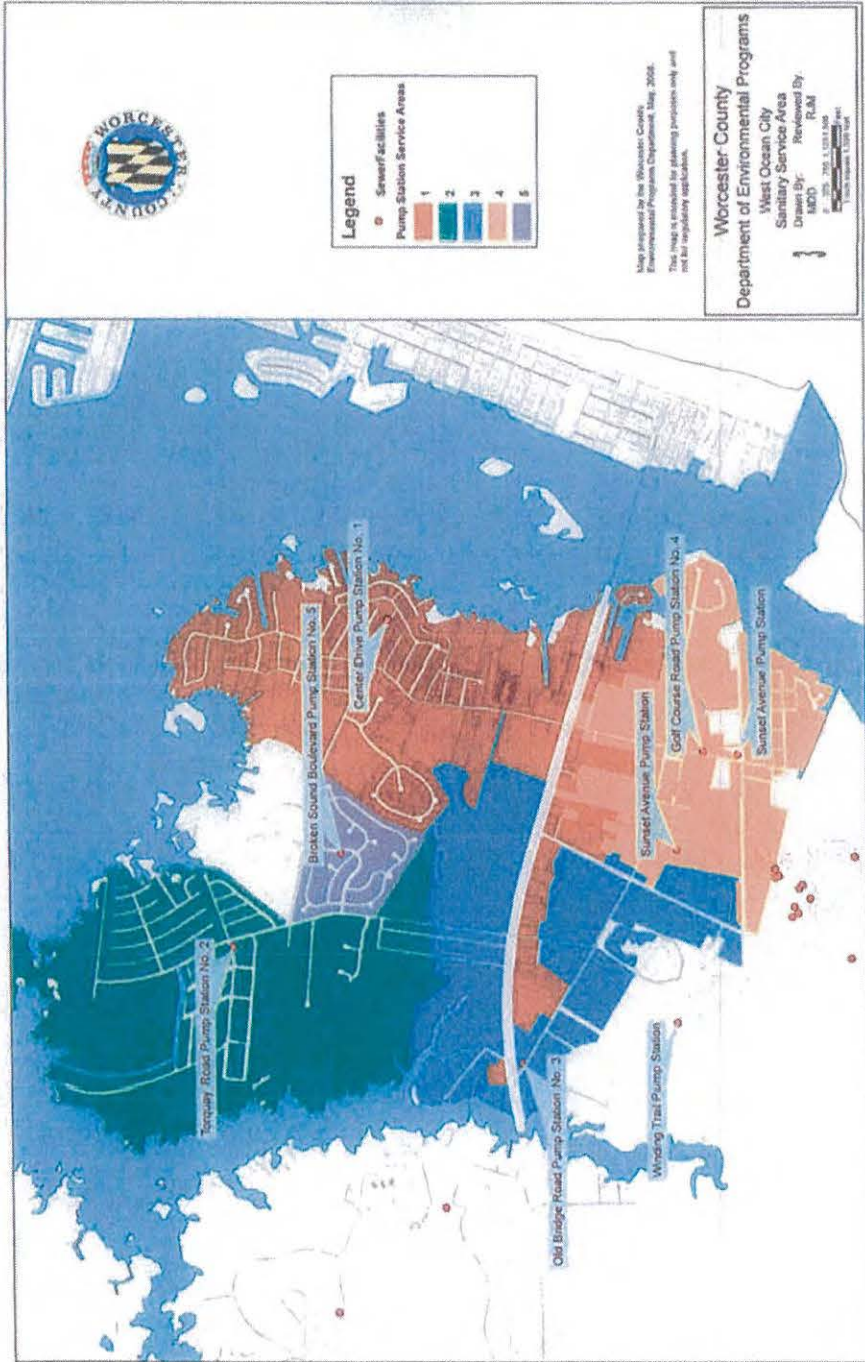
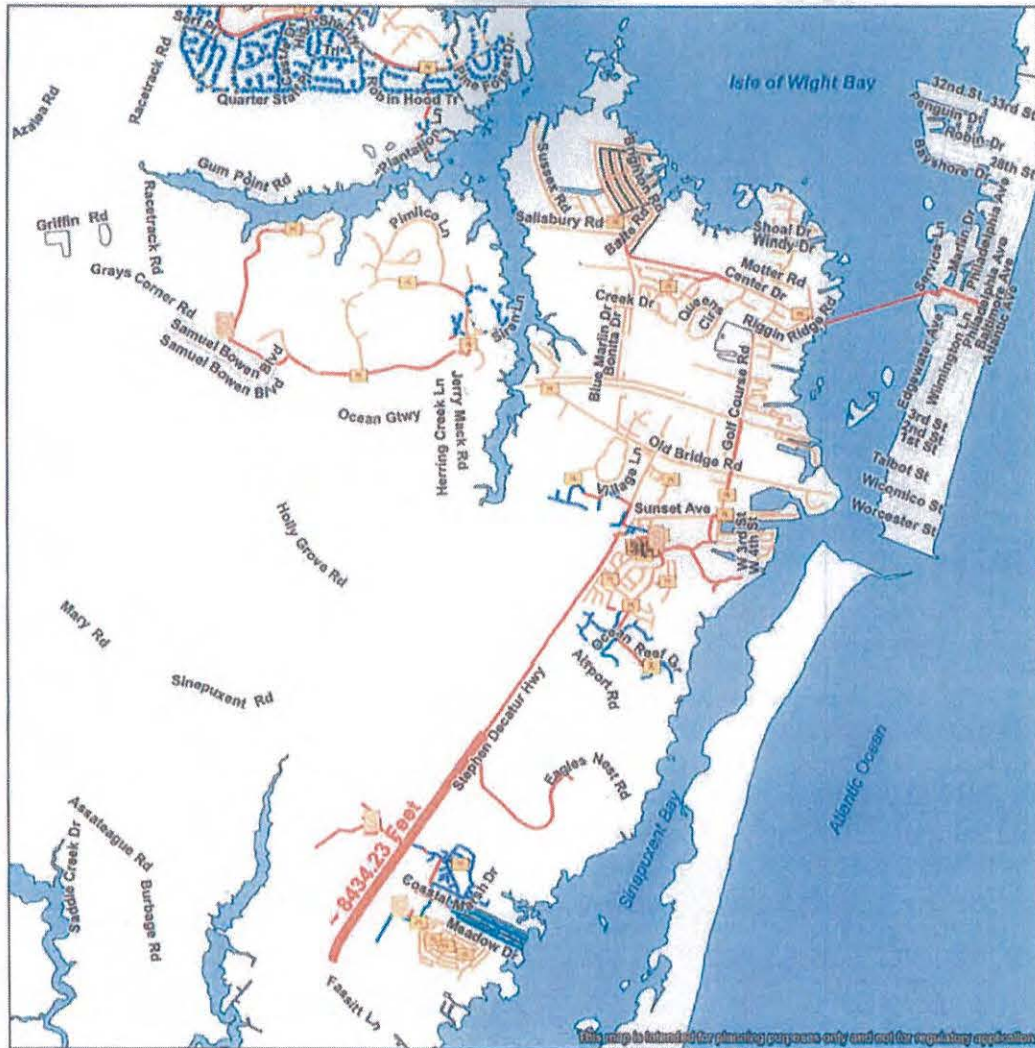



Figure G





**Worcester County
Maryland**

**West Ocean City Area
Sewer Infrastructure**

Proposed Pipelines

- Proposed Frontier Town Sewer Pipeline

Sewer Facilities

- Wastewater Treatment Plant
- Pump Station

Sewer Lines

- Force Main
- Gravity Main
- Low Pressure
- Sewer Main
- Vacuum Main

**Department of Development
Review and Permitting
Technical Services Division**

N Drawn By: MDD Reviewed By: KLH

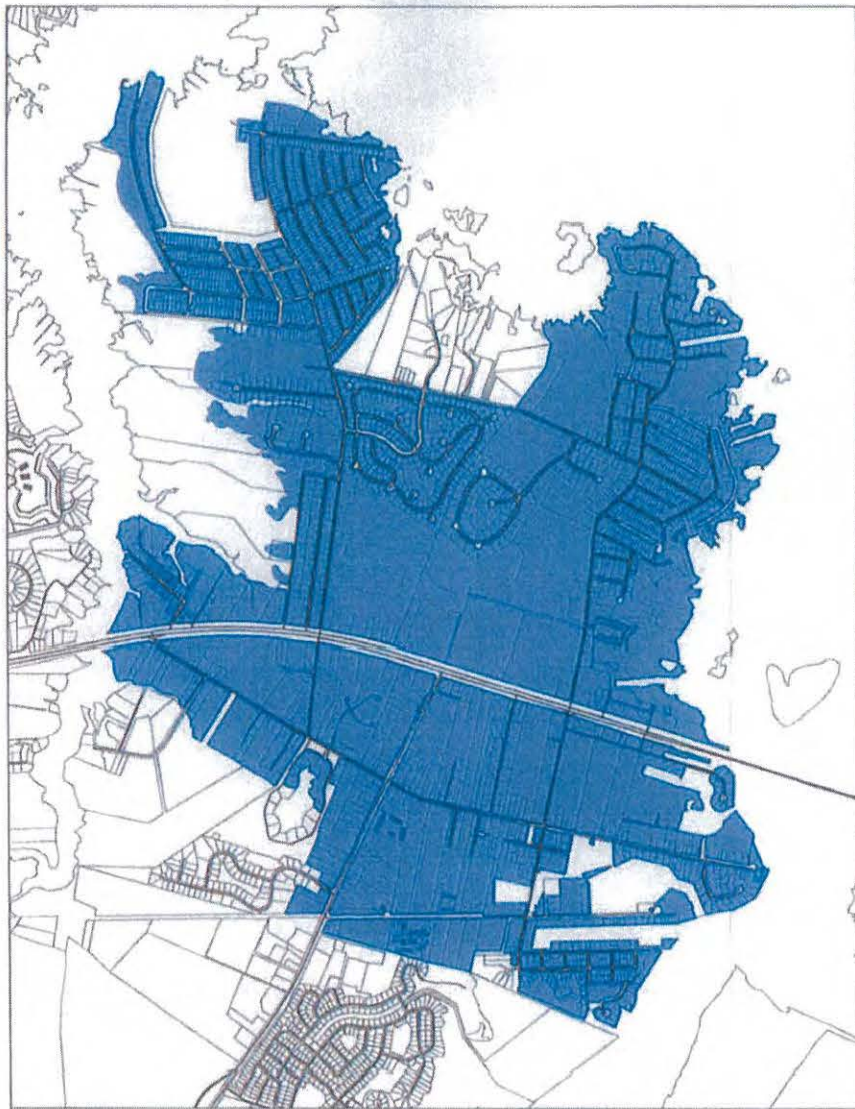
0 4,000


1 inch = 4,000 feet

Map prepared on September 02, 2015.

MDD GIS Data/Sanitary Services/feet GIS/DC_SewerInfrastructure(38-63-13).mxd

Figure H



Legend
 WOC Sewer

Worcester County
 Department of Environmental Programs
 West Ocean City
 Sewer Service Area
 Drawn By: MDD Reviewed By: RJM
 0 1,000
 Feet
 1 inch equals 1,250 feet

Map prepared by the Worcester County Environmental Programs Department, July, 2008.
 This map is intended for planning purposes only and not for regulatory application.

Figure 1

**Proposed Mystic Harbour Effluent Disposal Project:
Disposal Options and 2006 Land Use Plan, Worcester County, MD**

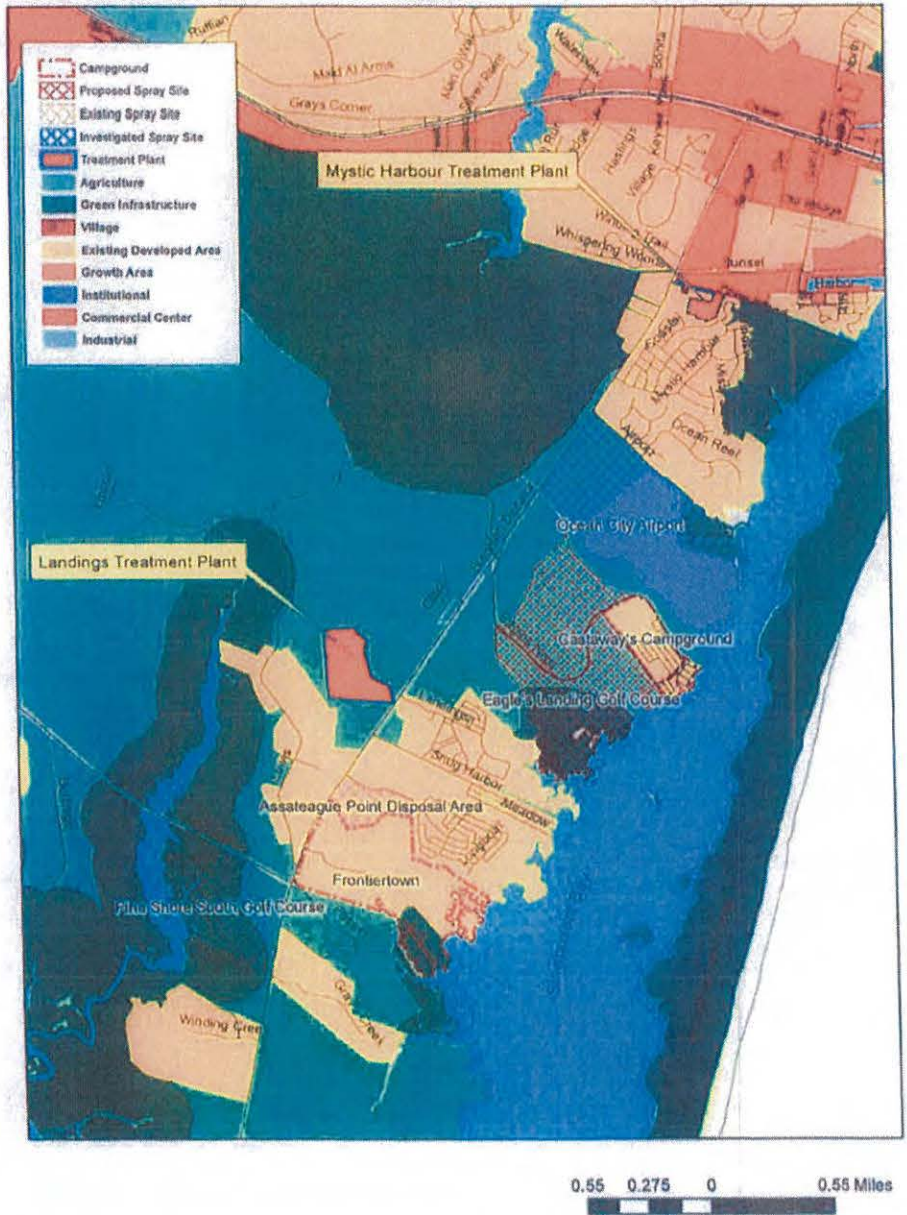
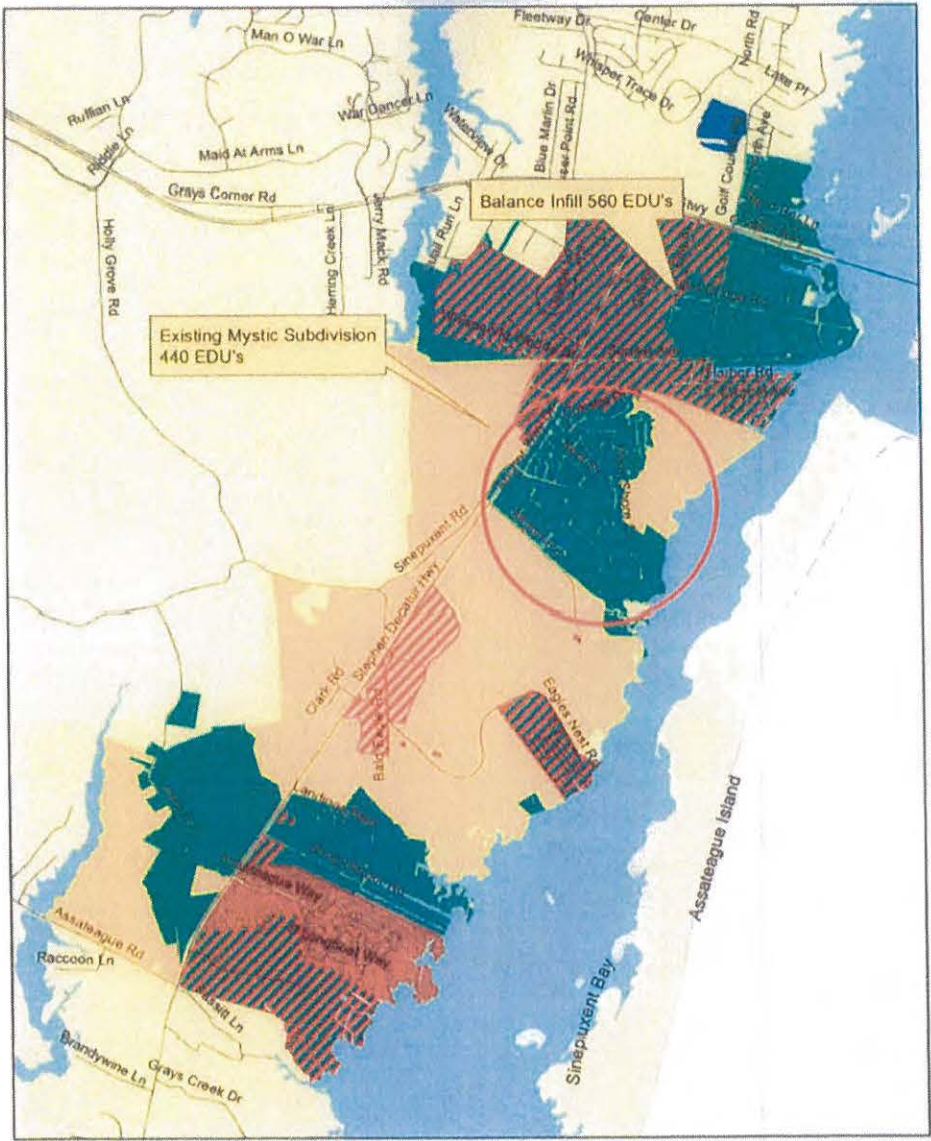


Figure K



0.6 0.3 0 0.6 Miles

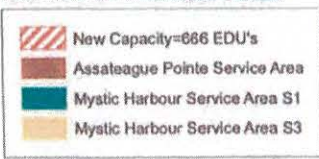
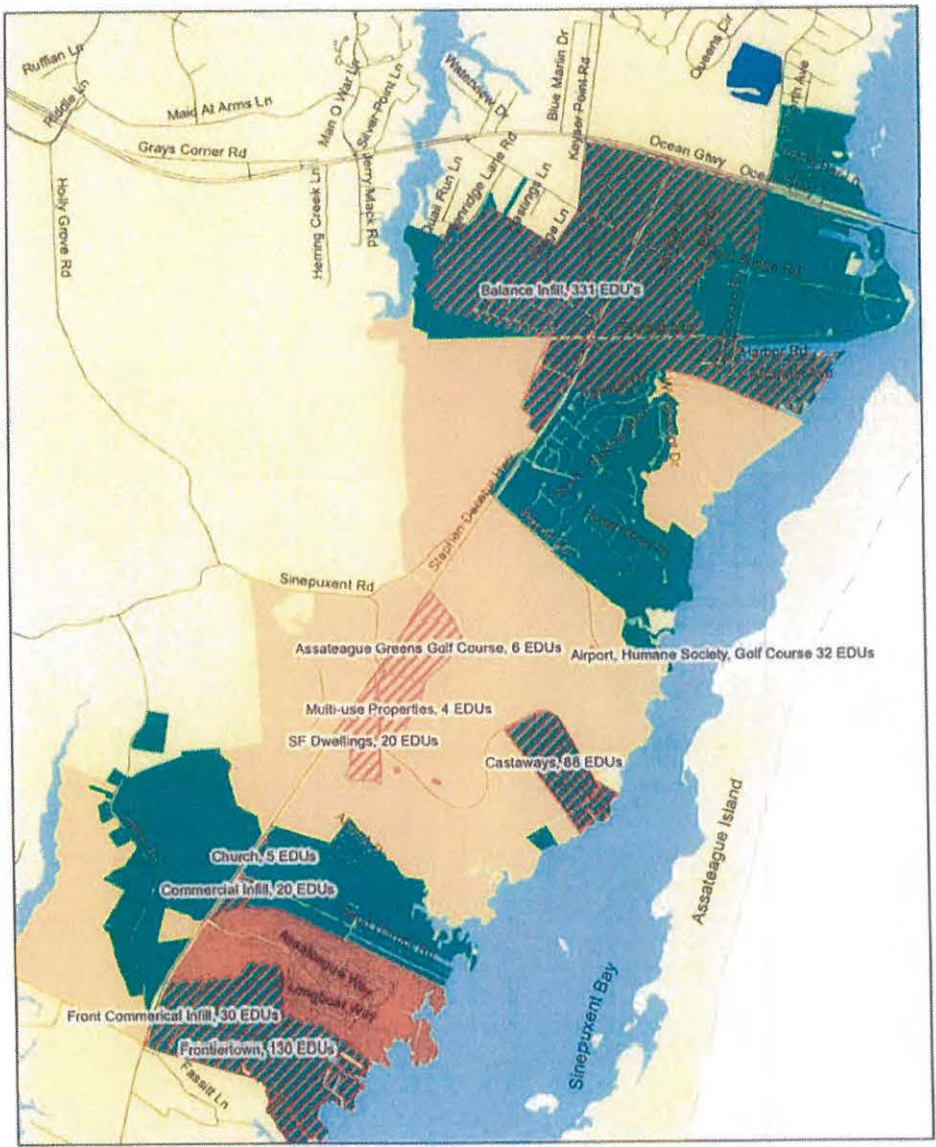


Figure L
 Mystic Harbour Sewer Planning Area
 Existing Mystic Capacity--1,000 EDUs
 Prepared by the Worcester County
 Department of Environmental Programs
 June 2015



0.55 0.275 0 0.55 Miles

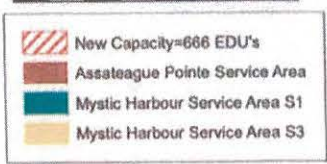


Figure M
 Mystic Harbour Sewer Planning Area
 Proposed Mystic Capacity--666 EDU's
 Prepared by the Worcester County
 Department of Environmental Programs
 June 2015

Appendices

- Appendix A:** Worcester County Floodplain Regulations
- Appendix B:** Worcester County Critical Area Regulations
- Appendix C:** State of Maryland Floodplain and Critical Area Regulations
- Appendix D:** Golf Course Irrigation Project Environmental Report Submitted to USDA
- Appendix E:** Pump Station Capacity Information
- Appendix F:** Worcester County – Town Agreement to Accept Flow from WOC
- Appendix G:** Worcester County – Town Agreement to Accept Flow from Mystic WWTP
- Appendix H:** Redirection Flow Tables – Mystic to WOC – 2015 to 2035

Appendix A

**Worcester County
Floodplain Regulations**

Title BR2. Construction Regulations

SUBTITLE III. Floodplain Management

§ BR 2-301. Purpose and general provisions.

(a)

Short title. This Subtitle shall hereinafter be referred to as the "Worcester County Floodplain Management Law."

(b)

Purpose and authority. The purposes of this Subtitle are to protect human life and health, to minimize property damage, to encourage appropriate construction practices to minimize future damage, to protect individuals from unwittingly buying land subject to flood hazards and to protect water supply, sanitary sewage disposal and natural drainage. The prevention of unwise development in areas subject to flooding will reduce financial burdens to the community and the state and will prevent future displacement and suffering of its residents. This protection is achieved through the review of all activities proposed within identified floodplains and by the issuance of permits for those activities that comply with the objectives of this Subtitle. Floodplains are an important asset to the community. They perform vital natural functions such as temporary storage of floodwaters, moderation of peak flood flows, maintenance of water quality, groundwater recharge, prevention of erosion, habitat for diverse natural wildlife populations, recreational opportunities and aesthetic quality. These functions are best served if floodplains are kept in their natural state. Wherever possible, the natural characteristics of floodplains and their associated wetlands and water bodies should be preserved and enhanced. This Subtitle provides a unified, comprehensive approach to floodplain management which addresses these natural floodplain functions and the federal and state programs concerned with floodplain management. These programs are the National Flood Insurance Program (44 CFR 59 - 79); the state's Waterway Construction Permit Program for nontidal floodplains; the state's Tidal and Nontidal Wetlands Permit Programs; the United States Army Corps of Engineers Section 10 and 404 Permit Programs; and the state's Coastal Zone Management Program. Decisions to alter floodplains, especially floodways and stream channels, should be the result of careful planning processes which evaluate resource conditions and human needs.

(c)

Abrogation and greater restrictions. This Subtitle supersedes any other local law currently in effect in flood-prone areas. However, any other law shall remain in full force and effect to the extent that its provisions are more restrictive.

(d)

Applicability. Any person or entity proposing to do any development within the floodplain zone regulated by this Subtitle must first obtain a permit for that development from the local permitting agency and must comply with all provisions of this Subtitle.

(e)

Partial invalidity and severability. If any section, subsection, paragraph, sentence, clause or phrase of this Subtitle should be declared invalid for any reason whatsoever, such decision shall not affect the remaining portions of this Subtitle, which shall remain in full force and effect, and for this purpose, the provisions of this Subtitle are hereby declared to be severable.

(f)

Disclaimer of liability. The degree of flood protection provided by this Subtitle is considered reasonable for regulatory purposes and is based on engineering experience and scientific methods of study. Floods of greater magnitude may occur or flood heights may be increased by man-made or natural causes. This Subtitle does not imply that flooding will not occur outside of the delineated floodplain zone nor that permitted development of land uses within the floodplain will be free of flooding and associated flood damage. This Subtitle does not create liability on the part of the county or any officer or employee thereof for any damage which may result from reliance on this Subtitle, and the granting of a permit or approval is not a representation, guaranty or warranty of any kind and shall create no liability upon the county, its officials or employees.

THE ENTIRE TEXT CAN BE SUBMITTED, IF REQUIRED

Appendix B

Worcester County Critical Area Regulations

Subtitle NR3:I: Atlantic Coastal Bays Critical Area

§ NR 3-101. Intent; purpose; findings; severability.

(a)

Intent. In 2002 the Maryland General Assembly passed the Atlantic Coastal Bays Protection Act for the purpose of preserving, protecting, and improving the water quality and natural habitats of the Atlantic Coastal Bays and their tributaries. The Legislature has determined that the Atlantic Coastal Bays require especially sensitive consideration with regard to development. It is the intent of the County Commissioners to establish a local program to implement the requirements of the Act.

(b)

Purpose. It is the purpose of the County Commissioners in enacting this Subtitle:

(1)

To establish a Resource Protection Program for the Atlantic coastal bays and their tributaries by fostering more sensitive development activity for certain shoreline areas so as to minimize damage to water quality and natural habitats;

(2)

To implement the Resource Protection Program; and

(3)

To authorize, ordain and impose a critical area protection program to provide for reasonable restrictions, reasonably enforced on properties in the Atlantic Coastal Bays Critical Area.

(c)

Findings. The County Commissioners find and declare that:

(1)

The Atlantic coastal bays and their tributaries are natural resources of great significance to the County;

(2)

The shoreline and adjacent lands constitute a valuable, fragile, and sensitive part of this estuarine system, where human activity can have a particularly immediate and adverse impact on water quality and natural habitats;

(3)

The capacity of these shoreline and adjacent lands to withstand continuing demands without further degradation to water quality and natural habitats is limited;

(4)

Studies have documented that the quality and productivity of the waters of the Atlantic coastal bays and their tributaries have declined due to the cumulative effects of human activity that have caused increased levels of pollutants, nutrients, and toxins in the bay systems and declines in more protective land uses such as forestland and agricultural land in the watershed.

(5)

Those portions of the Atlantic coastal bays and their tributaries within Maryland are particularly stressed by the continuing population growth and development activity concentrated in the Ocean City, West Ocean City, Ocean Pines, St. Martins Neck, South Point, and Maryland Route 611 Corridor areas;

(6)

The quality of life for the citizens of Worcester County would be enhanced through the restoration of the quality and productivity of the waters of the Atlantic coastal bays and their tributaries;

(7)

The preservation of the Atlantic coastal bays and their tributaries is dependent, in part, on minimizing further adverse impacts to the water quality and natural habitats of the shoreline and adjacent lands;

(8)

The cumulative impact of current development practices is inimical to these purposes;

(9)

It is in the County's interest for the benefit of current and future generations to foster more sensitive development activity in a consistent and uniform manner along shoreline areas of the Atlantic coastal bays and their tributaries so as to minimize damage to water quality and natural habitats; and

(10)

It is the public policy of the County Commissioners of Worcester County that, where possible, a setback of one hundred feet from the mean high water line of tidal waters, the edge of the bank of tributary streams, and the landward extent of tidal wetlands be provided on all lots and for all structures and other improvements created or erected after the effective date of this Subtitle. To that end it is hereby declared that any private restriction or covenant heretofore or hereinafter enacted which has the effect of precluding, impeding or encumbering the ability of the owner of a lot to maximize a yard setback on the waterfront and/or wetlands side of a lot in order to achieve the setback of one hundred feet or as much thereof that may be reasonable is hereby declared void as against public policy, provided zoning minimums are met.

(11)

Because of the limited distance between the headwaters of the watershed of the Atlantic coastal bays and the bays themselves, upstream activities have a direct impact on the quality and function of the water bodies of the Atlantic Coastal Bays Critical Area. Therefore, additional protections of certain areas beyond the limits of the Atlantic Coastal Bays Critical Area are necessary.

(12)

Existing state regulations do not require mitigation for impacts to non-tidal wetlands and their associated buffers under all circumstances. Therefore, the County Commissioners find it advisable to provide for additional protection for impacts to non-tidal wetlands and their buffers beyond the limits of the Atlantic Coastal Bays Critical Area but within the watershed of that Critical Area.

(d)

Goals. The goals of the Atlantic Coastal Bays Critical Area Law are to accomplish the following:

(1)

Minimize adverse impacts on water quality that result from pollutants that are discharged from structures or runoff from surrounding lands;

(2)

Conserve fish, wildlife, and plant habitat; and

(3)

Establish land use policies for development in the Atlantic Coastal Bays Critical Area which accommodate growth as well as address the environmental impacts that the number, movement, and activities of people may have on the area.

(e)

Citing. This Subtitle may be cited as the "Worcester County Atlantic Coastal Bays Critical Area Law."

(f)

Territory affected. Within Worcester County, the Atlantic Coastal Bays Critical Area shall mean all lands and waters defined in § 8-1807 of the Natural Resources Article, Annotated Code of Maryland, as from time to time amended. They include:

(1)

All waters of and lands under the Atlantic coastal bays and their tributaries to the head of tide as indicated by the more restrictive of either the State Wetlands Maps or the 1989 Maryland Department of Natural Resources Wetland Maps and all state and private wetlands designated under Title 16 of the Environment Article, Annotated Code of Maryland, as from time to time amended, and including all land and water areas within one thousand feet beyond the landward boundaries of state or private wetlands and the heads of tides designated under Title 16 of the Environment Article, Annotated Code of Maryland, as from time to time amended. The boundaries of the Atlantic Coastal Bays Critical Area and the limits of each of the land classification designations will be as shown on maps adopted by resolution of the County Commissioners after a duly advertised public hearing in accordance with the provisions of § ZS 1-114 of the Worcester County Zoning Ordinance and approved by the Critical Area Commission for the Chesapeake and Atlantic Coastal Bays.

[Amended 5-20-2008 by Bill No. 08-3]

(2)

Non-tidal wetlands and their buffers beyond the limits established in Subsection (f)(1) hereof only as provided for in § NR 3-127 of this Subtitle.

(g)

Applicability. Except as provided herein, the requirements of this Subtitle shall not apply to:

(1)

The initial development of a planned unit development or residential planned community for which the following were issued prior to June 1, 2002, and which is subdivided into recorded and legally buildable lots:

A.

A valid Step III approval in accordance with the provisions of the Zoning and Subdivision Control Article and at least three of the following state permits:

1.

Groundwater or surface water discharge permit.

2.

Non-tidal wetlands permit.

3.

Water quality certification permit.

4.

Water appropriation permit.

B.

Any planned unit development as described in Subsection (g)(1)A above which includes an inland marina built after April 8, 2002, shall meet the following requirements, except for those dwelling units immediately adjacent to tidal waters of the inland marina:

1.

At least eighty-five percent of the dwelling units in the planned unit development shall comply with the one-hundred-foot buffer requirements contained herein; and

2.

No dwelling unit may have a buffer of less than fifty feet from existing or proposed tidal waters, tidal wetlands or tributary streams.

(2)

A fairground or racetrack in an A-1 Agricultural District as defined by the Zoning and Subdivision Control Article which received special exception approval for that use prior to January 1, 2002, only for the purpose of making improvements consistent with said special exception.

(3)

The initial development of a Young Men's Christian Association (YMCA) facility located on property identified on the Atlantic Coastal Bays Critical Area Maps adopted pursuant to § NR 3-103(b) hereof, provided that prior to July 1, 2003:

A.

The property described in Subsection (g)(3) above has been acquired by the YMCA; and

B.

Three of the four following state permits has been issued to the YMCA:

1.

Groundwater or surface water discharge permit.

2.

Non-tidal wetlands permit.

3.

Water quality certification permit.

4.

Water appropriation permit.

(h)

Applicability to pending approvals. The provisions of this Subtitle shall not apply to the granting of an approval or activity pursuant thereto for the initial development of land pursuant to any approval listed herein as limited herein and strictly subject to the time limitations hereof.

Approval	Date of Approval/Issuance (on or before)	Limitation
§ ZS 1-325 site plan approval	Effective date of this Subtitle	A building permit is issued and construction commenced as evidenced by the placement of the building foundation within six months of the date of adoption of this Subtitle. Growth allocation is deducted where necessary.
Building permit, zoning permit, shoreline construction application accepted for review	Effective date of this Subtitle	Notwithstanding the provisions of § ZS-1-115(g), if the work described in any permit as described in this subsection has not begun within six months of the effective date of this Subtitle, such permit shall expire. Thereafter no work shall begin until the applicant has filed for and received a new permit which may only be issued in conformance with the requirements of this Subtitle. For the purposes of this subsection, the placement and approval of the building foundation shall be considered "beginning of construction."
Special exception by the Board of Zoning Appeals	Effective date of this Subtitle	A building permit is issued and construction commenced as evidenced by the placement of the building foundation within twelve months of the date of adoption of this Subtitle. Growth allocation is deducted where necessary.

Approval	Date of Approval/Issuance (on or before)	Limitation
Preliminary plat	June 1, 2002	All provisions except density limitations shall apply. Plat recorded within one year from the date of adoption of this Subtitle. Growth allocation is deducted where necessary.

(i) Underlying zoning. This subtitle is supplemental and is applicable in addition to underlying zoning and land use provisions of this Code and other applicable land use laws and regulations. Where such provisions are in conflict with the provisions of this Subtitle, the stricter provisions shall prevail, provided, however, that the minimum requirements of this Subtitle must always be met even when a stricter standard is applicable.

(i) Severability. Should any section or provision of this Subtitle be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the Subtitle as a whole or any part thereof other than the part so declared to be unconstitutional or invalid.

ENTIRE TEXT CAN BE SUBMITTED, IF REQUIRED

Appendix C

State of Maryland Floodplain and Critical Area Regulations

Maryland – Critical Area Regulations

In 1984, the Maryland General Assembly passed the Chesapeake Bay Critical Area Protection Act. This legislation is codified in Subtitle 18 of the Natural Resources Article, Title 8, of the Annotated Code of Maryland. The Law includes general information about Maryland's Critical Area Program, the Critical Area Commission, and the various elements that must be included in each local Critical Area program. Because the Critical Area Law on private land is primarily implemented and enforced by County and municipal governments, local programs must be comprehensive and meet certain minimum standards. The minimum standards for local Critical Area programs, entitled "Criteria for Local Critical Area Program Development" are found in Title 27, Subtitle .01 of the Code of Maryland Regulations (COMAR).

Within this subtitle, there are chapters addressing development activities, water-dependent facilities, shore erosion control, habitat protection, and other land use activities and decision-making processes that affect natural resources within the Critical Area. Subtitle .02 addresses development in the Critical Area that results from State and local agency programs. These regulations pertain to government-sponsored development activities or those that take place on land owned by the State or local governments. COMAR also includes provisions, in Subtitle .03, regarding notification to the Commission about certain projects that are authorized by local governments through their Critical Area review processes.

Like other State agencies, the Critical Area Commission has the authority to adopt its own regulations. Proposed regulations are first published in the Maryland Register, and then adopted through the Administrative, Executive, and Legislative Review (AELR) process. The AELR Committee reviews the regulations with regard to legislative authority and consistency with the legislative intent of the Natural Resources Article. The Committee also reviews any reported fiscal impacts of the proposed regulations. Following the review process, the final regulations are published in the Maryland Register with an effective date and become part of COMAR

Regulations for Floodplain Development

Introduction

All Maryland counties and 92 municipalities participate in the National Flood Insurance Program (NFIP). This program makes flood insurance available to property owners in participating communities. In return, local governments must adopt ordinances to manage development within 100-year floodplains to prevent increased flooding and minimize future flood damage. Floodway and Flood Insurance Rate Maps (FIRM) published by the Federal Emergency Management Agency (FEMA) are used to delineate the 100-year floodplain and identify regulated land.

MDE cooperates with FEMA to provide assistance to all communities participating in the NFIP. A Model Floodplain Management Ordinance, meeting all state and federal regulations and containing recommendations for improved management of floodplains, has been adopted widely by communities participating in the NFIP.

Floodplain Functions

Floodplains perform important natural functions, including temporary storage of floodwaters, moderation of peak flows, maintenance of water quality, groundwater recharge, and prevention of erosion. Floodplains also provide habitat for wildlife, recreational opportunities, and aesthetic benefits. These characteristics of floodplains and associated wetlands should be preserved and enhanced.

Floodplain Zone

Maryland counties and towns may have one or more of the following floodplain zones:

- Nontidal floodplains consist of the floodway and floodway fringe along rivers, creeks, and streams. The floodway carries the higher velocity water, while the floodway fringe is subject to shallower flooding from lower velocity water. They are designed as "A" zones on the FIRM. Floodways usually are shown on special Floodway Maps.
- Tidal floodplains consist of areas subject to coastal or tidal flooding by high tides, hurricanes, tropical storms, and steady on-shore winds. Tidal floodplains are also designated as "A" zones on the FIRM.
- Coastal high hazard areas consist of coastal shorelines subject to high velocity wind and wave action in addition to tidal flooding. They are designated as "V" zones on the FIRM. Buildings in V zones must meet more stringent standards because of the forces they must withstand.

8-1-1-1-1-1

Permits

The NFIP requires counties and towns to issue permits for all development in the 100-year floodplain. Development is broadly defined to include any man-made change to land, including grading, filling, dredging, extraction, storage, subdivision of land, and the construction or improvement of structures. If state and federal permits are required, development may not begin until all necessary permits are issued. Proposed development must not increase flooding or create a dangerous situation during flooding, especially on another person's property. If a structure is involved, it must be constructed to minimize damage during flooding.

Avoidance and Minimization

The Model Ordinance requires that the local permitting official work with an applicant to avoid development in the floodplain wherever possible. If unavoidable, the effects of development must be minimized.

Flood Protection Setback

Flood damage may be minimized by requiring development to be set back 100 feet from the top of the banks of all FEMA mapped water courses and 50 feet from unmapped streams. Where the floodplain is narrower than the setback requirement, the setback ends at the floodplain boundary. The setback area is a

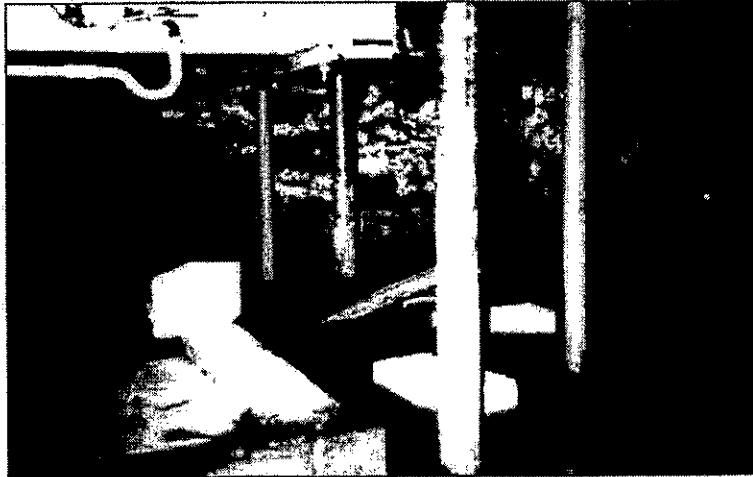
"no build" zone which preserves the natural functions of the floodplain. Certain exemptions are allowed and local officials may consider variances.

Elevation of Structures

Damage to new and substantially improved floodplain structures is minimized by elevating the lowest floor of occupied areas one foot above the level of the 100-year flood. Enclosed areas below this are strictly limited in use and are vented to allow flooding without significant damage. Minor additions in nontidal floodplains must also be elevated. This requirement applies to all electrical devices (heat pumps, furnaces, air conditioners, hot water heaters, etc.), plumbing devices (toilets, sinks, tubs, showers, etc.), and gas appliances. All structures must be firmly anchored to foundations to prevent flotation and lateral movement.

Additional freeboard elevation will help defer repair costs when flood waters exceed minimum structural elevation levels. **Freeboard** is an extra amount of elevation above the 100-year flood elevation added for an extra measure of protection. It helps accounts for uncertainties such as floods greater than the 100-year floor, errors in measurement, sea level rise, and subsidence, and it lends additional protection to structures.

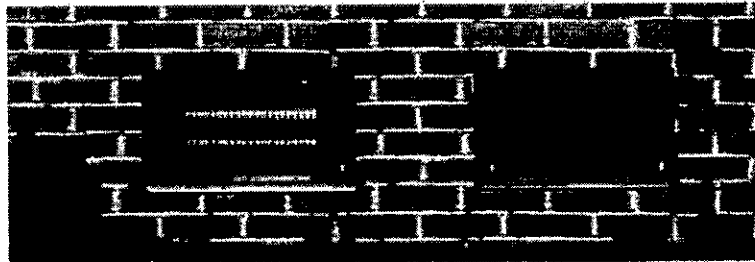
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This is an example of elevating utilities in the lower levels of homes in the floodplain.

Water Equalizing Vents

Enclosed areas below the level of the 100-year flood must be vented to allow water to move freely to equalize pressure on both sides of the wall. One square inch of vent opening is required for every square foot of area enclosed below flood level. The vents must be within one foot of grade. Areas below flood level can only be used for parking of vehicles and limited storage.



Lower levels of building structures need to be properly sealed or vented so that water can flow out as easily as it flowed in.

Elevation Certificates

To verify that a building has been properly elevated, counties and towns require the completion of an Elevation Certificate by a professional engineer or surveyor. After the lowest floor is in place, its elevation above sea level is determined by a survey. This form is part of the permit record and must be submitted before the building may be occupied legally.

Accessory Buildings

Small accessory buildings (garages and sheds) 300 square feet and under need not be fully elevated as long as they are anchored and have water equalizing vents and a Nonconversion Agreement is signed. Larger accessory buildings may be allowed without full elevation, provided certain conditions are met and a Declaration of Land Restriction is recorded to prevent future conversion to habitable space.

Floodways

Floodways should be reserved to carry deeper, high velocity waters during the 100-year flood. Ordinances do not allow new buildings or fill in the floodway. Any development that impedes floodwaters or causes any increase in water surface elevations during the 100-year flood is prohibited. Existing buildings can only be replaced or substantially improved by staying within the existing footprint. Minor additions must be elevated on pilings or columns.

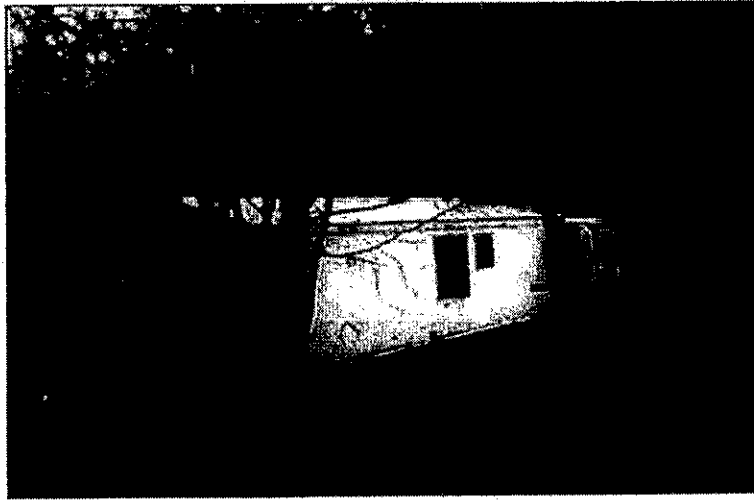
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Coastal and High Hazard Areas

Where additional flood hazards due to wind and wave action exist, buildings must be elevated on pilings or columns so that the bottom of the lowest supporting member of the lowest floor is at least one foot above the level of the 100-year flood. Areas below are kept open to allow free movement of water under the building, or can be equipped with breakaway walls designed to collapse without damage to the building's support system.

Manufactured Homes and Recreational Vehicles

New manufactured homes are not allowed in floodways or coastal high hazard areas. In other floodplain zones, manufactured homes have the same elevation requirements as other new construction. Foundation pilings or columns must be reinforced and the structure must be firmly anchored to prevent flotation or movement. Recreational vehicles are allowed on flood-prone sites without full elevation if licensed, highway ready, and in place for no more than 180 days.



Displaced trailer from floods in 1996.

State Permits

In addition to local permits, activities in the 100-year nontidal floodplain require State Waterway Construction Permits, and activities within 25 feet of or in nontidal wetlands require wetland permits from Water Management Administration (WMA)/Maryland Department of the Environment (410-537-3768). Activities that may change tidal wetlands require Tidal Wetlands Permits from WMA (410-537-3837). To get applications for any of the above State permits, call 1-800-876-0200. Enforcement assistance can be obtained by calling WMA at (410) 537-3510 or 1-800-922-8017.

Further information on the requirements for floodplain development or map information can be obtained from your local permit office or from the State Coordinating Office of the NFIP, Water Management Administration, Maryland Department of the Environment, (410) 537-3775.

Maryland Department of the Environment
1800 Washington Blvd.
Baltimore, MD 21230
(410) 537-3000
www.mde.state.md.us

Additional Maryland State Regulatory Programs

Water Quality Certification (Section 401 Clean Water Act)

Lead agency/organization: Maryland Department of the Environment (MDE) - Wetlands & Waterways Program

Quick summary:

Under Section 401, states have the authority to review any federal permit or license that may result in a discharge to wetlands and other waters under state jurisdiction, in order to ensure that the actions would be consistent with the state's water quality requirements. If a state denies certification, the federal permit or license cannot be issued. States can also qualify certifications by specifying conditions that must be met.

Summary:

The Department of the Environment is responsible for issuing water quality certification (WQC) for proposed discharges into jurisdictional wetlands and waters of the State of Maryland, pursuant to Section 401 of the Clean Water Act. The WQC certifies that a proposed Section 404 discharge will not violate the State's water quality standards which are contained at COMAR 26.08.02. The WQC must be issued for all US Army Corps of Engineers Section 404 permit actions and for Corps' planning and navigation projects that include a Section 404 discharge.

The Department manages and regulates the waters of the State to protect the following beneficial water uses:
Water contact recreation

Fish, other aquatic life, and wildlife

Shellfish harvesting

Public water supply

Agricultural water supply

Industrial water supply

The WQC helps to protect these uses by ensuring that a proposed discharge will not violate the State's water quality standards.

Generally, application for the WQC is part of the standard joint permit application. However, for proposed Section 404 activities that do not require a State permit, e.g. federal action in tidal areas, the State issues an individual WQC based upon a request from the federal agency.

Title:Tidal Wetlands Act & Program

Lead agency/organization: Maryland Department of the Environment (MDE)

Other organizations involved:State Board of Public Works

Summary:

In 1970, the Maryland General Assembly recognized that many wetlands had been lost or despoiled throughout the State by unregulated activities such as dredging, dumping and filling, and that remaining wetlands were in jeopardy. The assembly established the Tidal Wetlands Act, which restricts construction and development actions in tidal wetlands.

The enactment of the Wetlands Act established a comprehensive plan to restrict and regulate activities conducted in wetlands in order to preserve and protect them. The Act states that these unregulated activities will "affect adversely, if not eliminate entirely, the value of the wetlands as a source of nutrients to finfish, crustacea, and shellfish of significant economic value" and will "destroy the wetlands as a habitat for plants and animals of significant economic value and eliminate or substantially reduce marine commerce, recreation, and aesthetic enjoyment". The Act also declares: "It is the policy of the State, taking into account varying ecological, economic, developmental, recreational, and aesthetic values, to preserve the wetlands and prevent their despoliation and destruction."

The Act mandated the mapping of tidal wetlands and the creation of a regulatory program to protect the State's tidal wetland resources. Maryland developed 2,400 scale tidal wetland boundary maps (1" = 200') which delineate tidal wetlands boundaries and depict vegetation types. In addition, the resource was defined as either state or private tidal wetlands. State wetlands include all the open water and vegetated wetlands below mean high water, and are owned by the State of Maryland. Private wetlands include all tidal wetlands above the mean high water line and are in private ownership.

Tidal wetlands are managed to provide reasonable use while furnishing essential resource protection. Licenses, issued by the State's Board of Public Works based on recommendations from the Water Management Administration (WMA), are required for projects in State wetlands. The Board of Public Works is comprised of the Governor, the Comptroller of the Treasury, and the State Treasurer. Permits are issued directly by WMA for projects in private wetlands. A permit or license must be obtained before a person fills, dredges, or otherwise alters a tidal wetland. Typical projects include:

Shoreline protection projects including marsh creation, stone revetments, and bulkheads;
Piers;
Dredging; and
Stormwater Discharges.

Construction of the following projects in tidal wetland areas require authorization from WMA: filling, dredging, bulkheads, revetments, boat ramps, jetties, cable crossings, storm drain systems, groins, breakwaters, vegetative stabilization, and similar structures. Applications are evaluated to insure that appropriate steps are taken to first avoid, then minimize impacts to tidal wetlands. Mitigation is required for unavoidable impacts, with the amount of mitigation based on resources impacted, type of mitigation proposed, and location of the mitigation. In-kind and on-site mitigation is preferred and required wherever appropriate site conditions exist.

Related laws/programs: Tidal Wetlands Act & Program, Nontidal Wetlands Act & Program

Contacts:

Tidal Wetlands Division
1800 Washington Blvd.
Baltimore, MD 21230
Phone: (410) 537-8075
Fax (410) 537-8047

Title: Stormwater Management

Lead agency/organization: Maryland Department of the Environment (MDE)

Summary:

In 1982, legislation was passed to manage stormwater runoff to reduce stream channel erosion, pollution, and flooding to avoid adverse impact on land and water resources. Proposed changes to regulations were begun in 1993 and continue through 1999. Regulations are expected to be finalized in July 1999. A new stormwater design manual was released for review in 1998 and should be finalized in 1999.

Any land developed for residential, commercial, industrial, or institutional use requires an approved plan.

Threshold

of disturbance is 5000 square feet.

State standards with mandatory local government implementation. Local ordinances under revised regulations shall

be final in July 2000.

Local programs are reviewed at least every three years

Discharges must be treated prior to discharge in water or wetlands. The Department promotes establishment of wetland plantings in conjunction with wet pond facilities. Some indirect protection of wetlands through requirements to maintain streams in pre-development conditions. Treatment is required for one year storm event.

Contacts:

Maryland Department of the Environment
Water Management Administration
Nonpoint Source Program
1800 Washington Blvd.
Baltimore, MD 21230
(410) 537-3543

Title: Sediment & Erosion Control Program and Law

Lead agency/organization: Maryland Department of the Environment (MDE), - Nonpoint Source Program

Other organizations involved: county governments

Quick summary:

The Sediment Control Law of 1970 requires that local governments adopt erosion and sediment control ordinances to control runoff from construction sites. State law exempts only agricultural land management practices and the construction of agricultural facilities (except in Calvert County), construction of single-family homes on lots more than two acres (provided that earth disturbances are less than 1/2 acre), and minor projects of limited volume and area from the requirement to obtain, implement, and maintain an approved erosion and sediment control plan.

Summary:

Current soil erosion and sediment control measures must meet state standards and specifications that were approved in 1984 (COMAR 26.17.01).

An approved erosion and sediment control plan is required for the following activities:

Land clearing, grading, or earth disturbance involving more than 100 cubic yards or 5,000 square feet of grading.

Exceptions: State and federal projects are exempt from local approval, agricultural projects, or single-family residence on lots of 2 acres or more provided the earth disturbance is less than 0.5 acres.

State standards with optional local government implementation

Plan approval is from soil conservation district

The State may delegate enforcement authority to local government. Failure to comply with the law may result in the issuance of "stop work" orders, and civil or criminal penalties.

Contacts:

Maryland Department of the Environment
Water Management Administration
Nonpoint Source Program
1800 Washington Blvd., Baltimore, MD 21230
(410) 537-3543

Title: Water Resources Development Act (33 U.S.C. Sec 2201-2330)

Lead agency/organization: U.S. Army Corps of Engineers (Corps)

Other organizations involved: U.S. Environmental Protection Agency (EPA), US Fish and Wildlife Service (FWS)

Quick summary:

The Water Resources Development Acts include numerous provisions that relate to wetlands protection, primarily in connection with water resources development projects.

Summary:

These omnibus measures authorized construction or study of hundreds of new water resources development projects, to be undertaken by the Corps of Engineers. In addition, these acts added new restrictions that specifically require wetlands protection. Provisions requiring protection of fish and wildlife habitat may result indirectly in wetlands protection. This act also authorized several environmental restoration projects, some with a goal of significant wetlands restoration.

Since 1986, the act has required that mitigation plans accompany all project proposals unless it can be shown that the project will have negligible effects on fish and wildlife. It also requires that mitigation be undertaken simultaneously with other project activities.

In 1990, the act was amended to require that the goal of the Corps' water resources development program be "no overall net loss" of wetlands. The act also requires the Corps to develop an action plan to achieve this goal and to identify any new authorities it needs to meet this goal. The action plan must be prepared in consultation with the US EPA, and the FWS.

The 1990 amendments also authorize the training and certification of wetlands delineators as well as a demonstration program to determine the feasibility of wetlands restoration, enhancement, and creation as a means of contributing to no net loss. Federal and state land-owning agencies and private parties may contribute land to the demonstration areas.

The act also establishes environmental protection as one of the primary missions of the Corps in water resources projects.

Contacts:

US Army Corps of Engineers
Baltimore District
PO Box 1715
Baltimore, MD 31203
Phone: (301) 962-3670

Title: Watershed Protection and Flood Prevention Act & Program (16 U.S.C. Sec. 1001-1009 (1985 & Supp. 1991))

Lead agency/organization: U.S. Department of Agriculture (USDA), - Natural Resources Conservation Service (NRCS)

Quick summary:

Technical and financial assistance is provided in cooperation with local sponsoring organizations, state and other public agencies, to voluntarily plan and install watershed-based projects on private lands.

Summary:

This Program works through local government sponsors and helps participants solve natural resource and related economic problems on a watershed basis. Eligible organizations include Native American tribes, state or local governments, soil or water conservation districts, flood prevention or control districts, nonprofit water users' associations, and similar organizations that can carry out and maintain improvement projects.

Projects include watershed protection, flood prevention, erosion and sediment control, water supply, water quality, fish and wildlife habitat enhancement, wetland creation and restoration, and public recreation in

watersheds of 250,000 or fewer acres. NRCS provides both technical and financial assistance. The 1990 Farm Bill (i.e., the Food, Agriculture, Conservation, and Trade Act of 1990) amended the watershed protection program to allow cost sharing (federal funding of 50 percent or more) for acquiring perpetual easements on wetlands or floodplains for conservation or flood prevention.

Contacts:

Natural Resources Conservation Service
339 Busch's Frontage Road, Suite 301
Annapolis, MD 21401

Appendix D

Golf Course Irrigation Project Environmental Report Submitted to USDA

WORCESTER COUNTY, MARYLAND

Environmental Report

Proposed Mystic Harbour Effluent Disposal

**Department of Environmental Programs and Department of Public Works,
Worcester County, Maryland
DRAFT, pending USDA Approval
September 10, 2015**

Executive Summary

Mystic Harbour Wastewater Treatment Plant (WWTP) serves the Mystic Harbour Water and Wastewater Sanitary Service Area in eastern Worcester County, Maryland, just to the west of Ocean City, Maryland. Recently the plant has been upgraded, allowing it to meet effluent limits and to expand service.

The plant discharges to shallow injection wells that are not reliable. Although the plant has a treatment capacity of 450,000 GPD, the current disposal capacity is 250,000 GPD. In order to take full advantage of the upgraded treatment plant, a new system for plant effluent disposal is needed. Eagle's Landing Golf Course, located south of the plant, is proposed for effluent disposal through spray irrigation. The proposed project includes reconstruction of the golf course irrigation system, purchase of an existing storage tank at the golf course, piping connections, replacing the pump in the pump house at the golf course, and potentially adding effluent pumping capacity at the WWTP.

Worcester County has consulted with federal and state agencies concerning this proposal's potential environmental impacts. Correspondence requesting comment was sent via the State Clearinghouse, and a summary letter dated August 22, 2014 from the State Clearinghouse is provided.

This Environmental Report (ER) describes the proposed action as well as design alternatives that were considered in the Preliminary Engineering Report dated April 2014 prepared by Worcester County Department of Public Works.

The analysis of environmental consequences resulted in the following findings:

1. The proposed project will have minimal indirect environmental impact because the upgraded WWTP and additional effluent capacity provided by this project, will serve additional existing commercial facilities only. Because the project will result in retirement of two septic systems and two larger on-site systems operating with less efficiency, the project will result in reduction of nutrient inputs to the surface and groundwater.
2. The minimal direct environmental impact will be mitigated by employing stormwater management and sediment and erosion control practices, and increasing forest cover, as required by law.

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1.0 Introduction

The Mystic Harbour Wastewater Treatment Plant is located on the east side of State Route 611, south of Sunset Drove and north of the Mystic Harbour community in northern Worcester County, Maryland. The treatment plant was constructed in the mid 1970's to serve the seasonal Mystic Harbour Community. The plant has been upgraded with improved treatment technology to serve existing infill lots and commercial uses to the north. Currently effluent is discharged to shallow injection wells. In order to take full advantage of the upgraded treatment plant, a new system for plant effluent disposal is needed. Eagle's Landing Golf Course, located south of the plant, is proposed for the purpose of spray irrigation for effluent disposal.

1.1 Project Description

The location of the treatment plant, the land proposed for effluent disposal (Eagle's Landing Golf Course) and all elements planned for purchase or construction under this grant application are shown in Figure 1 (Section 6. Exhibits).

The current service area includes commercial and residential properties north of the plant and the Mystic Harbour Community (Figure 2; Section 6. Exhibits). Proposed additions are the Castaway's Campground which is already within the approved service area, and Frontiertown Campground. (Please note that Assateague Point and the Landings are served by their own, well-functioning facilities, so are not part of the Mystic Harbour Service Area.) With the additional effluent capacity, three additional existing facilities within the service area but currently served by on-site septic systems are planned to be connected as well: Ocean City Airport, Eagle's Landing Golf Course, and the Humane Society.

Construction of the disposal system will include reconstruction of the golf course's current irrigation system and a golf course pump house, conversion of an existing effluent storage tank located at the Castaways Campground facility (365,000 gallon capacity), piping connections and adding effluent pumping capacity at the WWTP. Storage ponds at the golf course are planned to serve as back-up storage. These ponds may be re-shaped if needed (higher berms or additional excavation).

1.2 Purpose and Need

The Mystic Harbour Wastewater Treatment Plant will have a treatment capacity of 450,000 GPD once upgrades are completed. However, because the plant discharges effluent to injection wells, effluent disposal capacity remains limited to 250,000 GPD. Furthermore, the injection wells are not reliable. The wells need continual cleaning and replacing, and despite the additional of new wells, disposal capacity has not been increased. Construction of a disposal system able to handle this larger treatment capacity will allow the plant to function at its intended capacity. Furthermore, treatment and disposal at the two aforementioned campground facilities is no longer adequate. Disposal at Frontiertown is accomplished by dosing multiple, conventional, subsurface disposal fields which is not considered environmentally acceptable for facilities of this size within the Critical Area and in close proximity to Maryland's

Coastal Bays. The Castaways Campground system is unable to meet effluent standards and adequately dispose of their effluent. The system was initially approved as an upgrade but at loading rates higher than is typically allowed for newly permitted systems in Maryland. Ultimately the problems could only be overcome with a full-time, skilled operator on site. Maryland Department of the Environment ordered them to either correct the problems or connect to the Mystic Harbour Wastewater Treatment Plant.

Extension of sewer service to these existing facilities will reduce water quality impacts by eliminating potential sources of groundwater contamination. The proposed project will also result in higher energy efficiency, as the individual systems will be eliminated.

This Environmental Report serves as the compliance document for the National Environmental Policy Act (NEPA) and addresses the issue of alternatives to the proposed project and the project's direct and indirect environmental impacts. Please note that hereafter the proposed construction of effluent disposal facilities is referred to as "the project".

The project will have minimal environmental impact. The environmental impacts of this project are short term and associated with the project's construction period. The increased capacity that will result will permit extension of service to existing commercial parcels and uses. This upgrade in effluent capacity will not be opening up new land to commercial or other development.

2.0 Alternatives to the Proposed Action

2.1 No-Action Alternative

A no-action alternative will result in the Mystic Harbour Treatment Plant not operating at full upgraded capacity, and surrounding inadequate systems continuing to function poorly and contributing more pollutants to groundwater.

2.2 Ocean City Airport Alternative

The Ocean City Airport property has significant open land in runway buffers and along taxiways (250 acres) available for maximum potential treatment of 180,000 to 225,000 GPD of effluent. Proximity to the treatment plant makes this the lowest cost option at an estimated \$12.22 per gallon. Federal Aviation Administration (FAA) approval was unable to be obtained due to safety concerns (vector control) and disruption of airport operation during construction. Regional FAA regulations prohibit the use of bio-solids as a soil amendment and reclaimed water for irrigation as these uses attract wildlife that would create a safety risk to airport operations.

2.3 Pine Shore South Alternative

The closed Pine Shore South golf course has a total area of 97 acres available for potential treatment of effluent with a potential maximum disposal capacity of 204,000 GPD. The property was for sale at the time the project alternatives were being considered. An acceptable price was unable to be negotiated. The estimated cost of \$32.85 per gallon is higher because of the costs of land purchase and infrastructure.

2.4 Town of Berlin Alternative

Effluent could be piped to the recently completed spray field developed by the Town of Berlin for disposal. The disadvantage to this alternative is the high cost and the need for a long pipeline and disruptive construction, with an estimated cost of \$23.00 per gallon.

2.5 Recommended Alternative

The Ocean City Golf Course has 250 acres available to accept effluent disposal and potential disposal capacity of 180,000 to 225,000 GPD. Spray is already part of the golf course operation. Spraying treated effluent would reduce the need for groundwater withdrawal. When conditions don't allow effluent spray on the golf course, effluent will be diverted to the Ocean City WWTP per an agreement with Ocean City. This project is cost competitive with the other alternatives at a projected cost of \$16.00 per gallon.

3.0 Affected Environment/Environmental Consequences

3.1 Land Use

3.1.1 General Land Use

The project area is located in West Ocean City, east of Route 611, south of Sunset Avenue and north of Snug Harbor Road. The project area is near Sinepuxent Bay, a Maryland Coastal Bay. The county's land use is predominantly rural, with agriculture and silvaculture dominating the landscape. Northeastern Worcester County, including West Ocean City, is most urbanized.

3.1.1.1 Affected Environment

The project site is urbanized, surrounded by and including commercial and open urban land, as well as residential uses. Tidal wetlands, adjacent to Sinepuxent Bay are also a significant land cover. Figure 3 (Exhibits 6.0) depicts land cover in the proposed project area.

3.1.1.2 Environmental Consequences

The project will not result in changes to the local land use pattern or plan and will not alter the anticipated environmental consequences of this planned development.

3.1.1.3 Mitigation

Mitigation is not required.

3.1.2.1 Important Farmland, Prime Forest Land and Prime Rangeland

The Farmland Protection Policy Act (FPPA) categorizes all lands "in or committed to urban development" as not prime or unique farmland. All land in the project area is in urban development, so by definition it is not Important Farmland. Figure 4 (Section 6.0) is a map of soils in and immediately surrounding the project area.

3.1.2.1 Affected Environment

The project will not have detrimental effects on farmland, as stated in a letter dated August 29, 2014 from Nelson D. Brice, District Conservationist, USDA (Section 5 of this report).

3.1.2.2 Environmental Consequences

Since all construction will take place on urbanized land, there will be no environmental consequences related to resources addressed by this section.

3.1.2.3.1.1.1 Mitigation

Mitigation is not required.

3.1.3 Formally Classified Lands

Lands administered by federal, state, or local agencies in some cases have been designated for special management and classed as "formally classified lands". These lands include:

- National parks and monuments
- National battlefield park sites
- National historic sites and parks
- Wilderness areas
- Wild and scenic and recreational rivers
- Wildlife refuges
- National seashores, lake shores and trails
- State parks
- Bureau of Land Management (BLM) administered lands
- National forests and grasslands
- Native American owned lands and leases administered by the Bureau of Indian Affairs (BIA).

3.1.3.1 Affected Environment

No formally classified lands exist within the viewshed of the project.

3.1.3.2 Environmental Consequences

There will be no visual impacts to formally classified lands resulting from the project.

3.1.3.3.1 Mitigation

Mitigation is not required.

3.2 Floodplains

The Code of Public Local Laws of Worcester County, Maryland, Title 2 Construction Regulations, Subtitle III Floodplain Management, includes the local floodplain development requirements and addresses approaches to floodplain management, including the issuance of county permits. Additional applicable programs that require compliance include the National Flood Insurance Program, Maryland Tidal and Nontidal Wetlands Permit Program, the U.S. Army Corps of Engineers (USACE) Section 10 and 404 Permit Program, and Maryland Coastal Zone Management Program.

3.2.1 Affected Environment

The proposed project is primarily in Zone B (area of "100-year flood") according to the most recent Flood Insurance Rate Map FIRM map 24047C0180H, 24047C0170H, 24047C0190H, July 18, 2015(Figures 5A1, 5A2, 5B1, 5B2, 5B3, 5B4, Section 6.0).

3.2.2 Environmental Consequences

The project will not result in additional floodplain development. The golf course pump house and effluent storage tank are existing structures. The pump will be replaced within the pump house but no alteration to these structures is planned. The project will serve only existing facilities. Removal of septic systems from this zone will reduce potential impact in the event of flooding.

3.2.3 Mitigation

No mitigation efforts expected.

3.3 Wetlands

Protection of Wetlands, Executive Order 11990, issued May 24, 1977, directs all Federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative. In addition, the USDA Department Regulation 9500-3 *Land Use Policy* discourages the unwarranted alteration of wetlands.

3.3.1 Affected Environment

According to the Maryland Department of Natural Resources Wetlands Inventory Data (Figure 6, Section 6.0) the project site does not contain significant wetlands. It should be further noted however that not all regulated wetlands are shown in the Inventory, and that hydric soils are an indication that regulated wetlands may exist on the site. For this reason, hydric soils are shown in Figure 5, Section 6.0 as well.

3.3.2 Environmental Consequences

This project will not likely impact wetlands. A formal wetland delineation will be conducted if recommended by experts prior to construction of the project. Construction will avoid wetlands impacts.

3.3.3 Mitigation

No mitigation efforts expected.

3.4 Cultural Resources

3.4.1 Historic Properties

To comply with the National Historic Preservation Act of 1966 and Archeological and Historic Preservation Act of 1974, cultural resources at the project site must be

identified. A historic property is defined as one that is listed in, or eligible for, the National Register of Historic Places, the official list of the nation's cultural resources.

3.4.1.1 Affected Environment

A review of Maryland's Inventory of Historic Properties revealed that there are no historic structures on the proposed project site, nor any that are in proximity that would be impacted by construction of this project.

3.4.1.2 Environmental Consequences

No impacts to historic resources are anticipated. A letter dated August 22, 2014 from Linda Janey, confirms that the Maryland Historical Trust determined that the project will have "no effect" on historic properties. The letter is provided in Section 5.0.

3.4.1.3 Mitigation

Mitigation is not required.

3.4.2. Visual Aesthetics

On completion of this project there will be no changes to the aesthetics of the project area.

3.4.2.1 Affected Environment

The site of proposed construction is in view of mainly commercial uses.

3.4.2.2 Environmental Consequences

While construction activity will be visible, no additional negative impacts to visual aesthetics will occur as a result of this project, as the project involves placing infrastructure below ground and using existing structures.

3.4.2.3 Mitigation

No mitigation efforts expected.

3.5 Biological Resources

3.5.1 Threatened and Endangered Species

Section 7 of the Endangered Species Act requires that information be collected on whether any species that is listed or proposed to be listed may be present in the area affected by the proposed project.

3.5.1.1 Affected Environment

No threatened or endangered species habitat occurs on the site of the proposed project. Maryland Department of Natural Resources completed review but provided no comment in response to the State Clearinghouse letter sent to all agencies, per letter dated August 22, 2014 from Linda C. Janey, Assistant Secretary for Clearinghouse and Communications, Maryland Department of Planning (Section 5 of this document). Also included in Section 5 are two Trust Resource reports generated at the IPAC website and a letter dated December 16, 2014 from Genevieve LaRouche, United States Department of the Interior, Fish and Wildlife Service, stating that no federally proposed or listed threatened or endangered species are known to exist within the project impact area.

3.5.1.2 Environmental Consequences

There will be no direct or indirect impacts to habitat of federally listed species by the project.

3.5.1.3 Mitigation

Mitigation is not required.

3.5.2 Vegetation

The Worcester County Forest Conservation Law was enacted under the Maryland Forest Conservation Act of 1991. The purpose of the law is to preserve, protect and establish forest areas in conjunction with certain land development activities. For a "linear project" such as the proposed project, if over 40,000 square feet of forest is cleared, trees must be replaced at a ratio of 1:1.

In 2002 the General Assembly formally recognized the value of the Atlantic Coastal Bays by extending the State's Critical Area Program to include this area of Worcester County. The Critical Area Program provides land use and environmental regulations in the 1,000 feet landward of tidal waters and marsh. Generally the program requires a minimum 100-foot vegetated buffer extending landward from the tidal waters' mean high water line, tidal wetlands and tributary streams, and additional mitigation of environmental impacts.

3.5.2.1 Affected Environment

Vegetation in the proposed project area is primarily managed turf.

Environmental Consequences

Some of the proposed project site is within the Coastal Bays Critical Area (Figure 7, Section 6.0) and is therefore exempt from the Forest Conservation Law, however, some is outside of the Coastal Bays Critical Area, and will be subject to the Forest Conservation Law.

3.5.2.2 Mitigation

No mitigation efforts expected.

3.6 Water Quality Resources

3.6.1 Surface Water

3.6.1.1 Affected Environment

The project is located in the Sinepuxent Bay watershed. While water quality in the bay is good, nutrient and chemical inputs from urban and agricultural runoff are major factors affecting water quality in the watershed.

3.6.1.2 Environmental Consequences

The Mystic Harbour Wastewater Treatment Plant has a strict effluent limit for total nitrogen (3 mg/l). The injection well disposal capacity is 0.25 MGD at 3 mg/l, or approximately 2,283 lbs/year. The new treatment plant has a capacity of 0.45 MGD. A portion of the new treatment plant capacity will be used to remove existing on-site septic systems, some of which are substandard. Assuming half of the extra plant capacity is used for removal of septic systems and those septic systems currently discharge 30 mg/l of nitrogen to the groundwater, another 9.132 lbs of nitrogen would be removed annually. Use of the Eagle's Landing Golf Course for effluent disposal in conjunction with the high quality¹ Thus, the project is expected to have a significant positive, long-term effect on surface water quality.

Short term, the project will involve soil disturbance, which can have a negative impact of water quality if not managed to minimize run-off.

There are no above or underground petroleum storage tanks associated with this project or that will be demolished as part of this project. A letter dated August 22, 2014 from Linda C. Janey, Assistant Secretary for Clearinghouse and Communications, Maryland Department of Planning, notes regulation associated with this (Section 5 of this document).

The state of Maryland requires that sewer and water service is consistent with the County Water and Sewerage Plan. A letter dated August 22, 2014 from Linda C. Janey, Assistant Secretary for Clearinghouse and Communications, Maryland Department of Planning, notes this requirement (Section 5 of this document).

3.6.1.3 Mitigation

¹ Ross, John, P.E. Deputy Director of Public Works. E-mail communication dated September 16, 2014.

On September 4, 2014, this proposed plan was presented to the Worcester County Planning Commission to determine its consistency with the County Comprehensive Plan. The Planning Commission provided a unanimous concurrence that the plan was consistent with the Comprehensive Plan and forwarded it to the County Commissioners to schedule a Public Hearing on the project. The public hearing was held October 21, 2014. The plan was unanimously approved by the County Commissioners following at the public hearing. It was forwarded to the Maryland Department of Planning (MDP) and Maryland Department of the Environment (MDE) for final approval. MDP commented to MDE they found the amendment to be generally consistent with the County's 2006 Comprehensive Plan goals and policies. Worcester County is currently working with MDE to resolve outstanding technical issues before final planning approval can be given.

3.6.2 Groundwater

3.6.2.1 Affected Environment

The project area is situated over relatively young geologic formations. The surface geology (Quaternary System) of the site consists predominantly of the Sinepuxent Formation of the Pleistocene deposits. These deposits are chiefly sand, have an average thickness of 50 feet, and cover wide areas. They are capable of large yields of groundwater. Underlying the Sinepuxent Formation is the Tertiary System, composed predominantly of marine sands and clays. Local groundwater recharge to the surface aquifer should be contained within the surface aquifer and move horizontally offsite with the prevailing groundwater flow into the Sinepuxent Bay.

3.6.2.2 Environmental Consequences

Effluent will no longer be disposed of through the shallow injection wells. Improvements to groundwater quality impacts are anticipated as a result of the project.

3.6.2.3 Mitigation

Mitigation is not required.

3.7 Coastal Resources

Worcester County's Atlantic coastline was brought into the state's Critical Area Program in 2002. The program implements the federal Coastal Zone Management Act (CZMA) and provides land use and site planning standards.

3.7.1 Affected Environment

The project's site is partly within the Critical Area and within the Sinepuxent Bay watershed.

3.7.2 Environmental Consequences

This project is part of a planned development pattern that will minimize impact to the coastal zone.

A letter dated August 22, 2014 from Linda C. Janey, Assistant Secretary for Clearinghouse and Communications, Maryland Department of Planning, refers to the sewage sludge transport permit at the adjacent Castaways campground. This permit allowed them to transport sludge to a wastewater treatment plant in Berlin for treatment. The campground is now connected to the Mystic Harbour Wastewater Treatment Plant and the permit is no longer relevant.

The above-noted letter also refers to land restoration of commercial or industrial property. The properties involved are not hazardous waste sites and remediation is not relevant to this project.

3.7.3 Mitigation

Mitigation is not required.

3.8 Socio-Economic Issues/Environmental Justice Issues

The project will provide improved wastewater treatment service to a developed commercial area. Since the project is connecting existing, planned uses, its affect on socio-economic and environmental justice will not diverge from the impact of the county's planned and existing population distribution and characteristics.

3.8.1 Affected Environment

The project will not alter existing and planned patterns of development.

3.8.2 Environmental Consequences

Socio-economic and environmental justice issues are not anticipated as a result of the project. Environmental impacts of construction will be minimal. Improved wastewater service, however, can create an improved setting for

commercial business, which may result in more or better employment opportunities at these sites.

3.8.3 Mitigation

Mitigation is not required.

3.9 Miscellaneous Issues

3.9.1 Transportation

3.9.1.1 Affected Environment

The project is located on State Route 611 and along county roads.

3.9.1.2 Environmental Consequences

There will be short-term modification of traffic patterns during construction on the roads along or under which sewer and water lines are to be placed.

3.9.1.3 Mitigation

No mitigation efforts expected.

3.9.2 Noise

3.9.2.1 Affected Environment

Water and Sewer line construction will require heavy machinery that produces noise.

3.9.2.2 Environmental Consequences

The construction will be short-term and conducted during working hours.

3.9.2.3 Mitigation

Mitigation is not required.

3.9.3 Solid Waste

3.9.3.1 Affected Environment

A letter dated August 22, 2014 from Linda C. Janey, Assistant Secretary for Clearinghouse and Communications, Maryland Department of Planning, notes that solid waste must be properly disposed of, or recycled. In addition, the letter notes that hazardous waste must be generated and handled in compliance with state and federal laws and regulations (Section 5 of this document). The letter also notes that the project must comply with lead paint abatement regulations. While solid waste will be generated, hazardous waste will not be generated, nor does the project involve residential property built before 1950, which could involve lead paint abatement.

3.9.3.2 Environmental Consequences

Solid waste will need to be removed from the site.

3.9.3.3 Mitigation

Any solid waste, including construction, demolition and land clearing debris will be properly disposed of at a permitted solid waste acceptance facility, or recycled if possible.

3.9.4 Additional Comments from State Agencies

A letter dated August 22, 2014 from Linda C. Janey, Assistant Secretary for Clearinghouse and Communications, Maryland Department of Planning, include four (4) miscellaneous comments on the Preliminary Engineering Report (PER).

3.9.4.1 Wastewater Pumping Agreement

State's comment: The statement "By agreement, the County has the right to pump one million gallons daily (MGD) of wastewater to the Town of Ocean City for treatment and disposal" needs to be reviewed and confirmed by Walid Saffouri who appeared to have a comment about this wastewater diversion during the meeting of 5/17/2014 with Worcester County Staff.

County response: The county has an agreement with the Town of Ocean City as part of the turnover agreement when the County gave ownership of the plant to the Town in 1994. This limit is also mentioned in the West Ocean City consent order documents and is a part of the new agreement between the Town and the County on the redirection of treated effluent to the WOC mains and the reuse of treated effluent to irrigate the Town's golf course as a part of this project.

3.9.4.2 Castaways Campground Facility

State's comment: The wastewater facility at Castaways has been demolished and the construction of a sewer connection to the Mystic Harbour [Wastewater Treatment Plant] will be completed shortly. No treatment and disposal capacities are available at Castaways. Therefore, Castaways facility should be deleted from this table [table 1].

County response: The wastewater treatment facility at Castaways has been demolished, but part of the system was converted to a private pump station and force main with an attached flow meter that is read by county personnel. The flow equalization tank that previously held treated effluent for the campground will receive and store treated effluent from the Mystic Harbour plant prior to discharge to holding ponds at the golf course to be used for irrigation.

3.9.4.3 Ocean City Airport Alternative

State's comment: I was informed by the Worcester County staff that the alternative to dispose of treated wastewater via drip irrigation at Ocean City Airport was rejected by FAA. This alternative should be deleted from Table 4.

County response: The use of the airport was technically not ruled out by FAA, it was an alternative explored for this project. It may still be possible to pursue this option in the future, but we anticipate it would take time and financial cost that we were not willing to commit to at this time.

3.9.4.4 Effluent Disposal Capacities of the Golf Course

State's Comment: The potential effluent disposal capacities at the Ocean City Golf Course and Pine Shores South Golf Course are estimated values. It is assumed that more accurate capacities based on vegetation water demand will be made available to MDE during the groundwater discharge permit application process.

County response: The capacity of the potential effluent disposal (reuse) of the treated effluent at the golf course was covered in a preliminary approval letter given to County staff by Dr. Tien of Maryland Department of the Environment at the start of this planning process. Actual consumptive use estimates and the finer details of the capacity limits and the other related limits will be part of the discharge permitting process.

4.0 Summary of Mitigation

4.1 Mitigation Actions

The following resources will be impacted and the project requires the recommended mitigation:

- a. Water Quality. The County Water and Sewer Plan is in the process of being updated to reflect the service planned for this project.

4.2 Permits and other Requirements

The following resources will be impacted and the project may require the following permits:

- a. Water Quality/Coastal Zone. Sediment and Erosion Control and Stormwater Management permit will be required.
- b. Water Quality. Discharge permit authorizes discharge by the Mystic Harbour Wastewater Treatment Plant. Sediment and Erosion Control and Stormwater Management Permits will be required.

- c. **County Water and Sewerage Plan.** The County Water and Sewerage Plan must be amended to reflect this project. The proposed service is in the process of being added to the Plan as an amendment.

5.0 Correspondence

Maryland Department of Planning
Clearinghouse Review
Attn: Linda Janey, J.D.
301 West Preston Street, Room 1104
Baltimore, Maryland 21201-2365

Nelson Brice
District Conservationist
USDA Service Center
Natural Resources Conservation Service
304 Commerce Street
Snow Hill, MD 21863-1008

Genevieve LaRouche
Supervisor
US Department of the Interior
Fish and Wildlife Service
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401



Sustainable _____ Attainable _____

Maryland Department of Planning

August 22, 2014

Ms. Katherine Munson
Planner IV, Environmental Programs
Worcester County
1 West Market Street
Room 1201
Snow Hill, MD 21863

STATE CLEARINGHOUSE RECOMMENDATION

State Application Identifier: MD20140709-0603

Applicant: Worcester County

Project Description: USDA: Mystic Harbor Spray Effluent Disposal - A Proposed Expansion of Water and Wastewater Service to Pines Plaza

Project Location: County(ies) of Worcester

Approving Authority: U.S. Department of Agriculture USDA/RUS

CFDA Number: 10.760

Funds: Federal: \$3,200,000.00 State: \$ 0.00 Local: \$ 0.00 Other: \$ 0.00

Recommendation: Consistent with Qualifying Comment(s) and Contingent Upon Certain Action(s)

Dear Ms. Munson:

In accordance with Presidential Executive Order 12372 and Code of Maryland Regulation 34.02.01.04-.06, the State Clearinghouse has coordinated the intergovernmental review of the referenced project. This letter constitutes the State process review and recommendation based upon comments received to date. This recommendation is valid for a period of three years from the date of this letter.

Review comments were requested from the Maryland Department(s) of Natural Resources, Transportation, the Environment; and the Maryland Department of Planning, including the Maryland Historical Trust. As of this date, the Maryland Department of Transportation has not submitted comments. This recommendation is contingent upon the applicant considering and addressing any problems or conditions that may be identified by their review. Any comments received will be forwarded.

Maryland Historical Trust found this project to be consistent with their plans, programs, and objectives.

The Maryland Department of Planning stated that their finding(s) of consistency is/are contingent upon the applicant taking the action(s) summarized below.

The current Water and Sewer Plan for Worcester County dates to 1990. The outdated plan does not contain the numerous amendments that have been adopted over the years that renders the Plan challenging to evaluate consistency with the other County planning documents. The Mystic Harbour WWTP was approved by MDE for upgrade and expansion through Resolution (20)09-16.

Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor

Richard Eberhart Hall, AICP Secretary
Amanda Stakem Conn, Esq., Deputy Secretary

301 West Preston Street • Suite 1101 • Baltimore • Maryland • 21201
Tel: 410.767.4500 • Toll Free: 1.877.767.6272 • TTY users: Maryland Relay • Planning.Maryland.gov

Ms. Katherine Munson

August 22, 2014

Page 2

State Application Identifier: MD20140709-0603

The details of this study address the methods for effluent discharge that Resolution 09-16 indicated the need to accomplish as part of the expansion. Prior to funding any part of this project the County must either update its 1990 Water and Sewer Plan in its entirety or secure an approved amendment from MDE to include all effluent discharge agreements with Ocean City and land owners (golf course(s)), revise all text and tables and maps to describe the new system, service area, and remaining EDUs available for infill development to include the list of retired individual septic and community sewerage systems, that would be consistent with all land use goals and policies of the current Worcester County Comprehensive Plan (2006).

The Maryland Department(s) of Environment found this project to be generally consistent with their plans, programs, and objectives, but included certain qualifying comments summarized below.

1. Page 1. The statement "By agreement, the County has the right to pump one million gallons daily (MGD) of wastewater to the Town of Ocean City for treatment and disposal" needs to be reviewed and confirmed by Walid Saffouri who appeared to have a comment about this wastewater diversion during the meeting of 5/27/2014 with Worcester County Staff.
2. Page 2, Table 1. The wastewater facility at Castaways has been demolished and the construction of a sewer connection to the Mystic Harbour will be completed shortly. No treatment and disposal capacities are available at Castaways. Therefore, Castaways facility should be deleted from this table.
3. Page 5, Table 4. I was informed by the Worcester County staff that the alternative to dispose of treated wastewater via drip irrigation at Ocean City Airport was rejected by FAA. This alternative should be deleted from Table 4.
4. The potential effluent disposal capacities at the Ocean City Golf Course and Pine Shores South Golf Course are estimated values. It is assumed that more accurate capacities based on vegetation water demand will be made available to MDE during the groundwater discharge permit application process.
5. Any above ground or underground petroleum storage tanks, which may be utilized, must be installed and maintained in accordance with applicable State and federal laws and regulations. Underground storage tanks must be registered and the installation must be conducted and performed by a contractor certified to install underground storage tanks by the Land Management Administration in accordance with COMAR 26.10. Contact the Oil Control Program at (410) 537-3442 for additional information.
6. If the proposed project involves demolition – Any above ground or underground petroleum storage tanks that may be on site must have contents and tanks along with any contamination removed. Please contact the Oil Control Program at (410) 537-3442 for additional information.
7. Any solid waste including construction, demolition and land clearing debris, generated from the subject project, must be properly disposed of at a permitted solid waste acceptance facility, or recycled if possible. Contact the Solid Waste Program at (410) 537-3315 for additional information regarding solid

Ms. Katherine Munson

August 22, 2014

Page 3

State Application Identifier: MD20140709-0603

- waste activities and contact the Waste Diversion and Utilization Program at (410) 537-3314 for additional information regarding recycling activities.
8. The proposed project is located near land on which sewage sludge was stored, land applied, or disposed under a sewage sludge utilization permit issued by the Land Management Administration. Specific questions regarding this site should be directed to the Sewage Sludge Division at (410) 537-3314.
 9. The Waste Diversion and Utilization Program should be contacted directly at (410) 537-3314 by those facilities which generate or propose to generate or handle hazardous wastes to ensure these activities are being conducted in compliance with applicable State and federal laws and regulations.
 10. Any contract specifying "lead paint abatement" must comply with Code of Maryland Regulations (COMAR) 26.16.01 - Accreditation and Training for Lead Paint Abatement Services. If a property was built before 1950 and will be used as rental housing, then compliance with COMAR 26.16.02 - Reduction of Lead Risk in Housing; and Environment Article Title 6, Subtitle 8, is required. Additional guidance regarding projects contact Lead Division at (410) 537-3825.
 11. The proposed project may involve rehabilitation, redevelopment, revitalization, or property acquisition of commercial, industrial property. For specific information about these programs and eligibility, please contact the Land Restoration Program at (410) 537-3437.

Any statement of consideration given to the comments(s) should be submitted to the approving authority, with a copy to the State Clearinghouse.

The State Application Identifier Number must be placed on any correspondence pertaining to this project. The State Clearinghouse must be kept informed if the approving authority cannot accommodate the recommendation.

Ms. Katherine Munson

August 22, 2014

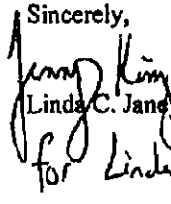
Page 4

State Application Identifier: MD20140709-0603

Please remember, you must comply with all applicable state and local laws and regulations. If you need assistance or have questions, contact the State Clearinghouse staff person noted above at 410-767-4490 or through e-mail at rita.pritchett@maryland.gov. Also please complete the attached form and return it to the State Clearinghouse as soon as the status of the project is known. *Any substitutions of this form must include the State Application Identifier Number.* This will ensure that our files are complete.

Thank you for your cooperation with the MIRC process.

Sincerely,


Linda C. Janey, J.D., Assistant Secretary
for Linda Janey

LCJ:RP

Enclosure(s)

cc: U.S. Department of Agriculture (USDA/RUS)

Tina Quinichete - MDOT

Amanda Degen - MDE

Greg Golden - DNR

John Leocha - MDPLR&WC

Beth Cole - MHT

14-0603_CRR.CLSS.doc



**USDA
SERVICE
CENTER**

**NATURAL
RESOURCES
CONSERVATION
SERVICE**

**304 COMMERCE STREET
SNOW HILL, MD 21863-1008
1-410-632-5439 (OPTION 3)
1-410-632-2732 (FAX)**

August 29, 2014

Katherine Munson
Environmental Programs
Worcester County

Re: Mystic Harbour Effluent Disposal Project

After reviewing the Mystic Harbour preliminary engineering report I see no detrimental effects to Worcester County farmland.

A handwritten signature in black ink, appearing to read "N. Brice".

Nelson D. Brice
District Conservationist

AN EQUAL OPPORTUNITY EMPLOYER



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, Maryland 21401
<http://www.fws.gov/chesapeakebay>

December 16, 2014

Katherine Munson
Worcester County, MD
1 West Market St., Suite 1306
Worcester County Government Center
Snow Hill, MD 21811

RE: Mystic Harbor WWTP Effluent Disposal in Worcester County MD

Dear Katherine Munson:

This responds to your letter, received November 24, 2014, requesting information on the presence of species which are federally listed or proposed for listing as endangered or threatened within the vicinity of the above referenced project area. We have reviewed the information you enclosed and are providing comments in accordance with section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the project impact area. Therefore, no Biological Assessment or further section 7 Consultation with the U.S. Fish and Wildlife Service is required. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

This response relates only to federally protected threatened or endangered species under our jurisdiction. For information on the presence of other rare species, you should contact Lori Byrne of the Maryland Wildlife and Heritage Division at (410) 260-8573.

Effective August 8, 2007, under the authority of the Endangered Species Act of 1973, as amended, the U.S. Fish and Wildlife Service (Service) removed (delist) the bald eagle in the lower 48 States of the United States from the Federal List of Endangered and Threatened Wildlife. However, the bald eagle will still be protected by the Bald and Golden Eagle Protection Act, Lacey Act and the Migratory Bird Treaty Act. As a result, starting on August 8, 2007, if your project may cause "disturbance" to the bald eagle, please consult the "National Bald Eagle Management Guidelines" dated May 2007.

TAKE PRIDE[™]
IN AMERICA 

If any planned or ongoing activities cannot be conducted in compliance with the National Bald Eagle Management Guidelines (Eagle Management Guidelines), please contact the Chesapeake Bay Ecological Services Field Office at 410-573-4573 for technical assistance. The Eagle Management Guidelines can be found at:
<http://www.fws.gov/northeast/ecologicalservices/pdf/NationalBaldEagleManagementGuidelines.pdf>

In the future, if your project can not avoid disturbance to the bald eagle by complying with the Eagle Management Guidelines, you will be able to apply for a permit that authorizes the take of bald and golden eagles under the Bald and Golden Eagle Protection Act, generally where the take to be authorized is associated with otherwise lawful activities.

An additional concern of the Service is wetlands protection. Federal and state partners of the Chesapeake Bay Program have adopted an interim goal of no overall net loss of the Basin's remaining wetlands, and the long term goal of increasing the quality and quantity of the Basin's wetlands resource base. Because of this policy and the functions and values wetlands perform, the Service recommends avoiding wetland impacts. All wetlands within the project area should be identified, and if construction in wetlands is proposed, the U.S. Army Corps of Engineers, Baltimore District, should be contacted for permit requirements. They can be reached at (410) 962-3670.

We appreciate the opportunity to provide information relative to fish and wildlife issues, and thank you for your interests in these resources. If you have any questions or need further assistance, please contact Trevor Clark at (410) 573-4527.

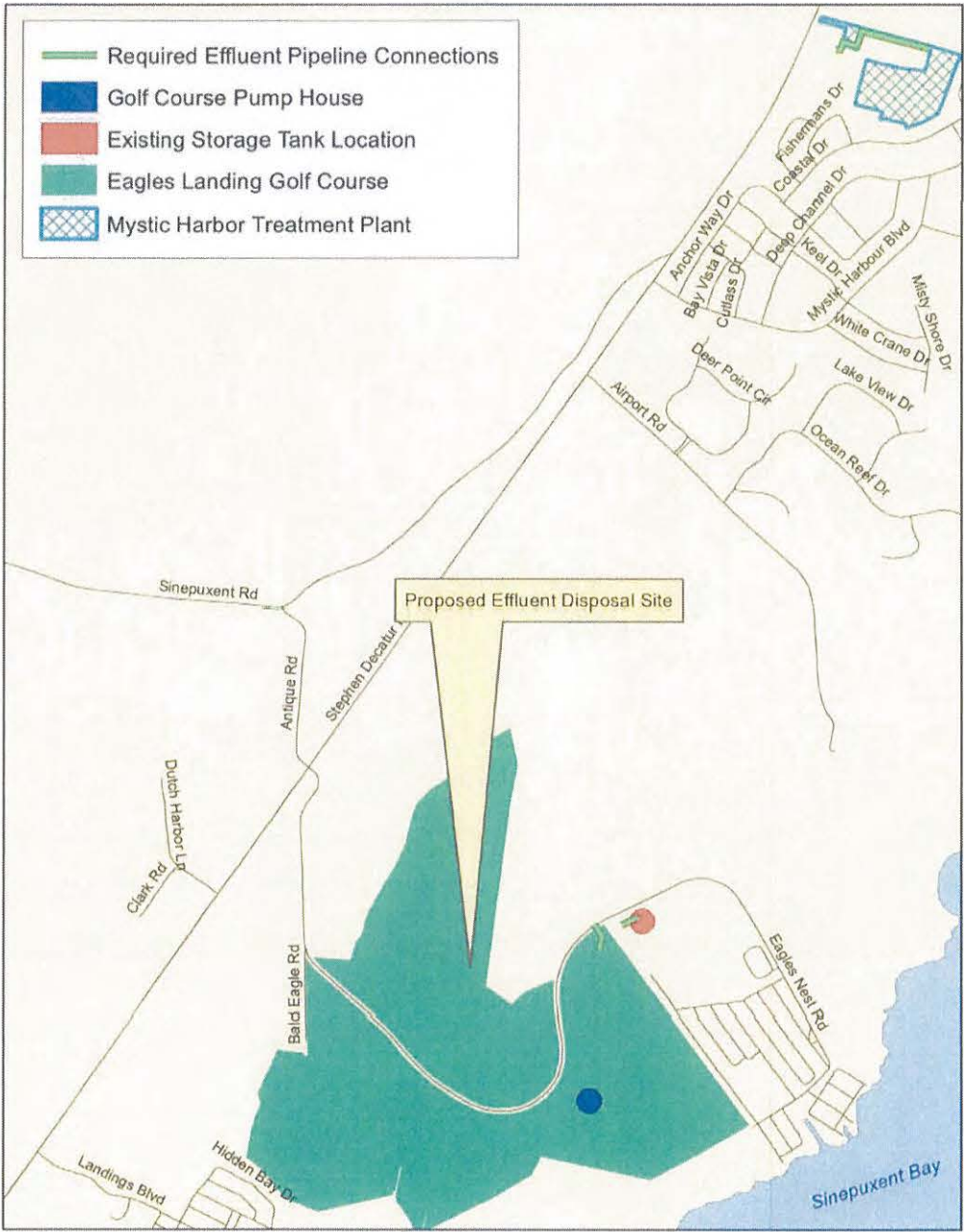
Sincerely,



Genevieve LaRouche
Supervisor

6.0 Exhibits

Figure 1. Proposed Mystic Harbour WWTP Effluent Disposal Project Elements; Worcester County, MD



Prepared by Worcester County EP, 11/25/14.
For planning purposes only.



**Figure 2. Proposed Mystic Harbour WWTP Effluent Disposal;
Service Area/Proposed Service; Worcester County, MD**

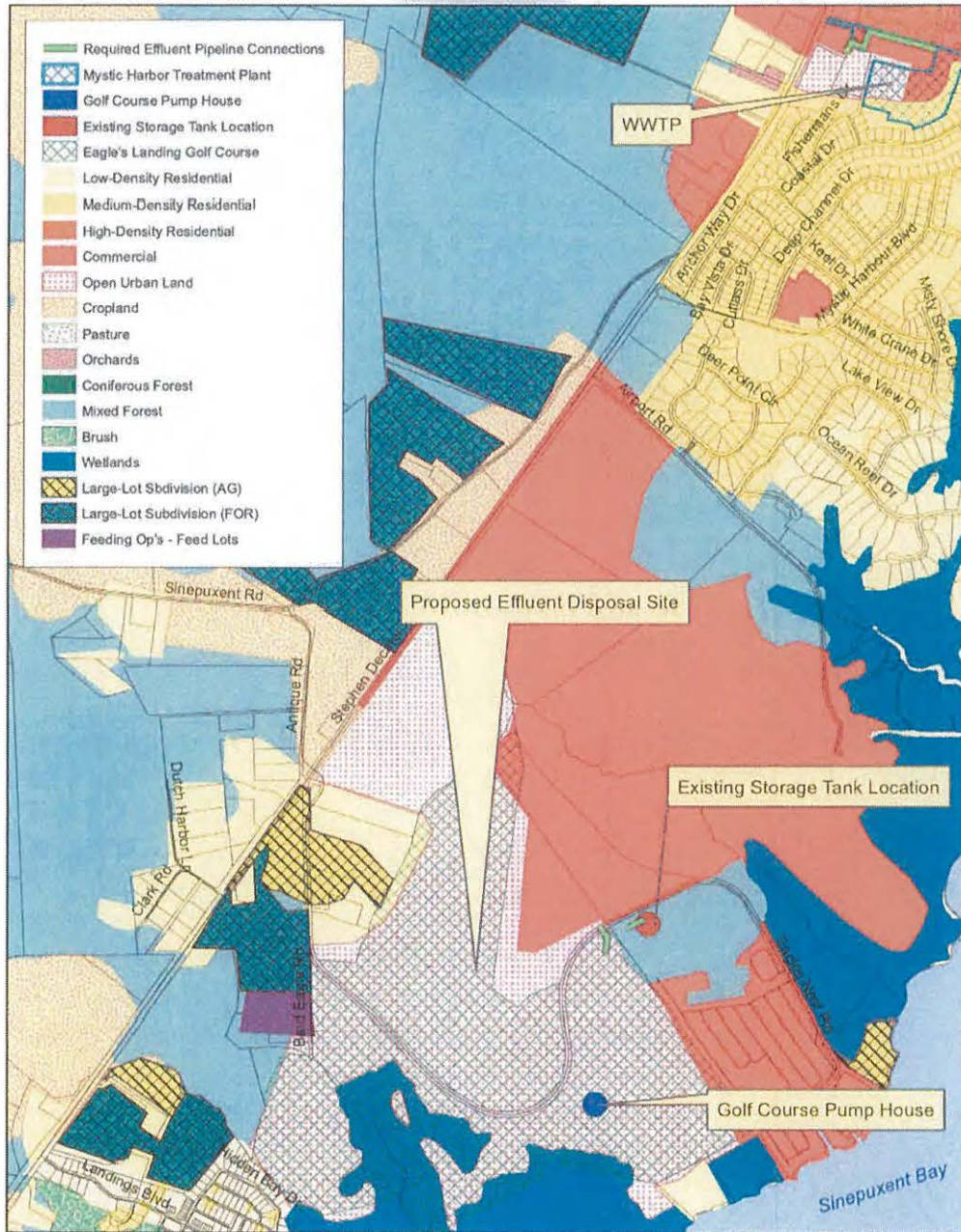


Prepared by Worcester County EP, 11/24/14.
For planning purposes only.

0.8 0.4 0 0.8 Miles



Figure 3. Proposed Mystic Harbour WWTP Effluent Disposal and Land Cover; Worcester County, MD



Prepared by Worcester County EP, 11/25/14.
For planning purposes only.

0.2 0.1 0 0.2 Miles



Custom Soil Resource Report

MAP LEGEND		MAP INFORMATION	
	Area of Interest (AOI)		Spot Area
	Soils		Stony Spot
	Soil Map Unit Polygons		Very Stony Spot
	Soil Map Unit Lines		Wet Spot
	Soil Map Unit Points		Other
	Special Point Features		Special Line Features
	Blowout		Water Features
	Borrow Pit		Streams and Canals
	Clay Spot		Transportation
	Closed Depression		Rail
	Gravel Pit		Interstate Highways
	Gravelly Spot		US Routes
	Landfill		Major Roads
	Lava Flow		Local Roads
	Marsh or swamp		Background
	Mine or Quarry		Aerial Photography
	Miscellaneous Water		
	Potential Water		
	Rock Outcrop		
	Saline Spot		
	Sandy Spot		
	Severely Eroded Spot		
	Sinkhole		
	Slide or Slip		
	Sodic Spot		

The soil surveys that comprise your AOI were mapped at 1:12,000. Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Worcester County, Maryland
 Survey Area Data: Version 10, Sep 24, 2014

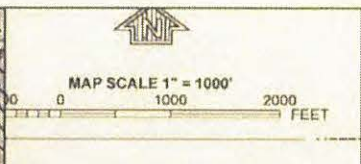
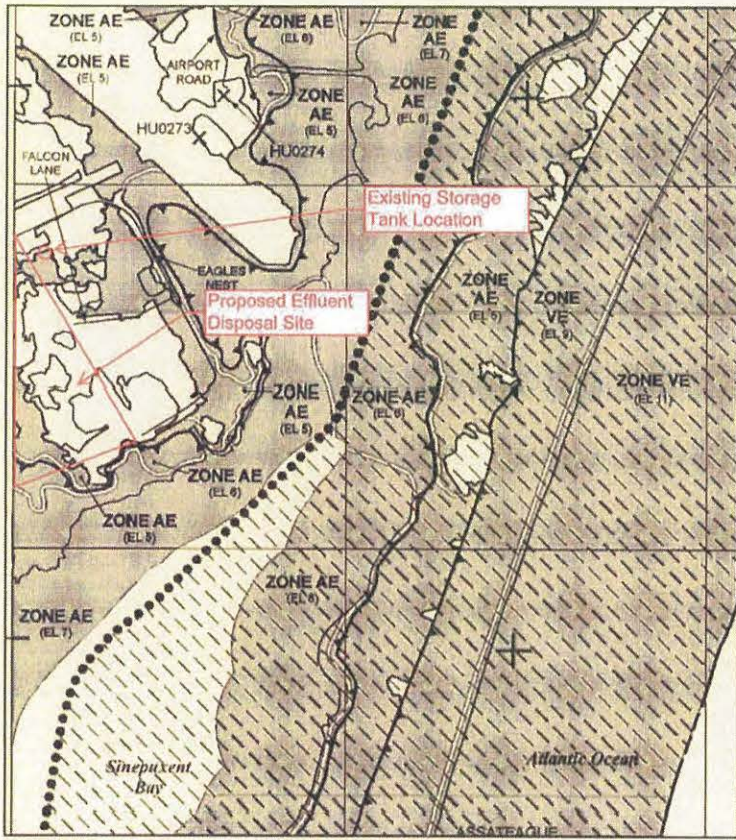
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 17, 2010—Jul 4, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Custom Soil Resource Report

MAP LEGEND		MAP INFORMATION	
<p>Area of Interest (AOI)</p> <p> Area of Interest (AOI)</p> <p>Soils</p> <p> Soil Map Unit Polygons</p> <p> Soil Map Unit Lines</p> <p> Soil Map Unit Points</p> <p>Special Point Features</p> <p> Blowout</p> <p> Borrow Pit</p> <p> Clay Spot</p> <p> Closed Depression</p> <p> Gravel Pit</p> <p> Gravelly Spot</p> <p> Landfill</p> <p> Lava Flow</p> <p> Marsh or swamp</p> <p> Mine or Quarry</p> <p> Miscellaneous Water</p> <p> Potential Water</p> <p> Rock Outcrop</p> <p> Saline Spot</p> <p> Sandy Spot</p> <p> Severely Eroded Spot</p> <p> Sinkhole</p> <p> Slide or Slip</p> <p> Sodic Spot</p>		<p>Spot Area</p> <p> Spot Area</p> <p>Stony Spot</p> <p> Stony Spot</p> <p>Very Stony Spot</p> <p> Very Stony Spot</p> <p>Wet Spot</p> <p> Wet Spot</p> <p>Other</p> <p> Other</p> <p>Special Line Features</p> <p>Water Features</p> <p> Streams and Canals</p> <p>Transportation</p> <p> Rail</p> <p> Interstate Highways</p> <p> US Routes</p> <p> Major Roads</p> <p> Local Roads</p> <p>Background</p> <p> Aerial Photography</p>	
		<p>The soil surveys that comprise your AOI were mapped at 1:12,000.</p> <p>Please rely on the bar scale on each map sheet for map measurements.</p> <p>Source of Map: Natural Resources Conservation Service Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov Coordinate System: Web Mercator (EPSG:3857)</p> <p>Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.</p> <p>This product is generated from the USDA-NRCS certified data as of the version date(s) listed below:</p> <p>Soil Survey Area: Worcester County, Maryland Survey Area Date: Version 10, Sep 24, 2014</p> <p>Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.</p> <p>Date(s) aerial images were photographed: Jun 17, 2010—Jul 4, 2010</p> <p>The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.</p>	



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0190H

FIRM
 FLOOD INSURANCE RATE MAP

WORCESTER COUNTY,
 MARYLAND
 AND INCORPORATED AREAS

PANEL 190 OF 450
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTRACT	NUMBER	PANEL	SHEET
WORCESTER COUNTY	24047C	190H	190

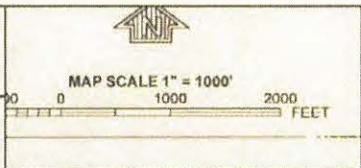
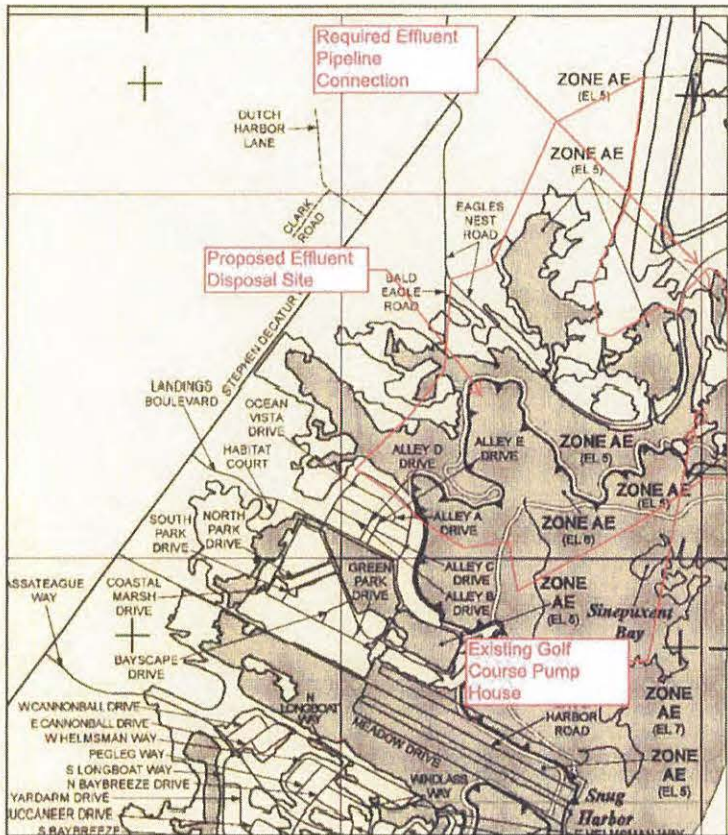
NOTE:
 THIS FIRM IS AN OFFICIAL COPY OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FIRM PANEL 190 OF 450. THE FIRM PANEL NUMBER IS LISTED IN THE MAP INDEX. THIS FIRM PANEL IS NOT TO BE USED FOR ANY OTHER PURPOSES.

THIS IS NOT AN MAP NUMBER. MAP NUMBER 24047C IS THE MAP NUMBER FOR THIS FIRM PANEL. THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FIRM PANEL 190 OF 450 IS THE MAP NUMBER FOR THIS FIRM PANEL.

MAP NUMBER
 24047C0190H
 EFFECTIVE DATE
 JULY 18, 2015

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using FIRM Online. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FIRM Flood Map Store at www.firm.fema.gov



PANEL 0170H

FIRM
FLOOD INSURANCE RATE MAP

**WORCESTER COUNTY,
MARYLAND
AND INCORPORATED AREAS**

PANEL 179 OF 450
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	SUBJECT	PANEL	SHEET
WORCESTER COUNTY	04000	0-18	1

NOTE:
THIS MAP IS A COPY OF THE ORIGINAL SOURCE AND IS NOT A REPRODUCTION OF THE ORIGINAL SOURCE. IT IS THE PROPERTY OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY AND IS LOANED TO YOU. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.

MAP NUMBER
24047C0170H

EFFECTIVE DATE
JULY 16, 2015

Federal Emergency Management Agency

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Figure 5B4: Proposed Mystic Harbour WWTFF Effluent Disposal and Floodplains; Worcester County, MD

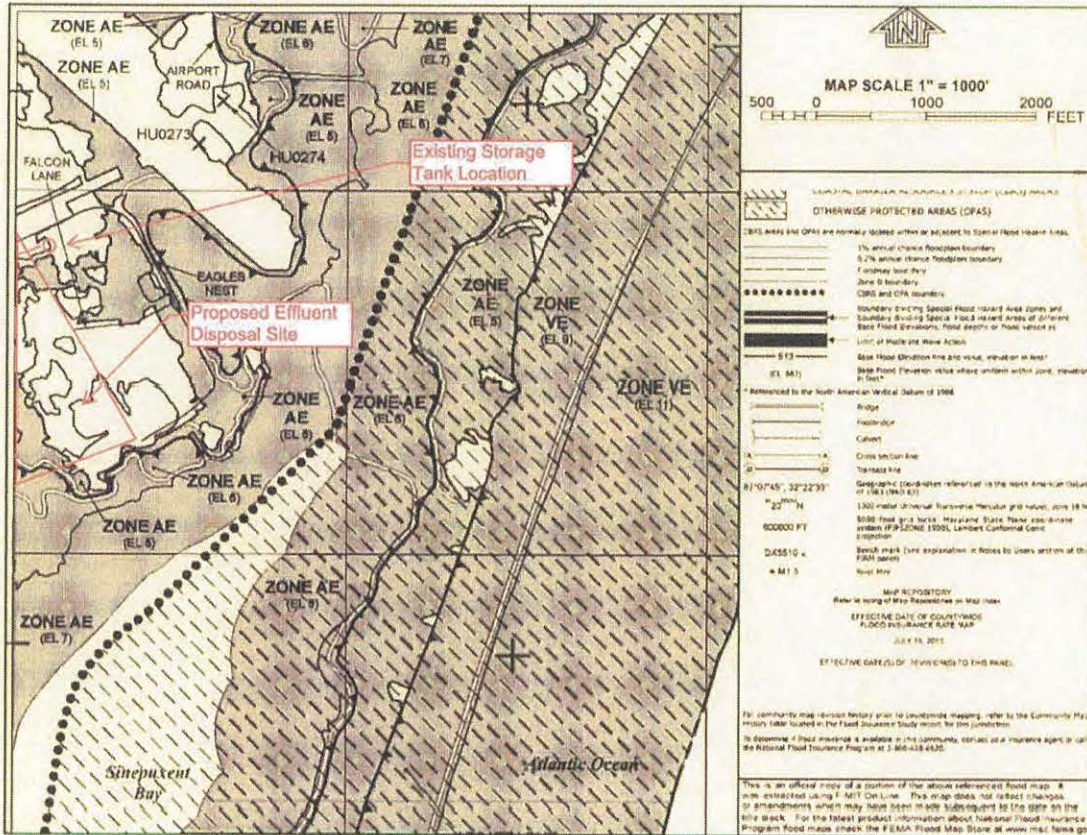


Figure 5B3: Proposed Mystic Harbour WWTP Effluent Disposal and Floodplains; Worcester County, MD

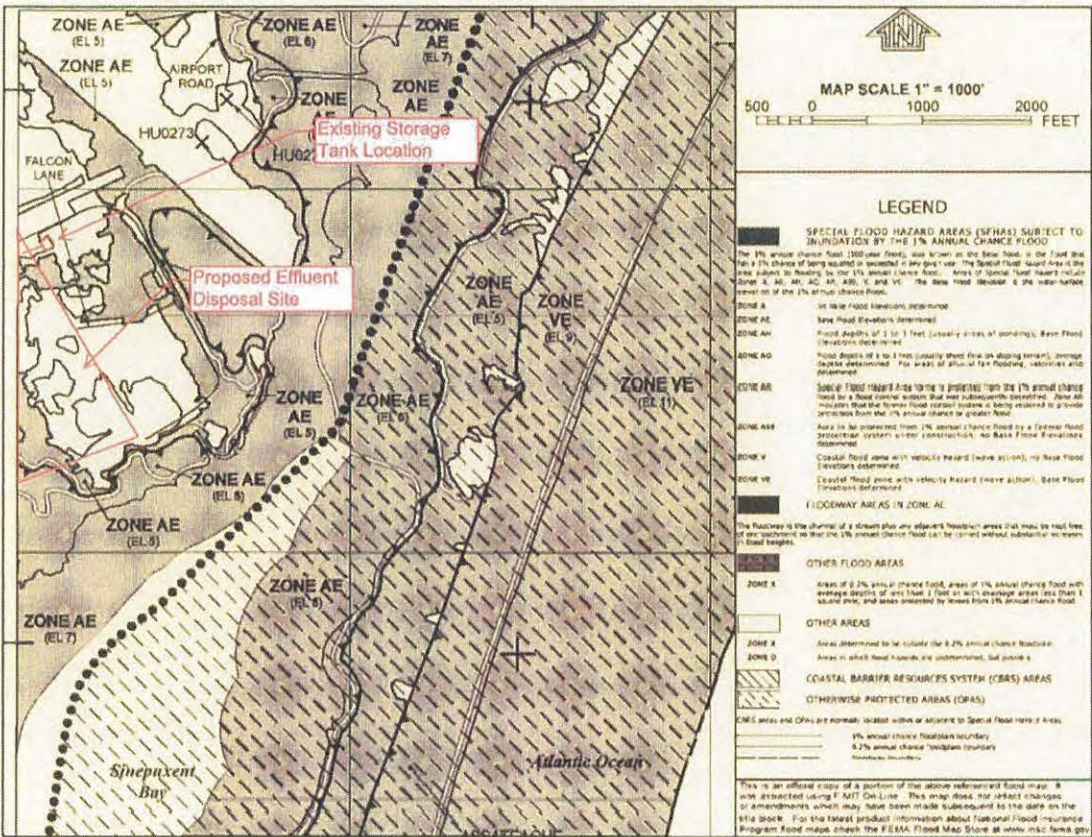


Figure 5B2: Proposed Mystic Harbour WWTP Effluent Disposal and Floodplains; Worcester County, MD

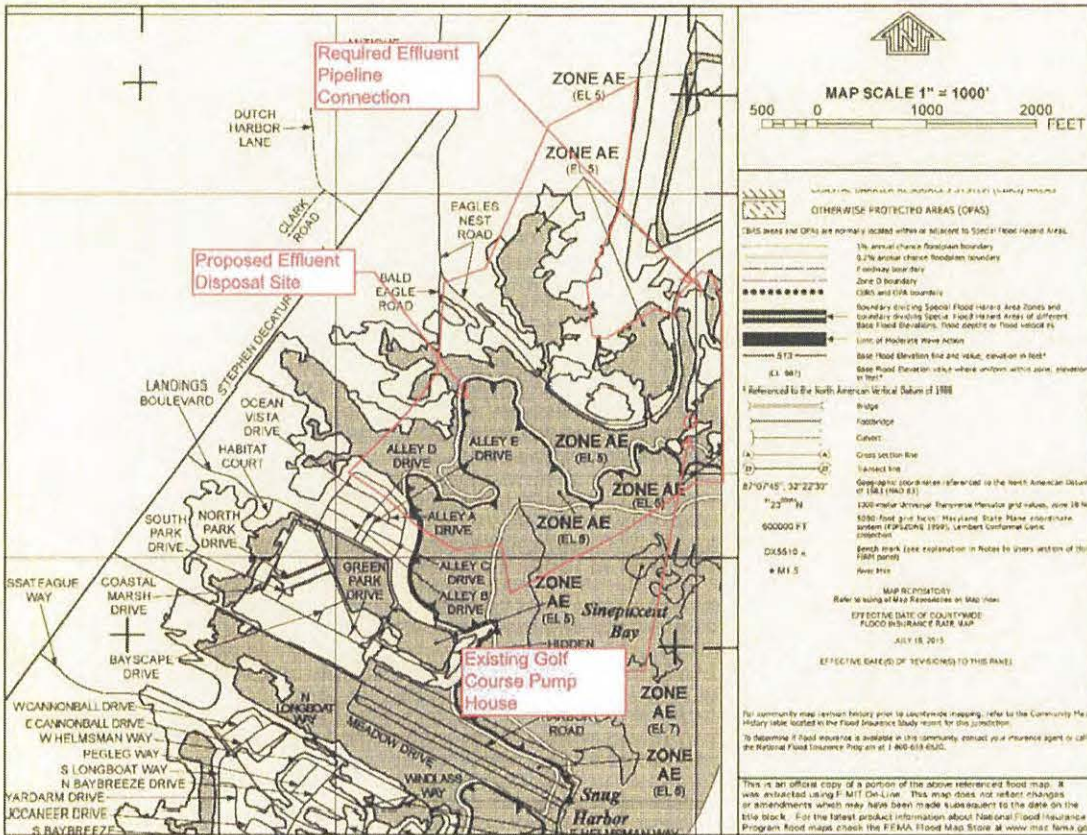
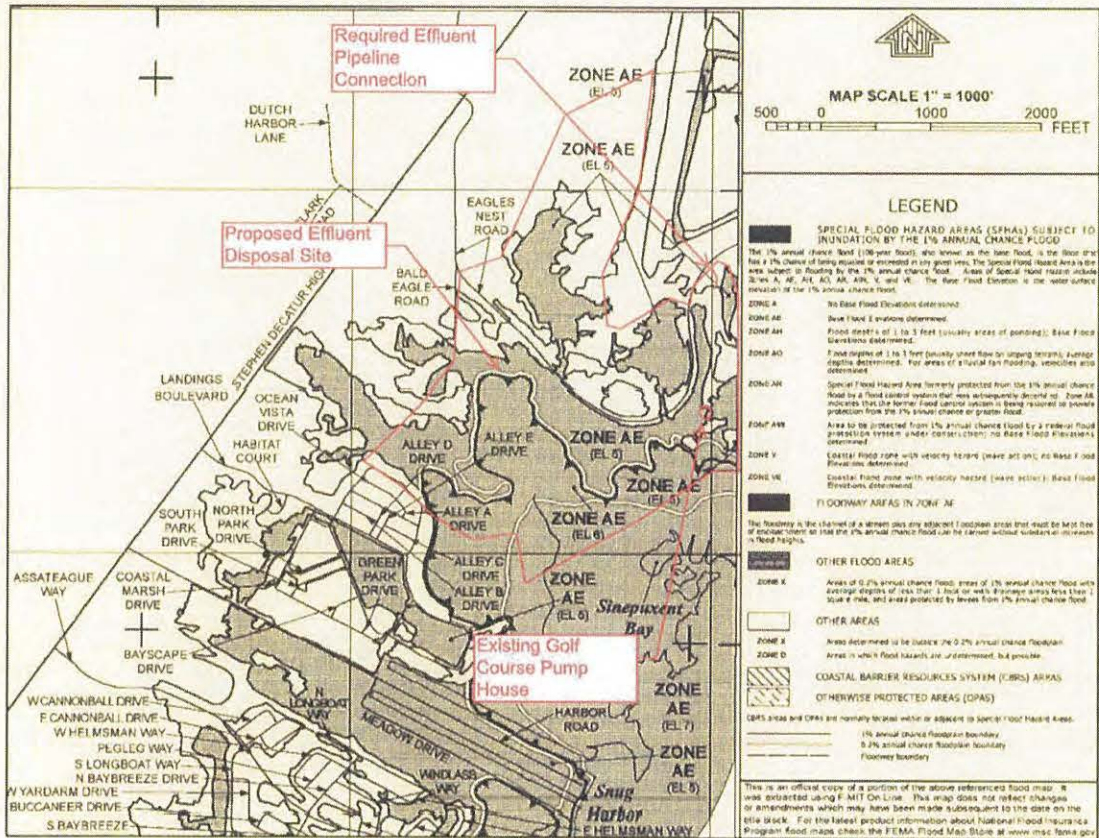
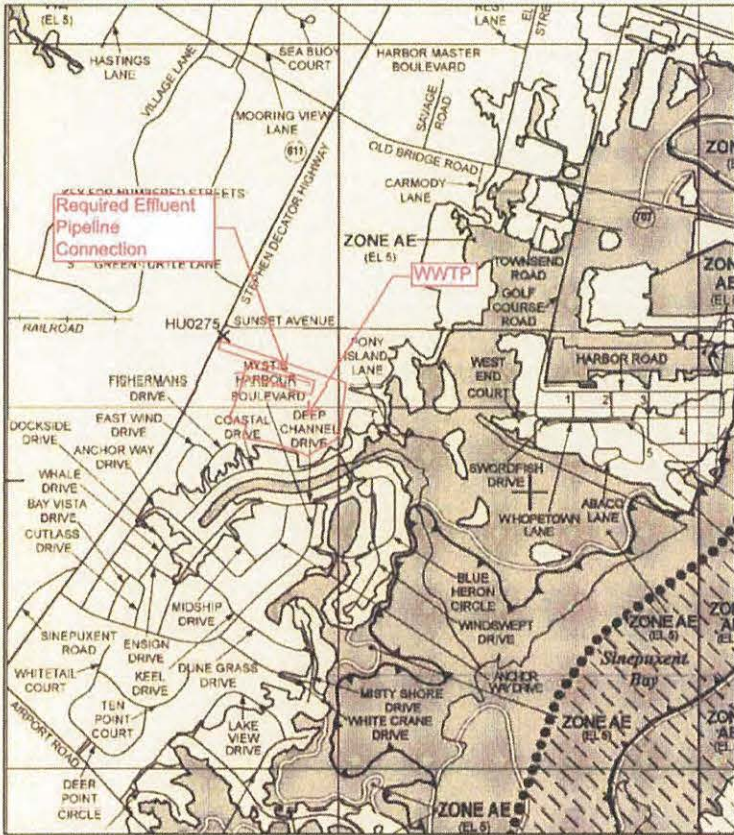



Figure 5B1: Proposed Mystic Harbour WWP Effluent Disposal and Floodplains; Worcester County, MD






 MAP SCALE 1" = 1000'
 0 1000 2000 FEET


PANEL 0180H

FIRM
 FLOOD INSURANCE RATE MAP
 WORCESTER COUNTY,
 MARYLAND
 AND INCORPORATED AREAS
 PANEL 180 OF 450
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:
 COMMUNITY NUMBER PANEL SHEET
 WORCESTER COUNTY 00000 0180 1

NOTE:
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DATES TO USE: This Map Number should be used to determine the effective date of the map. The date of the map should be used to determine the effective date of the map.


MAP NUMBER
 24047C0180H
EFFECTIVE DATE
 JULY 18, 2015
 Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

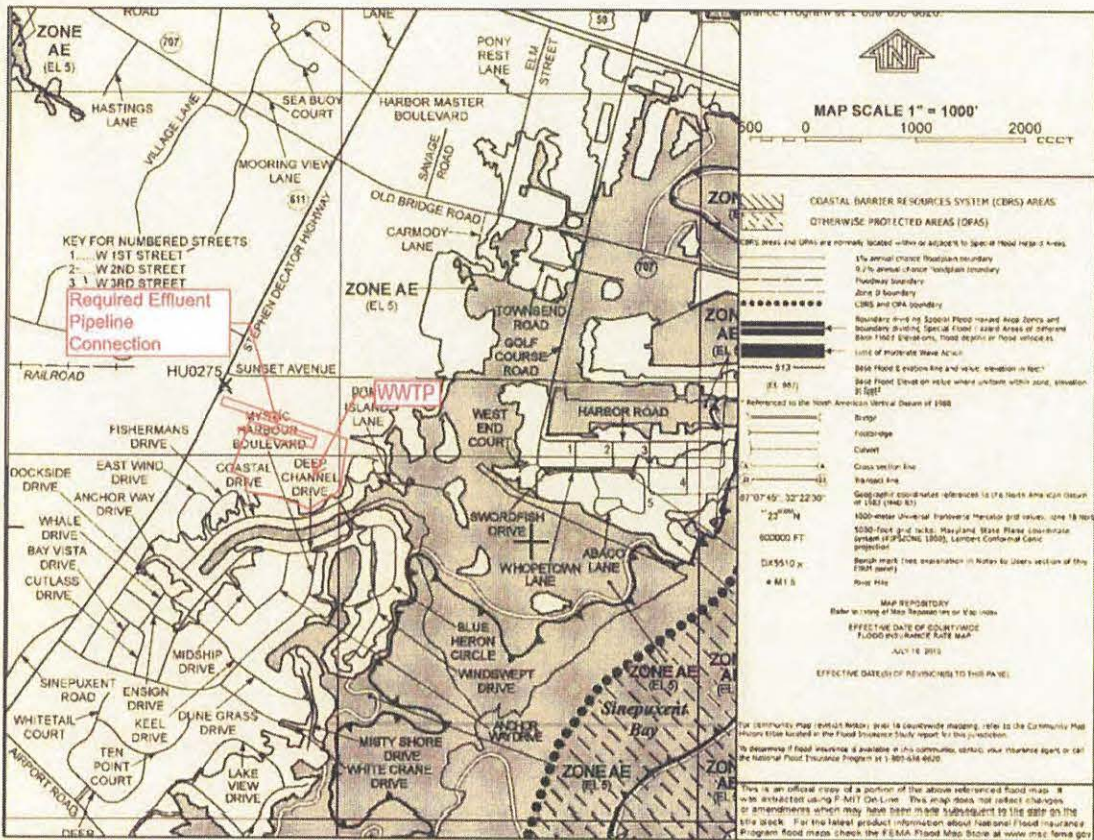
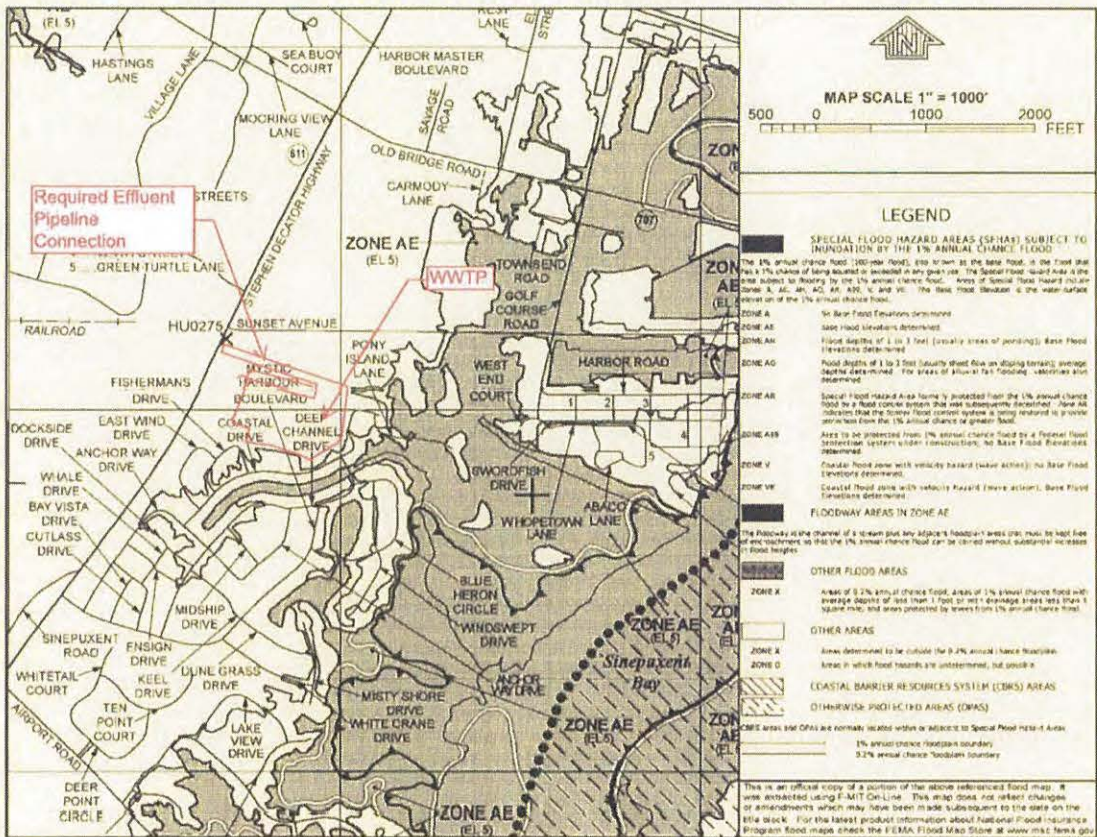


Figure 5A1: Proposed Mystic Harbour WWT Effluent Disposal and Floodplains; Worcester County, MD





U.S. Fish and Wildlife Service
National Wetlands Inventory

Jul 31, 2015



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or completeness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

Figure 6A. Proposed Mystic Harbour WWTP Effluent Disposal and Wetlands; Worcester County, MD



U.S. Fish and Wildlife Service
National Wetlands Inventory

Jul 31, 2015



Wetlands

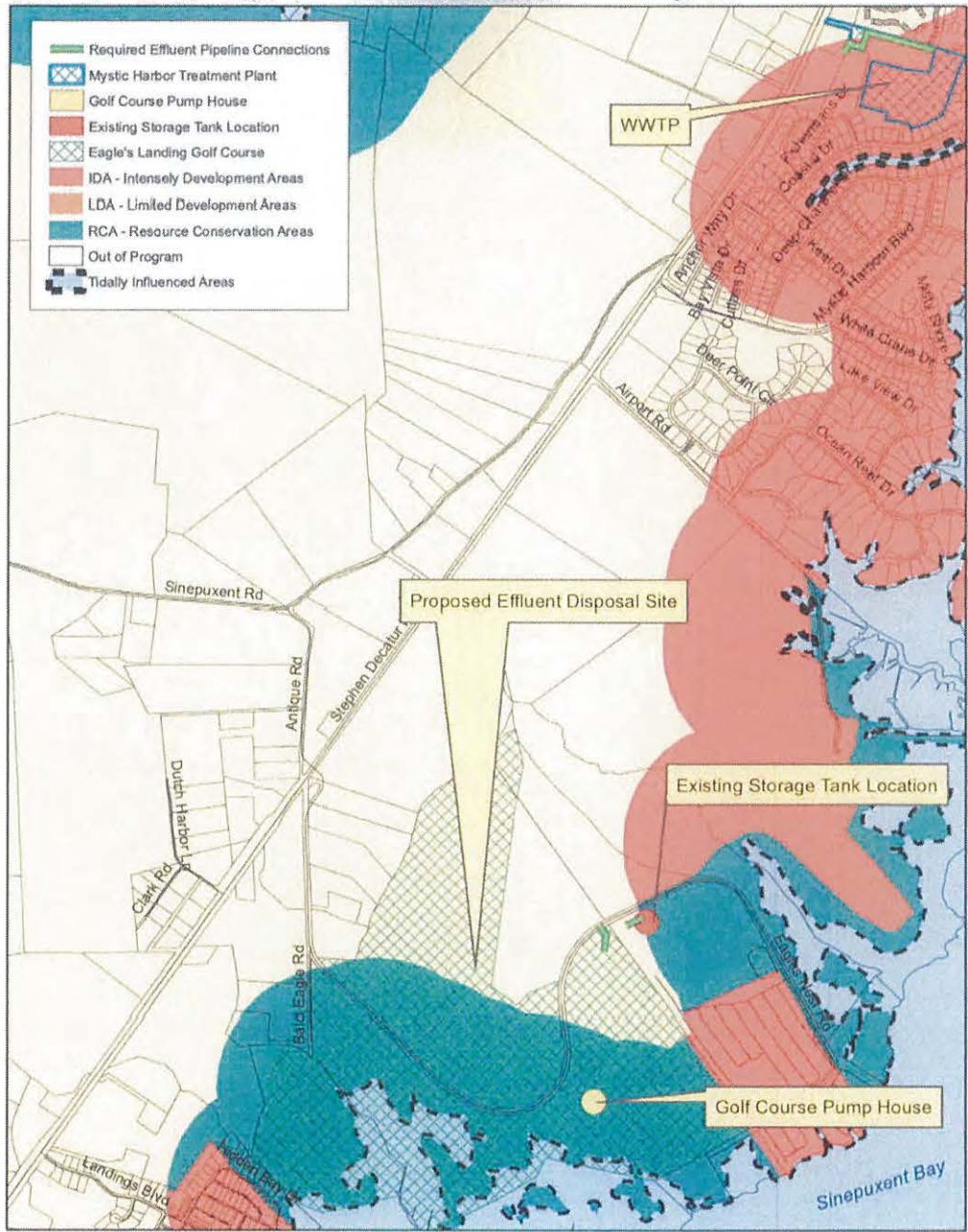
- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The U.S. Fish and Wildlife Service is not responsible for the accuracy or completeness of the data shown on this map. All wetlands-related data should be used in accordance with the paper metadata found on the Wetlands Mapper web site.

User Remarks:

Figure 6B. Proposed Mystic Harbour WWTP Effluent Disposal and Wetlands; Worcester County, MD

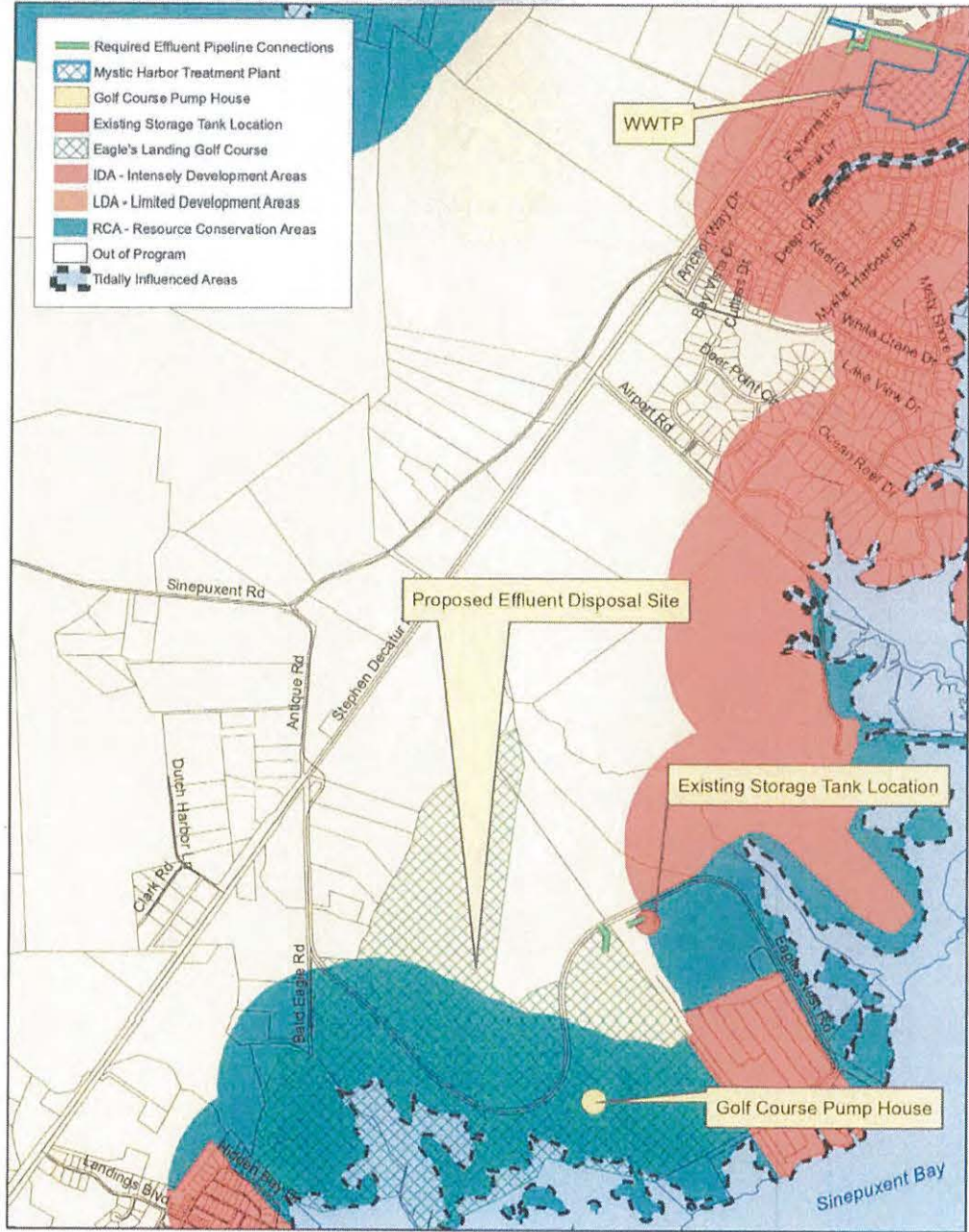
Figure 7. Proposed Mystic Harbour WWTP Effluent Disposal and Atlantic Coastal Bays Critical Area; Worcester County, MD



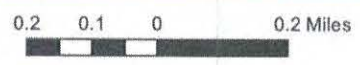
Prepared by Worcester County EP, 11/25/14.
For planning purposes only.



Figure 7. Proposed Mystic Harbour WWTP Effluent Disposal and Atlantic Coastal Bays Critical Area; Worcester County, MD



Prepared by Worcester County EP, 11/25/14.
For planning purposes only.



7.0 List of Preparers

Katherine Munson, Planner IV
Worcester County Department of Environmental Programs
Snow Hill, Maryland

Appendix E

Pump Station Capacity Information

Worcester County can submit this information during the design and engineering phase of the project in conjunction with the permitting of the major construction elements necessary to complete the addition of the outfalls.

Appendix F

**Worcester County –
Town Agreement to
Accept Flow From WOC**

SEWERAGE TREATMENT FACILITIES TRANSFER AGREEMENT

THIS AGREEMENT made this 28 day of June, 1994 by and between THE COUNTY COMMISSIONERS OF WORCESTER COUNTY (hereinafter Transferor) and MAYOR AND CITY COUNCIL OF OCEAN CITY (hereinafter Transferee)

WHEREAS, Title 9, Part II of the Environment Article, Annotated Code of Maryland authorizes municipalities to maintain and operate sewerage facilities; and in connection therewith to enter into contracts or agreements with counties relative to the construction, alteration, maintenance, or operation of such a system; and

WHEREAS, Title XII, § C-1201 of the Charter of Mayor and City Council of Ocean City (Ocean City) authorizes Ocean City to construct, operate and maintain sanitary sewage systems and sewage treatment plants; and

WHEREAS, Article 25B, §13E-1 of the Annotated Code of Maryland authorizes agreements between code counties and municipalities for the transfer of county owned sewerage facilities to municipalities upon certain terms and conditions; and

WHEREAS, the sewerage treatment facilities within the corporate limits of Ocean City are owned, operated and maintained by County Commissioners of Worcester County (Worcester County); and

WHEREAS, Ocean City, having determined that it is in best interests of the public's health, safety and general welfare, is desirous of owning, operating and maintaining the sewerage treatment facilities within its own corporate boundaries; and

WHEREAS, Worcester County is desirous of Ocean City owning, operating and maintaining the sewerage treatment facilities within Ocean City's corporate boundaries.

NOW, THEREFORE, THIS AGREEMENT WITNESSETH: That for and in consideration of the sum of Ten Dollars (\$10.00) and other good and valuable considerations the receipt and sufficiency of which is hereby acknowledged, the parties hereto covenant, warrant, and agree as hereinafter provided:

I

GENERAL INTENT AND PURPOSE

The parties hereto acknowledge and agree that it is the intent and purpose of this Agreement that Transferor shall convey unto Transferee all the assets of Transferor's sewerage treatment facilities located within the corporate limits of Transferee, including real property, personal property, permits, licenses, leases, easements, rights of way, accounts receivables, operating accounts, reserve fund accounts and all other matters and items involved in the operation of said sewerage treatment facilities; and any interpretations of this Agreement are to be resolved in favor of the complete transfer of assets, provided however, that at all times any interpretations are subject to the aforementioned Article 25B, Section 13 E-1.

II

ARBITRATION

The parties hereto, being governmental agencies, agree that it is not in the best interest of the public to institute litigation over any disputes which might arise under this Agreement unless absolutely necessary, and to that end the parties agree to meet and attempt to resolve all matters. In the event a resolution cannot be reached, each party agrees to appoint two elected members from its respective party to arbitrate a resolution of such disputes to be submitted to each party for approval. If such an arbitration cannot be agreed upon, then, and only then the parties agree to submit such issue to the Circuit Court for Worcester County for Declaratory Relief.

III

TRANSFER OF ASSETS

Effective as of midnight June 30, 1994 Transferor shall transfer, convey and assign onto Transferee, the following:

- A. Real property described on Exhibit A
- B. Personal property described on Exhibit B
- C. Leases described on Exhibit C
- D. Easements and Rights of Way described on Exhibit D
- E. Federal and State Permits described on Exhibit E
- F. Licenses described on Exhibit F
- G. Contracts described on Exhibit G
- H. Accounts receivables described on Exhibit H
- I. Operating accounts described on Exhibit I
- J. Reserve Fund accounts described on Exhibit J
- K. All pipes, sewer lines and sewerage treatment facilities within the corporate limits of Transferee including the ocean "outfall" pipe located at 64th Street described on Exhibit K.

All assets are to be conveyed by Transferor to Transferee "where is - as is" with no warranties but with a covenant to execute further assurances.

IV

ACCOUNTS PAYABLE AND BONDED INDEBTEDNESS (DEBTS)

Transferee covenants and agrees to assume all accounts payable incurred in the normal course of business associated with the assets to be conveyed hereunder and to indemnify and hold harmless Transferor on account of same. Transferor is indebted under certain General Obligation Bonds described on Exhibit L. Transferee covenants and agrees to assume the payment obligations under said Bonds and to indemnify and hold harmless Transferor on account of same. To assure the indemnification and hold harmless hereunder, Transferee covenants and agrees to pledge, to the extent permitted by law, its full faith and credit to the full extent of its ad valorem

taxing powers to pay said debts, and to impose upon all users of the sewerage treatment facilities transferred hereunder such fees, charges, and assessments as are requisite to pay all costs associated with the annual operation and maintenance of such sewerage treatment facilities and for the repayment of such bonded indebtedness. Transferee covenants and agrees that all monies transferred as Reserve Fund accounts shall only be expended to repay bonded indebtedness assumed hereunder, and for no other purpose. Transferee agrees to deliver an opinion of counsel as to the effectiveness and authority of Transferee to so assume such obligations and pledge its full faith and credit acceptable to Transferor.

V

EMPLOYEES

The employees, listed on the Exhibit M, shall be transferred to Transferee and Transferee shall accept such employees into its personnel with all benefits currently enjoyed and prospectively to be enjoyed as all of Transferee's employees enjoy except that, in no circumstance, shall such employees receive benefits, including pension, less than that currently enjoyed by such employees. To that end, Transferee, in conjunction with Transferor, agrees to maintain and make annual contributions to the current Sanitary Commission Nationwide Pension Plan for those employees transferred hereunder; provided, however, that all future full time employees of Transferee assigned to sewerage treatment facility responsibilities shall become members of Transferee's general employee pension plan.

The parties agree that Clifton Dale, one of the employees listed on Exhibit M, who is on medical/disability leave resulting from an automobile accident, shall remain as a Transferor employee until such time as he is able to return to work at which time he shall become an employee of Transferee. Notwithstanding same, Transferee shall reimburse Transferor for

all sums advanced by Transferor attributable to his employment, i.e. salary, pension, medical insurance and other benefits of employment, but excluding any medical or disability payments made to or on behalf of Clifton Dale. For pension purposes, Clifton Dale shall remain with the Nationwide Plan notwithstanding his "official" employment with Transferee at a subsequent date.

VI

LABORATORY TESTING

The laboratory testing facilities, utilized by Transferor for many testing procedures other than the sewerage treatment facilities being transferred hereunder, are a part of the assets to be transferred to Transferee hereunder. Transferee covenants and agrees to offer to test submittals of Transferor at the actual cost of such testing procedure to Transferee in accordance with the agreement listed on the Exhibit M.

VII

WEST OCEAN CITY

The effluent from the West Ocean City Sanitary District is being treated and discharged through the sewerage treatment facilities being transferred hereunder. Transferee agrees to continue to treat and discharge said effluent, as follows:

A. Transferor shall be responsible for the collection of said effluent in West Ocean City and the pumping and transfer of said effluent under the bay to the manhole located along the western side of Baltimore Avenue at 15th Street at which point the balance of the system will be owned by the Transferee, including said manhole.

B. Transferee shall be responsible for the pumping and transfer of said effluent from 15th Street to the 64th Street sewerage treatment facilities, the treatment thereof at said location, and the transfer and discharge of said treated effluent at the 64th Street "outfall."

C. Transferee shall bill Transferor, on or about July 1, annually, for the cost of such service as set forth on Exhibit O. Transferor shall pay said invoice on or before September 30 of each year, and if and to the extent not timely paid, interest shall begin to accrue on any unpaid portion at the rate of interest chargeable on delinquent county real estate taxes.

D. Transferee shall reserve one million (1,000,000) gallons per day for treatment and discharge of West Ocean City effluent of its current treatment and discharge capacities.

E. It is the intent of this agreement and both parties agree that, in any event, the charges to Transferor for treatment of such effluent from West Ocean City shall on a per gallon basis not to exceed the cost of treatment on a per gallon basis for treatment of effluent collected by Transferee within the corporate limits of Transferee but taking into account reasonable conveyance and administrative charges set forth on Exhibit "O."

VIII

EXPANSION OF FACILITIES

A. Transferee, upon application and receipt of all necessary permits, may expand the sewerage treatment facilities for service within the corporate limits of Transferee, as same are determined as of July 30, 1994 (current limits).

B. Transferee, upon the majority vote of the elective bodies of Transferee and Transferor and upon application and receipt of all necessary permits, may expand the sewerage treatment facilities for service outside the current limits of Transferee.

C. In event of any expansion, Transferee shall offer to Transferor, and upon acceptance by Transferor, Transferee shall reserve capacity from such expansion as set forth in Exhibit F. In the event Transferor accepts the proportionate reservation of the expansion, the costs of such expansion shall be paid by

Transferee and Transferor in the same proportionate amount as set forth in Exhibit P, and billed by Transferee to Transferor as set forth in Section VII C hereof.

D. It is the intent of this agreement and both parties agree that, in any event, charges to Transferee for expansion costs shall be fairly determined so that customers of Transferor in West Ocean City shall pay their share of the cost of expansion in the same manner and amounts as required by Transferee from customers within the corporate limits of Transferee.

IX

FUTURE COOPERATION

The parties hereto anticipate that future growth in both northern Worcester County and Ocean City may strain the capacities of the sewerage treatment facilities to be transferred hereunder and Transferor's other sewerage treatment facilities. However, the parties hereto also recognize that the maximum impact on the respective sewerage treatment facilities is seasonal, i.e., Transferee is at maximum usage during the summer; Transferor's spray irrigation fields are at maximum capacity during the winter and spring because of high water tables. The parties hereto agree to use good faith efforts to cooperate with each other toward shared facilities usage if the future needs so demand. It is the intent hereof that Transferee's "outfall" could discharge Transferor's excess treated effluent in the winter and spring, and Transferor's spray irrigation fields could accept Transferee's excess treated effluent in the summer.

X

COMPLIANCE WITH STATE LAW

Notwithstanding any provision hereof, both parties shall comply with all provisions of Section 13E-1 of Article 25B of the Annotated Code of Maryland.

XI
SURVIVAL

This Agreement and each and every covenant, term and condition hereof shall be deemed to survive the transfer of assets and not merge therewith.

AS WITNESS the hands and seals of the parties hereto, the day and year first above written.

THE COUNTY COMMISSIONERS OF
WORCESTER COUNTY

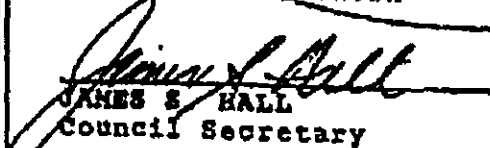

~~JOHN A. TAMM~~
~~MEMBER OF THE BOARD~~

By: 
JOANNE LYNCH, President

MAYOR AND CITY COUNCIL OF
OCEAN CITY


~~DANIEL JACOBS~~
~~Mayor~~

By: 
ROLAND E. POWELL, Mayor


JAMES S. HALL
Council Secretary

By: 
RICHARD W. MEHAN
Council President

TELEPHONE 410-632-1184
FAX 410-632-3131



OFFICE OF THE
COUNTY COMMISSIONERS

Worcester County

ROOM 112 COURT HOUSE
SNOW HILL, MARYLAND
21863

April 22, 1994

COMMISSIONERS
JEANNE LYNCH, PRESIDENT
FLOYD F. BASSETT, JR., VICE PRESIDENT
JOHN E. BLONDM
REGINALD T. HANCOCK
GEORGE M. HURLEY

JOHN A. YANKUS
DEPUTY ATTORNEY GENERAL
EDWARD H. HAMMOND, JR.
COUNTY ATTORNEY

APR 1994

21-98658

The Mayor and Council of Ocean City
Post Office Box 158
Ocean City, Maryland 21842

Dear Mayor and Council Members:

Upon further review and discussion, and in consideration of your letters of April 4, 1994 and April 8, 1994, the County Commissioners have agreed to authorize the transfer of the Ocean City sewage facilities to the Town of Ocean City. The transfer shall be subject to the County's completion of legal requirements specified for the transfer of County property and to the general following conditions:

- * The official transfer of the assets, liabilities, and fund balances shall occur on June 30, 1994.
- * Management control may pass to the Town of Ocean City upon the transfer of the employees (which may occur at an earlier date than June 30, 1994). The County will remain responsible for making payment, from the Ocean City Service Area Operating Account, for all operating expenses until June 30, 1994.
- * Ocean City shall be responsible to reimburse the County for payments made on all outstanding bond issues for the system. All of the remaining fund balance in the Capital Projects Fund for the Ocean City Service Area shall be transferred to Ocean City on June 30, 1994 with the condition that those funds may only be used to provide for payments relating to the Series G bonds.
- * Use of the ocean outfall pipe will be limited to the current boundaries of Ocean City and the West Ocean City sewage service area. Any further expansion shall require the joint approval of both the County Commissioners and the City Council by Public Local Law and municipal ordinance, respectively.
- * The County and other municipalities within the County will be guaranteed continued at-cost laboratory services from the City.

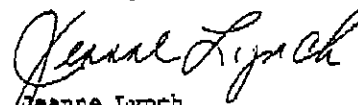
Page Two
Mayor and Council of Ocean City
April 22, 1994

* All employees transferred to the City will be guaranteed no loss of pay or vested benefits. The transfer of employees shall occur as soon as possible in general conformance with the provisions set forth in the draft Agreement concerning the transfer of employees which was prepared earlier this year (a revised Agreement is attached hereto). The County will reimburse, from the Ocean City Service Area Operating Account, the City for all payroll and employee benefit costs on a bi-weekly basis pending the transfer of the assets and fund balances.

* The West Ocean City Service Area will continue to be guaranteed LMGD in sewage treatment capacity through the Ocean City plant at a cost established pursuant to formulae based upon the proportionate flow attributable to the West Ocean City Service Area. West Ocean City will be entitled to purchase a proportional share of any Ocean City plant expansion.

We understand that the County Attorney and the City Attorney are working together to prepare the official transfer documents which shall detail all of the conditions of the transfer. We are glad that both City and County officials have been able to reach mutual agreement with regard to all of these provisions and we look forward to the timely and successful completion of this transfer.

Sincerely,


Jeanne Lynch
President

cc: John Tustin
Matthew Azzolini
Gerald Mason

Appendix G

Worcester County – Town Agreement to Accept Flow From Mystic WWTP

MEMORANDUM OF UNDERSTANDING
BETWEEN THE
MAYOR AND CITY COUNCIL OF OCEAN CITY ("the Town")

AND

THE COUNTY COMMISSIONERS OF WORCESTER COUNTY, MARYLAND
("the County")

SUBJECT: Spray Irrigation-Eagles Landing Golf Course

As of / /2014

WHEREAS, the County owns and operates a wastewater treatment facility serving the residents of Mystic Harbour and other properties within a close proximity thereof; and

WHEREAS, the County needs a disposal site for reuse of its treated wastewater effluent being discharged from its treatment facility; and

WHEREAS, the Town owns and operates a golf course facility known as Eagles Landing Golf Course, which is in close proximity to the Mystic Harbour Wastewater Treatment Facility; and

WHEREAS, it has been determined from usage at other locations that golf courses are a preferred discharge area for reuse of treated wastewater effluent through what is known as a spray irrigation system; and

WHEREAS, the current irrigation system at Eagles Landing Golf Course utilizes ground water from the aquifer beneath the golf course and said irrigation system has been in utilization for approximately 25 years and is in need of significant repair if not total replacement; and

WHEREAS, the town has buildings at their golf course and airport which are currently being served with water from wells and discharging wastewater into septic systems, of which one septic system has failed, and therefore requires the town to pump and haul at additional expense; and

WHEREAS, the Town and the County have reached an agreement for a new spray irrigation system to be installed at Eagles Landing Golf Course which will be utilized to reuse the treated wastewater effluent from the Mystic Harbour Wastewater Treatment Facility to irrigate the golf course; and

WHEREAS, the Town and the County desire to enter into this Memorandum of Understanding ("MOU") to set forth the covenants, agreements, and obligations of the respective parties to accomplish the purposes hereinafter set forth.

NOW, THEREFORE, this MOU witnesseth: that for and in consideration of the mutual covenants, agreements and obligations of each of the parties hereto, the County and the Town agree as follows:

1. Purpose. This MOU defines the terms by which the Town will allow the treated wastewater effluent to be stored and spray irrigated on the lands of the Eagles Landing Golf Course and defines the terms under which the Town/County will undertake to construct, install, operate and maintain the storage and spray irrigation system on the property of the Town.
2. Scope. This MOU includes the planning, construction, installation and utilization of the holding ponds and spray irrigation system; and this MOU shall remain in full force and effect for the duration of an easement from the Town to the County as hereinafter set forth unless earlier terminated by either party for cause, and not for convenience.
3. Obligations of the Town.

(a) The Town shall pass such Ordinance(s) that is/are necessary for the Town to enter into this MOU and to create the easement required hereunder for the purposes herein contained.

(b) The Town shall grant and convey unto the County an easement for a term of 40 years over such property as the County's wastewater treatment engineers and surveyors deem are necessary for the location and containment of the holding ponds and spray irrigation system, said easement shall be in writing, in recordable form, and will be recorded among the Land Records for Worcester County to fully protect the County's interest in said easement and to evidence that said easement "runs with the land".

At the end of each 40 year term, the county may renew the easement for an additional 40 years upon the same terms and conditions contained herein, except that there shall be no payment for the spray rights, provided that the spray irrigation system meets current state of the art conditions.

(c) Pursuant to Section IX of the Sewerage Treatment Facilities Transfer Agreement, between the parties hereto, under date of June 28, 1994, the Town agrees to allow treated effluent redirection, on an "as needed basis only" to the Town's Ocean City Wastewater Treatment Plant and Outfall because of the seasonal nature of the County not being able to spray irrigate during the winter months and the Town's excess capacity because of the seasonal nature of its usage. Any redirection shall be pursuant to an operating strategy agreed to by the parties hereto and contained in attachments B and B-1. The cost to be paid by the County for said redirection will be at the cost as calculated from Section VII of said Agreement.

(d) Provide to the County usage of the designated golf course ponds for storage of excess treated effluent under certain conditions set forth in the obligations of the County.

(e) To pay the County the annual operation, maintenance and usage fees for sewer and water, if provided, on the same terms and in the same amounts as paid by the users of the County's wastewater treatment facilities and potable water facilities.

(f) The reuse of the treated effluent from the County shall be the first priority for spraying the golf course subject to the operating strategy in attachments B and B-1.

4. Obligations of the County.

(a) The County shall pass such legislation that is/are necessary for the County to enter into this MOU and to accept the easement required hereunder for the purposes herein contained.

(b) Provide to the Town a new state of the art spray irrigation system to provide 100% coverage of the golf course. Effluent irrigation coverage of the golf course will be to the maximum extent allowed by the Maryland Department of the Environment ("MDE"). Fresh water will be used as required by MDE. Specifications will be developed by the Town and designed to meet the needs of both parties. The County shall participate in the approval process of the design and component submittal process. All permits, licenses and expenses related to the installation of the effluent irrigation system will be paid by the County. All contractors, suppliers, consultants and engineers working on golf course property will be approved and/or selected by the Town. Materials and equipment will also be selected and/or approved by the Town. This project will require an Irrigation Association (IA) Certified Irrigation designer and consultant. That cost is included in the estimated project costs. Any work associated with the construction and maintenance of the spray irrigation system needed to be performed by the County or their agents will have to be approved and coordinated with the Town. A Pre-engineering estimate of the spray irrigation system costs are as follows:

- (i) Irrigation system-\$1,200,000 based on \$1,500 per head and approximately 800 sprinkler heads. This includes all pipe, wire, controllers, design and installation and warranty. Price is based on the average of two recent Municipal Maryland projects of similar scope.
- (ii) County will pay to town the sum of \$185,000 for spray rights for the initial term of this agreement.
- (iii) Irrigation design and consulting services-\$50,000
- (iv) Bridge and road crossings-\$40,000
- (v) Mobilization-\$5,000.
- (vi) Contingency-\$100,000.

Total estimate- \$1,580,000

(c) If determined by the County to be necessary and financially and engineering feasible, it shall complete dredging of the golf course ponds for storage of excess treated effluent and any improvements, including but not limited to any required lining of the ponds; shall be designed by the County using Town parameters, but must then be approved by the Town prior to construction, and paid for by the County. The parties hereto acknowledge and agree that certain aesthetic improvements may be needed to the ponds, such as bulkheading, disposal of dredge material, etc. which the County will be responsible for providing. No fencing will be permitted around the storage ponds, and if fencing is required by the Environmental Protection Agency ("EPA"), MDE or any other regulatory agency, the ponds cannot be used for the storage of the treated effluent. Signage can be placed informing the public that treated effluent is in use provided same is required by the EPA, MDE, or any other governmental agency. All liability, if any, in the event of off site release of treated effluent waters due to storms, equipment failure, or faulty design shall be the liability of the County which shall also indemnify and save harmless the Town on the account of same. County will provide assistance in engineering pond overflow systems to mitigate these potential hazards.

(d) The County shall pay all utility bills associated with the use of the spray irrigation system which is currently served by its own electric meter.

(e) Costs for maintenance, repair and replacement, including labor for repairs, of the spray irrigation system, including any permit required groundwater monitoring, shall be the sole expense of the County. Repair labor costs for repairs performed by the town shall be paid for by the county on a flat fee basis as determined by the parties hereto. the county shall fund the future replacement of the system by cash, borrowing or bonding.

(f) After the first ten years of full operation and every five years thereafter, the County will pay for an Independent Irrigation System Evaluation in order to plan for maintenance and capital improvements and to maximize and protect the investment for both the Town and the County. The County shall perform such maintenance within 12 months after the audit and make such capital improvements prior to the next audit.

(g) Allow the Town to connect the following buildings to the County's water and wastewater system and provide a total of 32 wastewater equivalent dwelling units ("EDUS") and 12 water EDUS:

Airport-all buildings for water and wastewater

Golf course and club house-wastewater only

Humane society/golf course maintenance building- wastewater only

The County will run the wastewater lines to the Town's property lines at the County's expense for the golf course and Humane Society. The Town will construct all piping for the airport connection. All laterals constructed on town property shall be at the expense of the Town. The Town shall access the water from the Lions Club at the Town's expense.

(h) Provide the Town with a credit for water and wastewater equivalent dwelling unit equity contribution charges and future capital improvement charges valued at \$266,784.00.

(i) Provide the Town with compensation for future wastewater equivalent dwelling unit charges at the Town facilities valued at \$245,760.00. Compensation for future EDU charges at the Town facilities is computed based upon Mystic Harbour Wastewater Treatment Plant debt of \$48 per quarter per EDU, for 32 EDUS, at a total of \$6,144 per year over 40 years for a grand total of \$245,760.

(j) Treated effluent waters to be used on the golf course can have no setback or use restrictions except where required by MDE. The Town is the sole decision maker regarding where, when and how much treated effluent water will be spray irrigated. Treated effluent waters to be used on the golf course will have to be tested regularly at the MDE authorized outfall, but not less than monthly, for turf grass irrigation suitability. Amendments needed to correct water quality will have to be paid for by the County as would be the testing and consultation. In the event water quality cannot be made to meet established irrigation suitability guidelines effluent water will not be used until standards are met. The Town has established a list of water quality parameters that must be tracked to ensure that the treated effluent water is suitable for golf course irrigation purposes. These parameters are denoted as Attachment A, appended hereto. The County will be responsible for monitoring these parameters and/or paying for the cost of the Town to do so, ensuring that they are within acceptable standards, and taking corrective actions in the event that there is a problem in meeting the standards. All effluent monitoring information will be shared with the Town on a regular basis and will be made available at any time upon request.

5. The parties hereto agree that all prices mentioned herein are engineering estimates and are subject to change. Any cost overruns in excess of those stated herein shall be born by the County, and any savings on those listed herein shall be to the benefit of the County.
6. The County will continue to provide an "Airport Protection District" as currently found in the County Code Section ZS 1-302. The County agrees to notify the Town, in writing, of any rezoning, variance or special exception requests, or any requested residential development within the "Airport Protection District" as described in the aforesaid ZS 1-302 (c).
7. Liability, Indemnification and Hold Harmless: County and Town recognize that there are inherent risks associated with a spray irrigation system and County acknowledges and agrees that Town will not assume nor be liable for any losses or damages associated with such risks, including the golf course which the County shall repair at its expense; and that County shall indemnify and hold harmless the Town for same except for negligent acts of the Town.
8. Notice and Right to Cure. If either party believes the other party is in breach of this MOU, that party shall give written notice of the alleged breach and the other party shall

have 30 days to cure same or provide satisfactory information as to why it is not in breach of this MOU.

9. Termination for Cause. A breach of this MOU, which is not timely cured, shall be at the option of the aggrieved party grounds to terminate the MOU for cause. If this MOU is terminated by the Town for cause, then the Town shall be obligated to reimburse the County in accordance with the amortization schedule attached hereto as Attachment C.
10. In the case a dispute arises regarding this MOU, which cannot be resolved by the parties, the matter shall be submitted to mediation before litigation or as otherwise agreed by the parties.
11. No Partnership. This MOU does not create a partnership or any other business entity or affiliation between the parties, other than to define the respective rights and obligations of the parties as to the spray irrigation system at Eagles Landing Golf Course.
12. Final Agreement. This MOU represents the final agreement between the parties hereto, and shall only be amended or modified by written agreement between the parties.
13. This MOU shall be governed by the laws of the State of Maryland, and in particular, the express powers of each of the governmental bodies that are parties hereto.
14. This MOU is effective when signed below and shall be terminated at the end of the easement period unless earlier terminated for cause. If terminated for any reason, the Town shall give the County five (5) years before the termination takes effect. During the five (5) year period, the effluent shall be redirected pursuant to paragraph "3C" of this agreement. If terminated by the County for any reason, the County shall not have the five (5) years as aforesaid and the Town shall not be required to amortize any existing debt; and the system shall be state of the art at termination.
15. The County's obligations under this MOU are contingent upon the county receiving satisfactory financing and an MDE Discharge Permit.

Witness the signatures of the undersigned parties as of the day and year first above written.

County Commissioners of Worcester County,
Maryland

Mayor and City Council of Ocean City,
Maryland

By: 
James C. Church, President

By: 
David L. Recor, City Manager

ATTACHMENT A

Water Quality Parameters for Golf Course Irrigation Suitability

NOTE: Monitoring Frequency 1/month for all parameters

Parameter	Goal (QUARTERLY AVERAGE)
Sodium	< 70 parts per million (ppm)
Chloride	< 140 ppm
Calcium	> 20 ppm
Carbonates	< 50 ppm
Bicarbonates	> 120 ppm
Sulfates	< 180 ppm
Ammonium Nitrate (NH ₄)	< 10 ppm
Nitrate (NO ₃)	< 10 ppm
Phosphorus	Monitor
Potassium	Monitor
Magnesium	Monitor
Iron	< 5 ppm
Boron	< 2 ppm
Total Alkalinity	<150 ppm
Total Dissolved Solids (TDS)	< 650 ppm
pH	6.0 – 8.5 Standard Units

Others – the effluent water shall comply at all times with the limitations set forth in the Mystic Harbour Wastewater Treatment Plant's State of Maryland Discharge Permit.

NOTE: The parameters and/or their respective numeric limitations may be changed in the future if conditions indicate that it is necessary to do so and if such changes are agreed upon in writing by both the County and the Town. Such a change may be authorized at Staff level, by the Public Works Director of the County and the Golf Course Superintendent of the Town with written notification provided to the Town and County.

Attachment B
Worcester County/Town of Ocean City Operating Strategy
Effluent Reuse and Diversion from the Mystic Harbour Wastewater Treatment plant
May 2014

Introduction

This strategy is developed to describe the operations and procedures for the reuse of effluent from the Mystic Harbour Wastewater Treatment Plant (the treatment plant), owned by the County Commissioners of Worcester County Maryland, for irrigating the Eagles Landing Golf Course (the golf course), owned by the Town of Ocean City. The strategy will also describe the procedures for those periods when the golf course is unable to accept effluent for reuse.

Attachment B.1 shows a schematic decision matrix on the use of the various disposal alternatives.

Preferred Operation

Recognizing the benefits of a wastewater reuse program, to the extent possible, efforts will be made to maximize the use of effluent reuse in irrigating the golf course as the preferred and primary effluent disposal method for the treatment plant. To meet that goal, the system operators will maximize the use of storage and other operational measures. As long as the golf course is open and irrigating, effluent will be used to the extent possible.

To assist in maximizing the use of effluent for reuse, the County will provide the Town information (electronically as much as possible) on the volume of water available in the effluent holding tank(s) and the rate of flow being processed at the treatment plant.

It is understood that reuse of effluent for irrigation will be available during the approximate time period of April 15 to October 15 and even during that time period the golf course could be unavailable during some periods for reasons of equipment failure, weather or another reason. During periods when the golf course is not available, two alternative effluent disposal options have been developed. It is also to be understood that opportunities may arise for limited or normal utilization of effluent for irrigation outside the above referenced timeframe and that the Town and County will work together to take advantage of such favorable conditions for additional reuse events.

First Alternative – Injection Wells

When notified by the Town that the golf course is unavailable or if the ability to irrigate with effluent has been diminished for any reason, the County will begin using the groundwater injection wells for effluent disposal.

Although the injection wells require very little preparation time to be placed into operation, the Town should endeavor to provide 48 hours notice that the golf course will be unavailable for use in effluent reuse.

Second Alternative – Effluent Redirection

Recognizing that the golf course has limited availability for effluent reuse during the months of October through April and that during those periods, the wastewater treatment facilities in the Town are operating at a significantly reduced volume; effluent will be periodically redirected to the Town through the West Ocean City Sanitary Service Area. Redirection is to be used as a disposal alternative only when effluent reuse and groundwater injection are not adequate.

Prior to initiating effluent redirection, the Town's Wastewater Superintendant or an otherwise designated contact will be provided the following information:

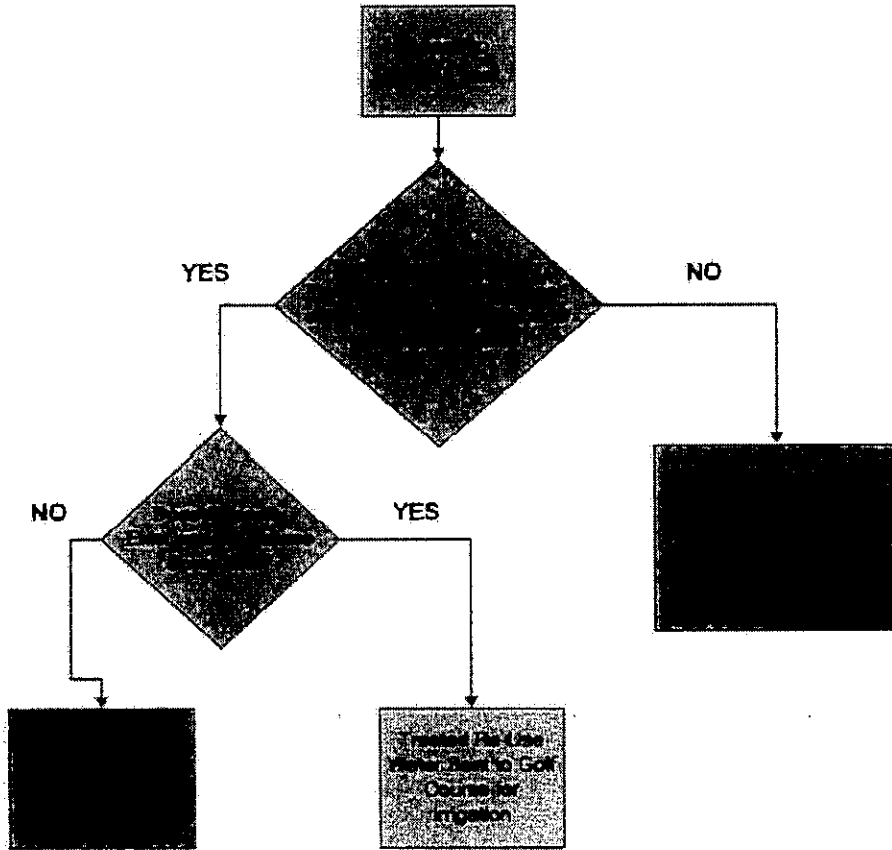
1. Date redirection will be initiated
2. Estimated duration of the redirection
3. Estimated quantity of redirection flow based on current and historical data
4. Any recent changes to the plant effluent characteristics

The Town Wastewater Superintendant will immediately notify the County if for some reason, the town is unable to accept the redirected effluent or if there are any limitations that need to be placed on the redirected flow.

The County will further notify the Town when the redirection has ceased.

Notifications are expected to be made via email.

Schematic Diagram of Proposed Effluent Disposal System for Mystic Harbour WWTP



ATTACHMENT "C"

TABJ

	A	B	D	E	H	I	J	K
1	Pmt No	Date	Total Pmt	P & I	Int Part	Prin Part	Balance	F.Y. Interest
2								
3	1	1-Jul-2014	\$20,727.32	\$20,727.32	\$13,078.40	\$7,648.92	\$2,084,895.06	
4	2	1-Oct-2014	\$20,727.32	\$20,727.32	\$13,030.59	\$7,696.73	\$2,077,198.35	
5	3	1-Jan-2015	\$20,727.32	\$20,727.32	\$12,982.49	\$7,744.83	\$2,069,453.52	
6	4	1-Apr-2015	\$20,727.32	\$20,727.32	\$12,934.08	\$7,793.24	\$2,061,660.28	\$52025.58
7	5	1-Jul-2015	\$20,727.32	\$20,727.32	\$12,885.38	\$7,841.94	\$2,053,818.34	
8	6	1-Oct-2015	\$20,727.32	\$20,727.32	\$12,836.36	\$7,890.96	\$2,045,927.38	
9	7	1-Jan-2016	\$20,727.32	\$20,727.32	\$12,787.05	\$7,940.27	\$2,037,987.11	
10	8	1-Apr-2016	\$20,727.32	\$20,727.32	\$12,737.42	\$7,989.90	\$2,029,997.21	\$51246.21
11	9	1-Jul-2016	\$20,727.32	\$20,727.32	\$12,687.48	\$8,039.84	\$2,021,957.37	
12	10	1-Oct-2016	\$20,727.32	\$20,727.32	\$12,637.23	\$8,090.08	\$2,013,867.28	
13	11	1-Jan-2017	\$20,727.32	\$20,727.32	\$12,586.67	\$8,140.65	\$2,005,726.63	
14	12	1-Apr-2017	\$20,727.32	\$20,727.32	\$12,535.79	\$8,191.53	\$1,997,535.10	\$50447.17
15	13	1-Jul-2017	\$20,727.32	\$20,727.32	\$12,484.59	\$8,242.73	\$1,989,292.37	
16	14	1-Oct-2017	\$20,727.32	\$20,727.32	\$12,433.08	\$8,294.24	\$1,980,998.13	
17	15	1-Jan-2018	\$20,727.32	\$20,727.32	\$12,381.24	\$8,346.06	\$1,972,652.05	
18	16	1-Apr-2018	\$20,727.32	\$20,727.32	\$12,329.08	\$8,398.24	\$1,964,253.81	\$49627.99
19	17	1-Jul-2018	\$20,727.32	\$20,727.32	\$12,276.59	\$8,450.73	\$1,955,803.08	
20	18	1-Oct-2018	\$20,727.32	\$20,727.32	\$12,223.77	\$8,503.55	\$1,947,299.53	
21	19	1-Jan-2019	\$20,727.32	\$20,727.32	\$12,170.62	\$8,556.70	\$1,938,742.83	
22	20	1-Apr-2019	\$20,727.32	\$20,727.32	\$12,117.14	\$8,610.18	\$1,930,132.65	\$48788.12
23	21	1-Jul-2019	\$20,727.32	\$20,727.32	\$12,063.33	\$8,663.99	\$1,921,468.66	
24	22	1-Oct-2019	\$20,727.32	\$20,727.32	\$12,009.18	\$8,718.14	\$1,912,750.52	
25	23	1-Jan-2020	\$20,727.32	\$20,727.32	\$11,954.69	\$8,772.63	\$1,903,977.89	
26	24	1-Apr-2020	\$20,727.32	\$20,727.32	\$11,899.88	\$8,827.46	\$1,895,150.43	\$47927.06
27	25	1-Jul-2020	\$20,727.32	\$20,727.32	\$11,844.69	\$8,882.63	\$1,886,267.80	
28	26	1-Oct-2020	\$20,727.32	\$20,727.32	\$11,789.17	\$8,938.15	\$1,877,329.65	
29	27	1-Jan-2021	\$20,727.32	\$20,727.32	\$11,733.31	\$8,994.01	\$1,868,335.64	
30	28	1-Apr-2021	\$20,727.32	\$20,727.32	\$11,677.10	\$9,050.22	\$1,859,285.42	\$47044.27
31	29	1-Jul-2021	\$20,727.32	\$20,727.32	\$11,620.53	\$9,106.79	\$1,850,178.63	
32	30	1-Oct-2021	\$20,727.32	\$20,727.32	\$11,563.62	\$9,163.70	\$1,841,014.93	
33	31	1-Jan-2022	\$20,727.32	\$20,727.32	\$11,506.34	\$9,220.98	\$1,831,793.95	
34	32	1-Apr-2022	\$20,727.32	\$20,727.32	\$11,448.71	\$9,278.61	\$1,822,515.34	\$46139.20
35	33	1-Jul-2022	\$20,727.32	\$20,727.32	\$11,390.72	\$9,336.60	\$1,813,178.74	
36	34	1-Oct-2022	\$20,727.32	\$20,727.32	\$11,332.37	\$9,394.95	\$1,803,783.78	
37	35	1-Jan-2023	\$20,727.32	\$20,727.32	\$11,273.65	\$9,453.67	\$1,794,330.12	
38	36	1-Apr-2023	\$20,727.32	\$20,727.32	\$11,214.56	\$9,512.76	\$1,784,817.36	\$45211.30
39	37	1-Jul-2023	\$20,727.32	\$20,727.32	\$11,155.11	\$9,572.21	\$1,775,245.15	
40	38	1-Oct-2023	\$20,727.32	\$20,727.32	\$11,095.28	\$9,632.04	\$1,765,613.11	
41	39	1-Jan-2024	\$20,727.32	\$20,727.32	\$11,035.08	\$9,692.24	\$1,755,920.87	
42	40	1-Apr-2024	\$20,727.32	\$20,727.32	\$10,974.51	\$9,752.61	\$1,746,168.06	\$44259.98
43	41	1-Jul-2024	\$20,727.32	\$20,727.32	\$10,913.55	\$9,813.77	\$1,736,354.29	
44	42	1-Oct-2024	\$20,727.32	\$20,727.32	\$10,852.21	\$9,875.11	\$1,726,479.18	
45	43	1-Jan-2025	\$20,727.32	\$20,727.32	\$10,790.49	\$9,936.83	\$1,716,542.35	
46	44	1-Apr-2025	\$20,727.32	\$20,727.32	\$10,728.39	\$9,998.93	\$1,706,543.42	\$43284.64
47	45	1-Jul-2025	\$20,727.32	\$20,727.32	\$10,665.90	\$10,061.42	\$1,696,482.00	
48	46	1-Oct-2025	\$20,727.32	\$20,727.32	\$10,603.01	\$10,124.31	\$1,686,357.69	
49	47	1-Jan-2026	\$20,727.32	\$20,727.32	\$10,539.74	\$10,187.58	\$1,676,170.11	
50	48	1-Apr-2026	\$20,727.32	\$20,727.32	\$10,476.06	\$10,251.26	\$1,665,918.85	\$42284.71

TABJ

	A	B	D	E	H	I	J	K
1	Pmt No.	Date	Total Pmt	P & I	Int Part	Prin Part	Balance	F Y. interest
51	49	1-Jul-2026	\$20,727.32	\$20,727.32	\$10,411.99	\$10,315.33	\$1,655,603.52	
52	50	1-Oct-2026	\$20,727.32	\$20,727.32	\$10,347.52	\$10,379.80	\$1,645,223.72	
53	51	1-Jan-2027	\$20,727.32	\$20,727.32	\$10,282.65	\$10,444.67	\$1,634,779.05	
54	52	1-Apr-2027	\$20,727.32	\$20,727.32	\$9,217.37	\$10,509.95	\$1,624,269.10	\$41259.53
55	53	1-Jul-2027	\$20,727.32	\$20,727.32	\$10,151.68	\$10,575.64	\$1,613,693.46	
56	54	1-Oct-2027	\$20,727.32	\$20,727.32	\$10,085.58	\$10,641.74	\$1,603,051.72	
57	55	1-Jan-2028	\$20,727.32	\$20,727.32	\$10,019.07	\$10,708.25	\$1,592,343.47	
58	56	1-Apr-2028	\$20,727.32	\$20,727.32	\$8,952.15	\$10,775.17	\$1,581,568.30	\$40208.48
59	57	1-Jul-2028	\$20,727.32	\$20,727.32	\$8,884.80	\$10,842.52	\$1,570,725.78	
60	58	1-Oct-2028	\$20,727.32	\$20,727.32	\$8,817.04	\$10,910.28	\$1,559,815.50	
61	59	1-Jan-2029	\$20,727.32	\$20,727.32	\$8,748.85	\$10,978.47	\$1,548,837.03	
62	60	1-Apr-2029	\$20,727.32	\$20,727.32	\$7,680.23	\$11,047.09	\$1,537,789.94	\$39130.92
63	61	1-Jul-2029	\$20,727.32	\$20,727.32	\$7,611.19	\$11,116.13	\$1,526,673.81	
64	62	1-Oct-2029	\$20,727.32	\$20,727.32	\$7,541.71	\$11,185.61	\$1,515,488.20	
65	63	1-Jan-2030	\$20,727.32	\$20,727.32	\$7,471.80	\$11,255.52	\$1,504,232.68	
66	64	1-Apr-2030	\$20,727.32	\$20,727.32	\$6,401.45	\$11,325.87	\$1,492,908.81	\$38026.15
67	65	1-Jul-2030	\$20,727.32	\$20,727.32	\$6,330.67	\$11,396.65	\$1,481,510.16	
68	66	1-Oct-2030	\$20,727.32	\$20,727.32	\$6,259.44	\$11,467.88	\$1,470,042.28	
69	67	1-Jan-2031	\$20,727.32	\$20,727.32	\$6,187.76	\$11,539.56	\$1,458,502.72	
70	68	1-Apr-2031	\$20,727.32	\$20,727.32	\$5,115.64	\$11,611.68	\$1,446,891.04	\$36893.51
71	69	1-Jul-2031	\$20,727.32	\$20,727.32	\$5,043.07	\$11,684.25	\$1,435,206.79	
72	70	1-Oct-2031	\$20,727.32	\$20,727.32	\$4,970.04	\$11,757.28	\$1,423,449.51	
73	71	1-Jan-2032	\$20,727.32	\$20,727.32	\$4,896.56	\$11,830.76	\$1,411,618.75	
74	72	1-Apr-2032	\$20,727.32	\$20,727.32	\$3,822.62	\$11,904.70	\$1,399,714.05	\$35732.29
75	73	1-Jul-2032	\$20,727.32	\$20,727.32	\$3,748.21	\$11,979.11	\$1,387,734.94	
76	74	1-Oct-2032	\$20,727.32	\$20,727.32	\$3,673.34	\$12,053.98	\$1,375,680.96	
77	75	1-Jan-2033	\$20,727.32	\$20,727.32	\$3,598.01	\$12,129.31	\$1,363,551.65	
78	76	1-Apr-2033	\$20,727.32	\$20,727.32	\$2,522.20	\$12,205.12	\$1,351,348.53	\$34541.78
79	77	1-Jul-2033	\$20,727.32	\$20,727.32	\$2,445.92	\$12,281.40	\$1,339,065.13	
80	78	1-Oct-2033	\$20,727.32	\$20,727.32	\$2,369.16	\$12,358.16	\$1,326,706.97	
81	79	1-Jan-2034	\$20,727.32	\$20,727.32	\$2,291.92	\$12,435.40	\$1,314,271.57	
82	80	1-Apr-2034	\$20,727.32	\$20,727.32	\$1,214.20	\$12,513.12	\$1,301,758.45	\$33321.20
83	81	1-Jul-2034	\$20,727.32	\$20,727.32	\$1,135.99	\$12,591.33	\$1,289,167.12	
84	82	1-Oct-2034	\$20,727.32	\$20,727.32	\$1,057.29	\$12,670.03	\$1,278,497.09	
85	83	1-Jan-2035	\$20,727.32	\$20,727.32	\$7,978.11	\$12,749.21	\$1,263,747.88	
86	84	1-Apr-2035	\$20,727.32	\$20,727.32	\$6,895.42	\$12,828.90	\$1,250,918.98	\$32069.81
87	85	1-Jul-2035	\$20,727.32	\$20,727.32	\$7,818.24	\$12,909.08	\$1,238,009.90	
88	86	1-Oct-2035	\$20,727.32	\$20,727.32	\$7,737.58	\$12,989.76	\$1,225,020.14	
89	87	1-Jan-2036	\$20,727.32	\$20,727.32	\$7,656.38	\$13,070.94	\$1,211,949.20	
90	88	1-Apr-2036	\$20,727.32	\$20,727.32	\$6,574.68	\$13,152.84	\$1,198,796.36	\$30780.86
91	89	1-Jul-2036	\$20,727.32	\$20,727.32	\$6,492.48	\$13,234.84	\$1,185,561.72	
92	90	1-Oct-2036	\$20,727.32	\$20,727.32	\$6,409.76	\$13,317.56	\$1,172,244.16	
93	91	1-Jan-2037	\$20,727.32	\$20,727.32	\$6,326.53	\$13,400.79	\$1,158,843.37	
94	92	1-Apr-2037	\$20,727.32	\$20,727.32	\$5,242.77	\$13,484.55	\$1,145,358.82	\$29471.54
95	93	1-Jul-2037	\$20,727.32	\$20,727.32	\$7,158.49	\$13,568.83	\$1,131,789.99	
96	94	1-Oct-2037	\$20,727.32	\$20,727.32	\$7,073.69	\$13,653.63	\$1,118,136.36	
97	95	1-Jan-2038	\$20,727.32	\$20,727.32	\$6,988.35	\$13,738.97	\$1,104,397.39	
98	96	1-Apr-2038	\$20,727.32	\$20,727.32	\$5,902.48	\$13,824.84	\$1,090,572.55	\$28123.81
99	97	1-Jul-2038	\$20,727.32	\$20,727.32	\$5,816.08	\$13,911.24	\$1,076,661.31	

TAB]

	A	B	D	E	H	I	J	K
1	Pmt No.	Date	Total Pmt	P & I	Int Part	Prin Part	Balance	F.Y. Interest
100	98	1-Oct-2036	\$20,727.32	\$20,727.32	\$6,729.13	\$13,998.19	\$1,062,663.12	
101	99	1-Jan-2039	\$20,727.32	\$20,727.32	\$6,641.64	\$14,085.68	\$1,048,577.44	
102	100	1-Apr-2039	\$20,727.32	\$20,727.32	\$6,553.61	\$14,173.71	\$1,034,403.73	\$26740.46
103	101	1-Jul-2039	\$20,727.32	\$20,727.32	\$6,465.02	\$14,262.30	\$1,020,141.43	
104	102	1-Oct-2039	\$20,727.32	\$20,727.32	\$6,375.88	\$14,351.44	\$1,005,789.99	
105	103	1-Jan-2040	\$20,727.32	\$20,727.32	\$6,286.19	\$14,441.13	\$991,348.86	
106	104	1-Apr-2040	\$20,727.32	\$20,727.32	\$6,195.93	\$14,531.39	\$976,817.47	\$25323.02
107	105	1-Jul-2040	\$20,727.32	\$20,727.32	\$6,105.11	\$14,622.21	\$962,195.28	
108	106	1-Oct-2040	\$20,727.32	\$20,727.32	\$6,013.72	\$14,713.60	\$947,481.66	
109	107	1-Jan-2041	\$20,727.32	\$20,727.32	\$5,921.76	\$14,805.56	\$932,676.10	
110	108	1-Apr-2041	\$20,727.32	\$20,727.32	\$5,829.23	\$14,898.09	\$917,778.01	\$23869.62
111	109	1-Jul-2041	\$20,727.32	\$20,727.32	\$5,736.11	\$14,991.21	\$902,786.80	
112	110	1-Oct-2041	\$20,727.32	\$20,727.32	\$5,642.42	\$15,084.90	\$887,701.90	
113	111	1-Jan-2042	\$20,727.32	\$20,727.32	\$5,548.14	\$15,179.18	\$872,522.72	
114	112	1-Apr-2042	\$20,727.32	\$20,727.32	\$5,453.27	\$15,274.05	\$857,248.67	\$22379.94
115	113	1-Jul-2042	\$20,727.32	\$20,727.32	\$5,357.80	\$15,369.52	\$841,879.15	
116	114	1-Oct-2042	\$20,727.32	\$20,727.32	\$5,261.74	\$15,465.58	\$826,413.57	
117	115	1-Jan-2043	\$20,727.32	\$20,727.32	\$5,165.08	\$15,562.24	\$810,851.33	
118	116	1-Apr-2043	\$20,727.32	\$20,727.32	\$5,067.82	\$15,659.50	\$795,191.83	\$20852.44
119	117	1-Jul-2043	\$20,727.32	\$20,727.32	\$4,969.95	\$15,757.37	\$779,434.46	
120	118	1-Oct-2043	\$20,727.32	\$20,727.32	\$4,871.47	\$15,855.85	\$763,578.61	
121	119	1-Jan-2044	\$20,727.32	\$20,727.32	\$4,772.37	\$15,954.95	\$747,623.66	
122	120	1-Apr-2044	\$20,727.32	\$20,727.32	\$4,672.65	\$16,054.67	\$731,568.99	\$19266.44
123	121	1-Jul-2044	\$20,727.32	\$20,727.32	\$4,572.31	\$16,155.01	\$715,413.98	
124	122	1-Oct-2044	\$20,727.32	\$20,727.32	\$4,471.34	\$16,255.98	\$699,158.00	
125	123	1-Jan-2045	\$20,727.32	\$20,727.32	\$4,369.74	\$16,357.58	\$682,800.42	
126	124	1-Apr-2045	\$20,727.32	\$20,727.32	\$4,267.50	\$16,459.82	\$666,340.60	\$17680.69
127	125	1-Jul-2045	\$20,727.32	\$20,727.32	\$4,164.63	\$16,562.69	\$649,777.91	
128	126	1-Oct-2045	\$20,727.32	\$20,727.32	\$4,061.11	\$16,666.21	\$633,111.70	
129	127	1-Jan-2046	\$20,727.32	\$20,727.32	\$3,956.95	\$16,770.37	\$616,341.33	
130	128	1-Apr-2046	\$20,727.32	\$20,727.32	\$3,852.13	\$16,875.19	\$599,466.14	\$16034.62
131	129	1-Jul-2046	\$20,727.32	\$20,727.32	\$3,746.66	\$16,980.66	\$582,485.48	
132	130	1-Oct-2046	\$20,727.32	\$20,727.32	\$3,640.53	\$17,086.79	\$565,398.69	
133	131	1-Jan-2047	\$20,727.32	\$20,727.32	\$3,533.74	\$17,193.56	\$548,205.11	
134	132	1-Apr-2047	\$20,727.32	\$20,727.32	\$3,426.28	\$17,301.04	\$530,904.07	\$14347.21
135	133	1-Jul-2047	\$20,727.32	\$20,727.32	\$3,318.15	\$17,409.17	\$513,494.90	
136	134	1-Oct-2047	\$20,727.32	\$20,727.32	\$3,209.34	\$17,517.98	\$495,976.92	
137	135	1-Jan-2048	\$20,727.32	\$20,727.32	\$3,099.88	\$17,627.46	\$478,349.48	
138	136	1-Apr-2048	\$20,727.32	\$20,727.32	\$2,989.68	\$17,737.64	\$460,611.82	\$12617.03
139	137	1-Jul-2048	\$20,727.32	\$20,727.32	\$2,878.82	\$17,848.50	\$442,763.32	
140	138	1-Oct-2048	\$20,727.32	\$20,727.32	\$2,767.27	\$17,960.05	\$424,803.27	
141	139	1-Jan-2049	\$20,727.32	\$20,727.32	\$2,655.02	\$18,072.30	\$406,730.97	
142	140	1-Apr-2049	\$20,727.32	\$20,727.32	\$2,542.07	\$18,185.25	\$388,545.72	\$10643.18
143	141	1-Jul-2049	\$20,727.32	\$20,727.32	\$2,428.41	\$18,298.91	\$370,246.81	
144	142	1-Oct-2049	\$20,727.32	\$20,727.32	\$2,314.04	\$18,413.28	\$351,833.53	
145	143	1-Jan-2050	\$20,727.32	\$20,727.32	\$2,198.96	\$18,528.36	\$333,305.17	
146	144	1-Apr-2050	\$20,727.32	\$20,727.32	\$2,083.16	\$18,644.16	\$314,651.01	\$9024.57
147	145	1-Jul-2050	\$20,727.32	\$20,727.32	\$1,966.63	\$18,760.69	\$295,900.32	
148	146	1-Oct-2050	\$20,727.32	\$20,727.32	\$1,849.38	\$18,877.94	\$277,022.38	

TAB]

	A	B	D	E	H	I	J	K
1	Pmt No.	Date	Total Pmt	P & I	Int Part	Prin Part	Balance	F.Y. Interest
149	147	1-Jan-2051	\$20,727.32	\$20,727.32	\$1,731.39	\$18,995.93	\$258,026.45	
150	148	1-Jul-2051	\$20,727.32	\$20,727.32	\$1,412.47	\$19,314.85	\$238,711.60	\$7,600.07
151	149	1-Jul-2051	\$20,727.32	\$20,727.32	\$1,493.20	\$19,234.12	\$219,677.68	
152	150	1-Oct-2051	\$20,727.32	\$20,727.32	\$1,372.99	\$19,354.33	\$200,323.35	
153	151	1-Jan-2052	\$20,727.32	\$20,727.32	\$1,252.02	\$19,475.30	\$180,848.05	
154	152	1-Jul-2052	\$20,727.32	\$20,727.32	\$1,130.30	\$19,597.02	\$161,251.03	\$5,248.51
155	153	1-Jul-2052	\$20,727.32	\$20,727.32	\$1,007.82	\$19,719.50	\$141,531.53	
156	154	1-Oct-2052	\$20,727.32	\$20,727.32	\$884.57	\$19,842.75	\$121,688.78	
157	155	1-Jan-2053	\$20,727.32	\$20,727.32	\$760.55	\$19,966.77	\$101,722.01	
158	156	1-Apr-2053	\$20,727.32	\$20,727.32	\$635.76	\$20,091.56	\$81,630.45	\$3,288.70
159	157	1-Jul-2053	\$20,727.32	\$20,727.32	\$510.19	\$20,217.13	\$61,413.32	
160	158	1-Oct-2053	\$20,727.32	\$20,727.32	\$383.83	\$20,343.49	\$41,069.83	
161	159	1-Jan-2054	\$20,727.32	\$20,727.32	\$256.69	\$20,470.63	\$20,599.20	
162	160	1-Apr-2054	\$20,727.95	\$20,727.95	\$128.75	\$20,599.20		\$1,279.46

Appendix H

Redirection Flow Tables Mystic to WOC 2015 to 2035

Redirection Projections Mystic to West Ocean City
Year 2035

Month	Average WWTP Flow	Average Irrigation Eagles Landing Golf	Injection Well Flow	Redirection Flow (daily)	Days in Month	Redirection Flow (monthly)
Jan	270,000	0	100,000	170,000	31	5270000
Feb	270,000	0	100,000	170,000	28	4760000
Mar	270,000	9,388	100,000	160,612	31	4978972
Apr	270,000	41,396	100,000	128,604	30	3858120
May	270,000	148,086	100,000	21,914	31	679334
Jun	449,800	178,119	100,000	171,681	30	5150430
July	449,800	224,942	100,000	124,858	31	3870598
Aug	449,800	173,282	100,000	176,518	31	5472058
Sep	270,000	145,759	100,000	24,241	30	727230
Oct	270,000	49,775	100,000	120,225	31	3726975
Nov	270,000	2,763	100,000	167,237	30	5017110
Dec	270,000	0	100,000	170,000	31	5270000

Yearly Redirection

48,780,827

Avg Daily

133,646

Non Season Flow

34,287,741

Non Season Average

126,992

Summer Flow

14,493,086

Summer Average

161,034

Redirection Projections Mystic to West Ocean City
Year 2030

Month	Average WWTP Flow	Average Irrigation Eagles Landing Golf	Injection Well Flow	Redirection Flow (daily)	Days in Month	Redirection Flow (monthly)
Jan	240,400	0	100,000	140,400	31	4352400
Feb	240,400	0	100,000	140,400	28	3931200
Mar	240,400	9,388	100,000	131,012	31	4061372
Apr	240,400	41,396	100,000	99,004	30	2970120
May	240,400	148,086	92,314	0	31	0
Jun	401,000	178,119	100,000	122,881	30	3686430
July	401,000	224,942	100,000	76,058	31	2357798
Aug	401,000	173,282	100,000	127,718	31	3959258
Sep	240,400	145,759	94,641	0	30	0
Oct	240,400	49,775	100,000	90,625	31	2809375
Nov	240,400	2,763	100,000	137,637	30	4129110
Dec	240,400	0	100,000	140,400	31	4352400

Yearly Redirection

36,609,463

Avg Daily

100,300

Non Season Flow

26,605,977

Non Season Average

98,541

Summer Flow

10,003,486

Summer Average

111,150

Redirection Projections Mystic to West Ocean City
Year 2025

Month	Average WWTP Flow	Average Irrigation Eagles Landing Golf	Injection Well Flow	Redirection Flow (daily)	Days in Month	Redirection Flow (monthly)
Jan	212,250	0	100,000	112,250	31	3479750
Feb	212,250	0	100,000	112,250	28	3143000
Mar	212,250	9,388	100,000	102,862	31	3188722
Apr	212,250	41,396	100,000	70,854	30	2125620
May	212,250	148,086	64,164	0	31	0
Jun	354,000	178,119	100,000	75,881	30	2276430
July	354,000	224,942	100,000	29,058	31	900798
Aug	354,000	173,282	100,000	80,718	31	2502258
Sep	212,250	145,759	66,491	0	30	0
Oct	212,250	49,775	100,000	62,475	31	1936725
Nov	212,250	2,763	100,000	109,487	30	3284610
Dec	212,250	0	100,000	112,250	31	3479750

Yearly Redirection **26,317,663**

Avg Daily **72,103**

Non Season Flow **20,638,177**

Non Season Average **76,438**

Summer Flow **5,679,486**

Summer Average **63,105**

Redirection Projections Mystic to West Ocean City
Year 2020

Month	Average WWTP Flow	Average Irrigation Eagles Landing Golf	Injection Well Flow	Redirection Flow (daily)	Days in Month	Redirection Flow (monthly)
Jan	187,700	0	100,000	87,700	31	2718700
Feb	187,700	0	100,000	87,700	28	2455600
Mar	187,700	9,388	100,000	78,312	31	2427672
Apr	187,700	41,396	100,000	46,304	30	1389120
May	187,700	148,086	39,614	0	31	0
Jun	313,000	178,119	100,000	34,881	30	1046430
July	313,000	224,942	88,058	0	31	0
Aug	313,000	173,282	100,000	39,718	31	1231258
Sep	187,700	145,759	41,941	0	30	0
Oct	187,700	49,775	100,000	37,925	31	1175675
Nov	187,700	2,763	100,000	84,937	30	2548110
Dec	187,700	0	100,000	87,700	31	2718700

Yearly Redirection

17,711,265

Avg Daily

48,524

Non Season Flow
Non Season Average
Summer Flow
Summer Average

15,433,577

57,161

2,277,688

25,308

**Redirection Projections Mystic to West Ocean City
Year 2015**

Month	Average WWTP Flow	Average Irrigation Eagles Landing Golf	Injection Well Flow	Redirection Flow (daily)	Days in Month	Redirection Flow (monthly)
Jan	131,000	0	100,000	31,000	31	961000
Feb	131,000	0	100,000	31,000	28	868000
Mar	131,000	0	100,000	31,000	31	961000
Apr	131,000	0	100,000	31,000	30	930000
May	131,000	0	100,000	31,000	31	961000
Jun	218,000	0	100,000	118,000	30	3540000
July	218,000	0	100,000	118,000	31	3658000
Aug	218,000	0	100,000	118,000	31	3658000
Sep	131,000	0	100,000	31,000	30	930000
Oct	131,000	0	100,000	31,000	31	961000
Nov	131,000	0	100,000	31,000	30	930000
Dec	131,000	0	100,000	31,000	31	961000

Yearly Redirection 19,319,000

Avg Daily (Yearly) 52,929

Non Season Flow 8,463,000

Non Season Average 31,344

Summer Flow 10,856,000

Summer Average 120,622



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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14-24

Larry Hogan
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Secretary

Boyd Rutherford
Lieutenant Governor

October 29, 2015

The Honorable Madison J. Bunting, Jr.
President, Worcester County Commissioners
Worcester County Government Center
1 West Market Street, Room 1103
Snow Hill, MD 21863

Dear President Bunting:

The Maryland Department of the Environment (MDE) has completed its final review of the **Frontier Town Sewer Amendment**, which amends the 1994 Worcester County Comprehensive Plan for Water and Sewerage Systems. The Worcester County Commissioners adopted the Amendment on November 18, 2014 through Resolution No. 14-24 (see enclosed Resolution).

The Amendment would add the Frontier Town Campground property (Tax Map 33, part of Parcel 94) to the existing Mystic Harbour Sewer Service Area with an S-1 designation. The campground has 585 seasonal lots. The Amendment requests a total of 160 EDUs be allocated to Frontier Town from the new Mystic Harbour WWTP expansion of 666 EDUs.

During MDE's review of the Amendment, the Maryland Department of Planning (MDP) advised the Department that the Amendment is consistent with the Worcester County Comprehensive Plan (see enclosed comments).

In accordance with §9-507(a) of the Environment Article, Annotated Code of Maryland, the Department hereby approves the **Frontier Town Sewer Amendment** in part and modifies the Amendment in part. Specifically, the Department approves the request to include the Frontier Town property in the Mystic Harbour S-1 service area with a total allocation of 160 EDUs (130 EDUs for the campground portion of the property and 30 EDUs for the front commercial portion of the property). The Department modifies the Amendment to include the attached map and allocation table to clarify the new Mystic Harbour service area (see attached map and text modification).

The County is reminded that the Department has previously approved the upgrade of the Mystic Harbour WWTP from 250,000 gpd to 450,000 gpd. However, to utilize the expanded capacity of the Plant, the County must resolve critical disposal and storage issues at the Mystic Harbour WWTP.

The Honorable Madison J. Bunting, Jr.
Page 2

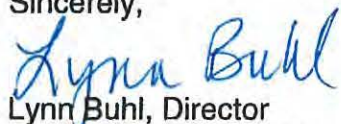
The Department of Natural Resources (DNR) advised MDE that the property is within a Rare, Threatened, and Endangered (RTE) species area. RTE areas are places where rare, threatened, or endangered native Maryland flora and fauna occur. Please be advised that special protection of these areas is necessary to ensure the persistence of these imperiled flora and fauna throughout the State. For guidance concerning the protection of RTE areas, please contact Greg Golden of DNR's Project Review Division at 410-260-8331, who will further coordinate with Lori Byrne of the Wildlife and Heritage Service at 410-260-8573.

Please also be advised that a portion of the Amendment area is located within the Chesapeake Bay Critical Area Resource Conservation Area (RCA). Any development occurring as a result of the approval of this Amendment must adhere to all Critical Area restrictions associated with the RCA. Please contact the Critical Area Commission at 410-260-3476 concerning Critical Area requirements.

The County is reminded that the Worcester County Water and Sewerage Plan update is overdue. The Department previously requested that the County develop a schedule for updating the current 1994 Water and Sewerage Plan and submit the schedule to MDE for approval within 90 days of receipt of the July 30, 2015 letter. The Department stands ready to work with the County to ensure that the County meets the approved schedule for updating the Plan.

This action completes MDE's review, as required by §9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance, please contact Virginia F. Kearney, Deputy Director, at 410-537-3512, toll-free at 800-633-6101; or by email at virginia.kearney@maryland.gov.

Sincerely,



Lynn Buhl, Director
Water Management Administration

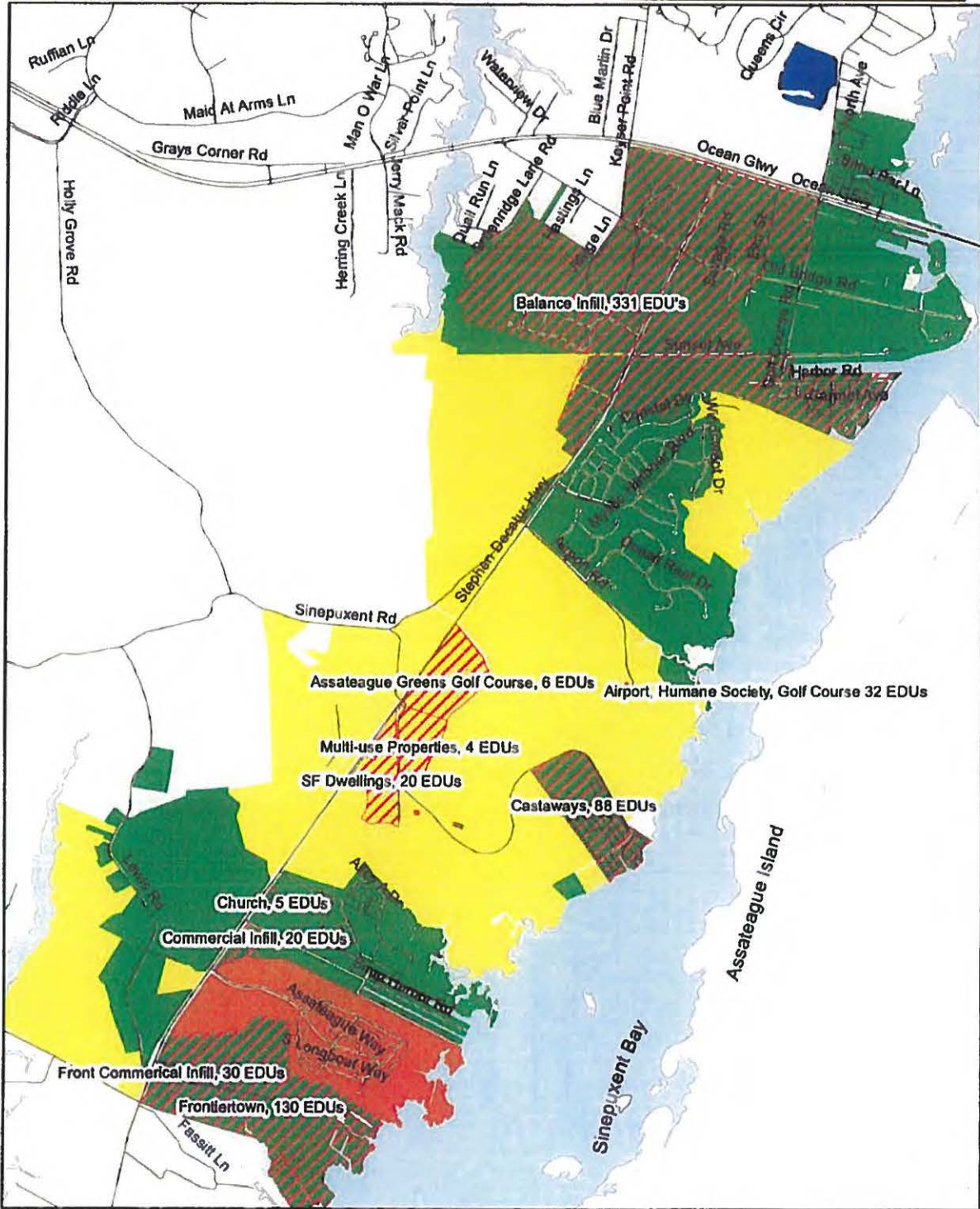
Enclosures

cc: Robert Mitchell, Department of Environmental Programs, Worcester County
John Ross, Deputy Director, Department of Public Works, Worcester County
Charles Boyd, Deputy Director, Planning Services, MDP
Greg Golden, Project Review, DNR
Nick Kelly, Chesapeake Bay Critical Area Commission
Virginia F. Kearney, Deputy Director, WMA, MDE

The Honorable Madison J. Bunting, Jr.
Page 3

bcc: Janice Outen, MDE
John Leocha, MDP
File

MDE Modification to the Frontier Town Sewer Amendment
Amendment Modification effective October 29, 2015



0.55 0.275 0 0.55 Miles

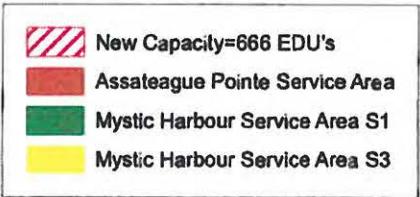


Figure M
 Mystic Harbour Sewer Planning Area
 Proposed Mystic Capacity--666 EDU's
 Prepared by the Worcester County
 Department of Environmental Programs
 June 2015

MDE Modification to the Frontier Town Sewer Amendment

Amendment Modification effective October 29, 2015

EDUs in MYSTIC HARBOUR SANITARY SERVICE AREA (New Capacity)	
North of Airport, North of Antique Road, East and West of Rt 611	
80	Vacant of Multi-lot Properties "Area 1"
80	Commercial Properties - "Area 1"
17	SF Dwellings
154	Infill and intensification of properties in "Areal"
331	Subtotal EDUs
Airport and South of Airport, East of Rt 611	
4	Vacant or multi-lot properties
6	Assateague Greens Executive Golf Course/Range - 9 holes
5	Church
20	SF Dwellings
32	Airport/Clubhouse/Humane Society
88	Castaways Campground
130	Frontier Town Campground
30	Commercial Portion of Frontier Town
20	Additional Commercial Infill South of Airport
335	Subtotal EDUs
666	TOTAL

Note: These EDUs are mapped on Figure M attached to this report.



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14-25

Larry Hogan
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Boyd Rutherford
Lieutenant Governor

November 19, 2015

Mr. Robert J. Mitchell, Director
Worcester County Department of Environmental Programs
Government Center
One West Market Street, Room 1306
Snow Hill, MD 21863



Dear Mr. Mitchell:

Thank you for your letter requesting the Department's reconsideration of the conditional approval for the Water and Sewer Plan Amendment for the Ocean Downs Sanitary Area Expansion. The Amendment was conditionally approved by MDE on July 30, 2015.

The Amendment would expand the Ocean Downs Sanitary Area that was originally established by Resolution 12-22 and approved by MDE on January 22, 2013. This Amendment would add five parcels (Tax Map 21, Parcels 153, 154, 155, 156, and 170) in the Crabs-To-Go Commercial Area to the S-1 service area category. On July 30, 2015, MDE approved the Amendment request for the expansion of the Ocean Downs Sanitary Area to five parcels, contingent on the County amending the Comprehensive Plan to make the proposed Sanitary Area expansion consistent with the Comprehensive Plan.

The Department has re-examined the Amendment request to expand the Sanitary Sewer Area. The Department acknowledges that there are inconsistencies between the zoning and land-use designations in this area. The zoning designation of the five parcels is Commercial. The Maryland Department of Planning (MDP) assisted MDE in analyzing zoning and land-use inconsistencies in the County and found that the potential for similar future requests is limited. One of the parcels, the Crabs-To-Go property, is an existing commercial property and the remaining four parcels are located directly between existing commercial properties and the existing Ocean Downs Sanitary Area. The Department also acknowledges the failing septic system on these properties.

In light of this re-examination, and in accordance with §§9-507 and 9-508 of the Environment Article, *Annotated Code of Maryland*, the Department hereby approves the Ocean Downs Sanitary Area Expansion to include the five parcels in the Crabs-To-Go Commercial Area.



Mr. Robert J. Mitchell

Page 2

The County is reminded to address the Crabs-To-Go Commercial Area in the 2019 update to the County's Comprehensive Plan. The Department looks forward to providing any assistance necessary at that time.

Thank you again for your letter. If you would like to discuss this further, please call me at 410-537-3084 or Ms. Lynn Buhl, Director of the Water Management Administration, at 410-537-3567 or by email at lynn.buhl@maryland.gov.

Sincerely,



Ben Grumbles
Secretary

cc: The Honorable Madison J. Bunting, Jr., President, Worcester County Commissioners
John Ross, Deputy Director, Public Works, Worcester County Government
David Craig, Secretary, Maryland Department of Planning
Charles Boyd, Deputy Director, Planning Services, Maryland Department of Planning
Lynn Buhl, Director, Water Management Administration
Virginia Kearney, Deputy Director, Water Management Administration



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Lieutenant Governor

October 2, 2015

The Honorable Madison J. Bunting, Jr.
President, Worcester County Commissioners
Worcester County Government Center
1 West Market Street, Room 1103
Snow Hill, MD 21863



Dear President Bunting:

The Maryland Department of the Environment (MDE) has completed its review of the **Town of Berlin Water and Sewer Planning Area Amendment** (Amendment), which amends the 1994 Worcester County Comprehensive Plan for Water and Sewerage Systems. The Worcester County Commissioners adopted the Amendment on July 21, 2015 through Resolution No. 15-24 (see attached resolution). The Department notes that a clerical error incorrectly identified one of the annexed parcels in the County Resolution as Tax Map 25, Parcel 436. The correct parcel, as identified in the Town's Annexation Resolution 2015-03 and on the Water and Sewer service area maps included with the Amendment, is Tax Map 25, Parcel 438.

The Amendment expands the existing water and sewer service areas for the Town of Berlin to reflect recently approved municipal annexations. The Amendment revises *Figure 3-7: Berlin and Environs Water Service Area* and *Figure 4-7: Berlin and Environs Sewerage Service Area* to include the four annexed parcels into the W-1/S-1 service area (see attached figures).

During MDE's review of the Amendment, the Maryland Department of Planning (MDP) advised the Department that the Amendment is consistent with the Worcester County Comprehensive Plan and the Town of Berlin's Comprehensive Plan (see enclosed comments). In accordance with §9-507(a) of the Environment Article, Annotated Code of Maryland, the Department hereby approves the **Town of Berlin Water and Sewer Planning Area Amendment** for parcels 91, 165, and 438 of Tax Map 25, and parcel 319 of Tax Map 32.

The Honorable Madison J. Bunting, Jr.
Page 2 of 2

The County is reminded that the Worcester County Water and Sewerage Plan update is overdue. The Department previously requested that the County develop a schedule for updating the current 1994 Water and Sewerage Plan and submit the schedule to MDE for approval within 90 days of receipt of the July 30, 2015 letter. The Department stands ready to work with the County to ensure that the County meets the approved schedule for updating the Plan.

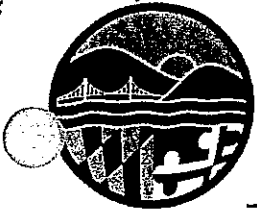
This action completes MDE's review, as required by §9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance, please contact Virginia F. Kearney, Deputy Director, at 410-537-3567, toll-free at 800-633-6101; or by email at virginia.kearney@maryland.gov.

Sincerely,


Lynn Buhl, Director
Water Management Administration

Enclosures

cc: ~~Robert Mitchem~~, Department of Environmental Programs, Worcester County
John Ross, Deputy Director, Department of Public Works, Worcester County
Charles Boyd, Deputy Director, Planning Services, MDP
La Verne Gray, MDP
Virginia F. Kearney, Deputy Director, WMA, MDE



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17-07

SEP 14 2017

The Honorable Madison J. Bunting, Jr.
President, Worcester County Commissioners
Worcester County Government Center
1 West Market Street, Room 1103
Snow Hill, Maryland 21863

Copy: Sewer Committee ✓

Dear President Bunting:

The Maryland Department of the Environment (MDE) has completed its review of the **Town of Ocean City – Miscellaneous Technical Data and Capital Plan Informational Updates Amendment (Amendment)** to the 1994 Worcester County Comprehensive Plan for Water and Sewerage Systems. The Worcester County Commissioners adopted the Amendment on April 25, 2017, through Resolution 17-7. The Amendment updates §3.2.1 *Ocean City Water System* to reflect the installation of a new elevated water storage tank at 1st Street.

During MDE's review of the Amendment, the Maryland Department of Planning (MDP) advised the Department that the Amendment is consistent with the Worcester County Comprehensive Plan (see enclosed comments). In accordance with §9-507(a) of the Environment Article, Annotated Code of Maryland, the Department hereby approves the **Town of Ocean City – Miscellaneous Technical Data and Capital Plan Informational Updates Amendment**.

The County is reminded that the Worcester County Water and Sewerage Plan update is overdue. The Department has received the County's schedule of updating the Plan and stands ready to work with the County to accomplish this. Please keep the Department up-to-date on the County's progress in updating the Plan.

This action completes MDE's review, as required by §9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance, please contact Virginia F. Kearney, Deputy Director, at (410) 537-3512, toll-free at (800) 633-6101, or by e-mail at virginia.kearney@maryland.gov.

Sincerely,

Virginia F. Kearney for
D. Lee Currey, Director
Water and Science Administration

Enclosures

The Honorable Madison J. Bunting, Jr.
Page 2

cc: Robert Mitchell, Department of Environmental Programs, Worcester County
Charles Boyd, Deputy Director, Planning Services, MDP
Virginia F. Kearney, Deputy Director, WSA, MDE

Robert Mitchell

17-14

From: Janice Outen -MDE- <janice.ouden@maryland.gov>
Sent: Tuesday, September 5, 2017 6:06 PM
To: Robert Mitchell; Chuck Boyd -MDP-; Naomi Howell -MDE-; Teresa Wong -MDE-
Subject: Acknowledgement - Worcester County Water & Sewer Plan - Withdrawal of the Amendment for the Expansion of the Ft. Whaley Campground (Resolution No. 17-14)

Bob,

Plased be advised that we received your letter of June 21, 2017 and Resolution No. 17-14 of the Worcester County Commissioners. We hereby acknowledge that you have withdrawn the amendment (Resolution No. 16-29) for the expansion of the Ft. Whaley Campground.

Thank you for your assistance in this matter.

Janice

Janice B. Outen, Manager
Water Resources Planning
Water Management Administration
MD Dept. of the Environment
1800 Washington Blvd.
Baltimore, MD 21230
410-271-8893
janice.ouden@maryland.gov

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