Talbot County

Comprehensive Water and Sewer Plan

2024 Report of the Review

Talbot County Council

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2024 REPORT OF THE REVIEW

INTRODUCTION

As required by Paragraphs 387B and 387C of Article 43 of the Annotated Code of Maryland, the first Comprehensive Water and Sewer Plan for Talbot County was prepared by Buchart-Horn and adopted in 1970 by the County Commissioners (now the County Council). In the following years, the 1971, 1972, 1973, 1974, 1976 and 1981 amendments to the basic Plan were prepared jointly by the County Council.

The 1975 amendment was completed in October 1975 by Frederick Ward Associates and was adopted by the County Council in 1976. This Plan incorporated substantial changes consistent with the most recent format required by the Maryland Department of the Environment (known as the Health Department at that time). The 1983 Plan Update was also prepared by Frederick Ward Associates and subsequently adopted on August 23, 1983. The 1983 Plan update was extended by passage of Resolution No. 42, effective from January 11, 1986, for a period of two years. The 1983 Plan update was re-extended by passage of Resolution No. 49, effective from December 22, 1987. The latter extension, with interim amendments, served as the Plan in effect through the date of adoption of the 1990 revision and update.

The 1990 Plan was prepared by McCrone, Inc. using the same general format as the 1983 Plan with expanded Appendices and informational updates in accordance with the revised objectives of the Plan. The 1992 Update provided a review or revision of goals, policies and background information and evaluated existing and proposed water and sewer conditions throughout Talbot County. Contained within the Appendices of the 1992 Update are the Groundwater Protection Plan, Sewer and Water Allocation Policies, Financial Management Plans and Policies to provide a single source of reference for regulators, planners, consultants, and the general public regarding planning and use policies for public water and sewer facilities within the County.

In the 1992 Update, an effort was made to minimize costs and to avoid duplication of efforts by utilizing information developed by other consultants under contract with the County and from other governmental sources. Therefore, the reports listed in Appendix 1 - General References have been freely utilized as a source of information. Where feasible, credit for source material is indicated in the text narrative or referenced Appendix 1.

The 1992 Update requested information from incorporated municipalities, owners of public and private utility companies, and operators of public and privately owned systems. In general, the 1992 Update is a compilation of most current information furnished by the various operating

agencies and privately owned systems, though in some instances revisions were extrapolated from previous reports and data sources. The 1992 Update also featured procedures for orderly amendments and revisions. A record of hearing and administrative procedures to adopt the 1992 Update is available in Appendix 15 of the 1992 Update of the Talbot County Comprehensive Water and Sewer Plan.

The Comprehensive Water and Sewer Plan for Talbot County was updated in 2002. The 2002 Report of the Review assessed the 1992 Update and incorporated new information and data to support the 1992 Update. In reviewing or researching historical data pertaining to regional water and sewer plans, the 1992 Update was referenced. Any amendments between the 1992 Update and the 2002 Report of the Review were included in the 2002 Report of the Review.

The Comprehensive Water and Sewer Plan for Talbot County has not been updated since the 2002 Report of the Review. This 2024 Report of the Review, prepared by Rauch Inc., assesses the 1992 Update and the 2002 Report of the Review and incorporates new information and data to support the Comprehensive Water and Sewer Plan and reflects up-to-date data and system-specific information. In reviewing or researching historical data pertaining to regional water and sewer plans, the 1992 Update should be referenced. A listing of the sections within the 1992 Update and the 2002 Report of the Review that remain as reference information or historical data has been provided in Table i. Reference Documents.

The 2024 Report of the Review examines the existing goals, policies, procedures, and water and sewer systems presented in the 1992 Update and the 2002 Report of the Review. For planning of water and wastewater services in Talbot County, geographical information system (GIS) resources produced by the Talbot County Department of Public Works (DPW) have been incorporated into the 2024 Report of the Review. The Priority Funding Areas, Land Use maps, Zoning, Development Restricted Lands and Sewer Service Area maps developed by DPW for Talbot County have been provided in Maps 1 through 6.

The Priority Funding Areas as presented in Map 1 are shown with two different colors identifying the County Priority Funding Areas. The orange color of the maps reflects the areas certified by the Talbot County Planning and Zoning Office; and the Maryland Department of Planning has determined that the areas conform to the statutory criteria for delineating Priority Funding Areas. The yellow colors of the map list the areas certified by the Talbot County Planning and Zoning Office; however the Maryland Department of Planning has determined that the areas do not conform to the statutory criteria for delineating Priority Funding Areas.

The Talbot County Land Use map presented in Map 2 shows the various land uses in Talbot County. These uses include Low-density, Medium-density and High-density Residential, Commercial, Institutional, Open urban land, Row and Garden Crops, Brush, Wetlands and other

land uses found throughout the county. Map 3 shows the General Zoning in the county that depicts the zoning as found in the 2016 Comprehensive Plan.

The Development Restricted Lands due to agriculture or programmed open space in Talbot County are listed in Map 4 as depicted in the 2016 Comprehensive Plan. Maps 5 and 6 list the water service and sewer service areas, respectively. Throughout the 2024 Report of the Review, maps and figures have been incorporated into text. These documents have been provided to show various land uses and water and sewer service areas for planning purposes only. The maps and figures do not impose an obligation on Talbot County to provide water and/or sanitary sewer service to these areas.

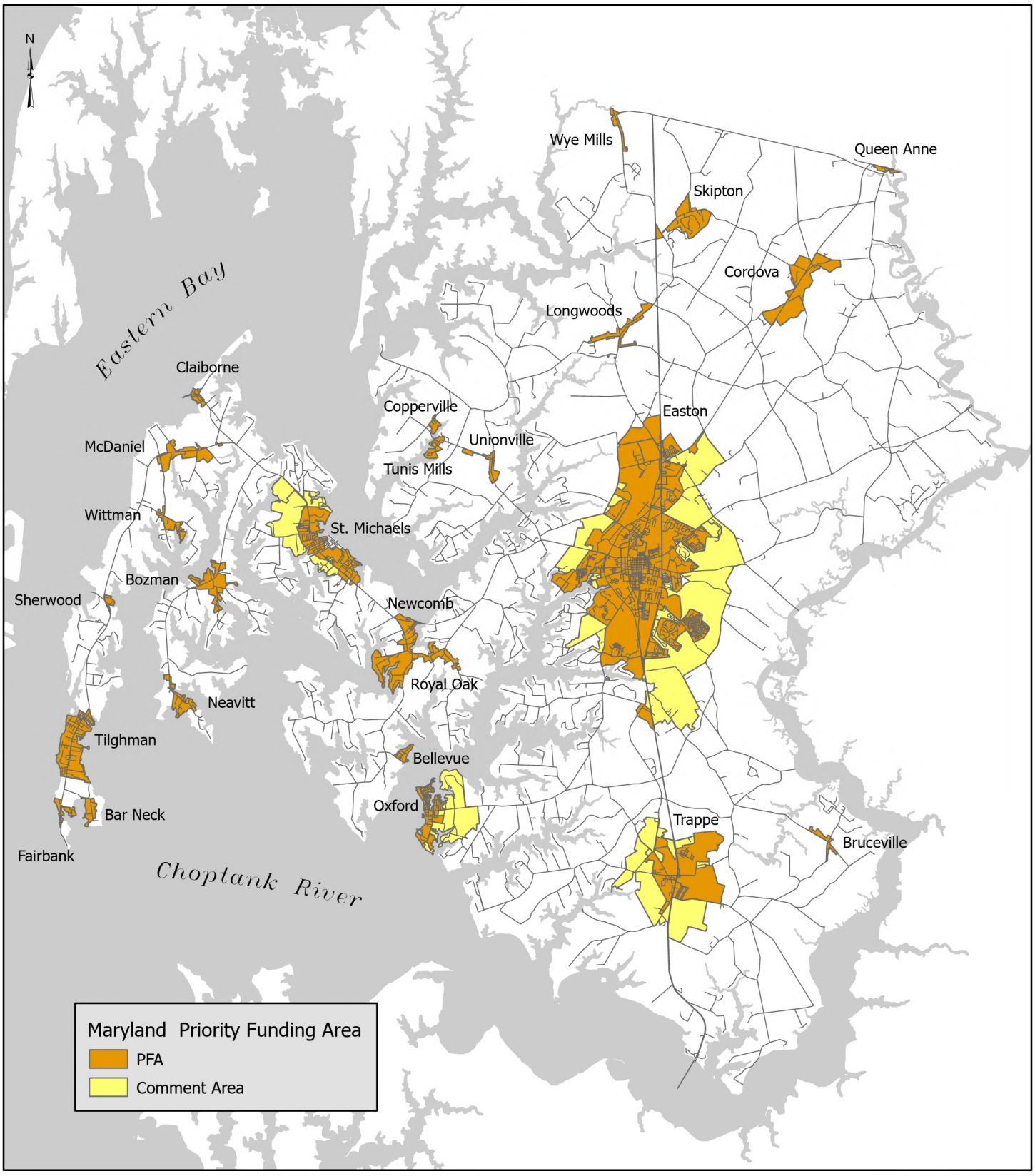
The goals, organization and policies of the Comprehensive Water and Sewer Plan are provided in Chapter One. This Chapter provides a summary of the appendices included in the 1992 Update. If information or data is needed from these appendices, the 1992 Plan Update should be reviewed.

The inventory of existing water and sewer systems in Talbot County is presented in Chapter Two. The data for each of the existing water and sewer systems was obtained through each local jurisdiction that owns and operates the facility. The 2024 Report of the Review also evaluates the safety and adequacy of water and sewer service for Talbot County and initiates the watershed-based approach outlined in Chapter Two. A Five-Year Capital Improvement Program for both water and sewer systems within the incorporated municipalities and Talbot County has been provided in Chapter Two. The Five-Year Capital Improvement Program lists the proposed facility improvements needed to assure the safety and adequacy of the water and sewer systems in Talbot County. The Water and Sewer Service maps were developed to be consistent with the 2016 Talbot County Comprehensive Plan. The water and sewer maps have been resized for better formatting and to support digital use, allowing users to zoom in for parcel-level detail. After this report is updated the most current maps can be found on the County website. The maps have also been reorganized to align more closely with current County sewer billing areas. Additionally, colors have been standardized for consistency, and the title block has been changed for improved clarity.

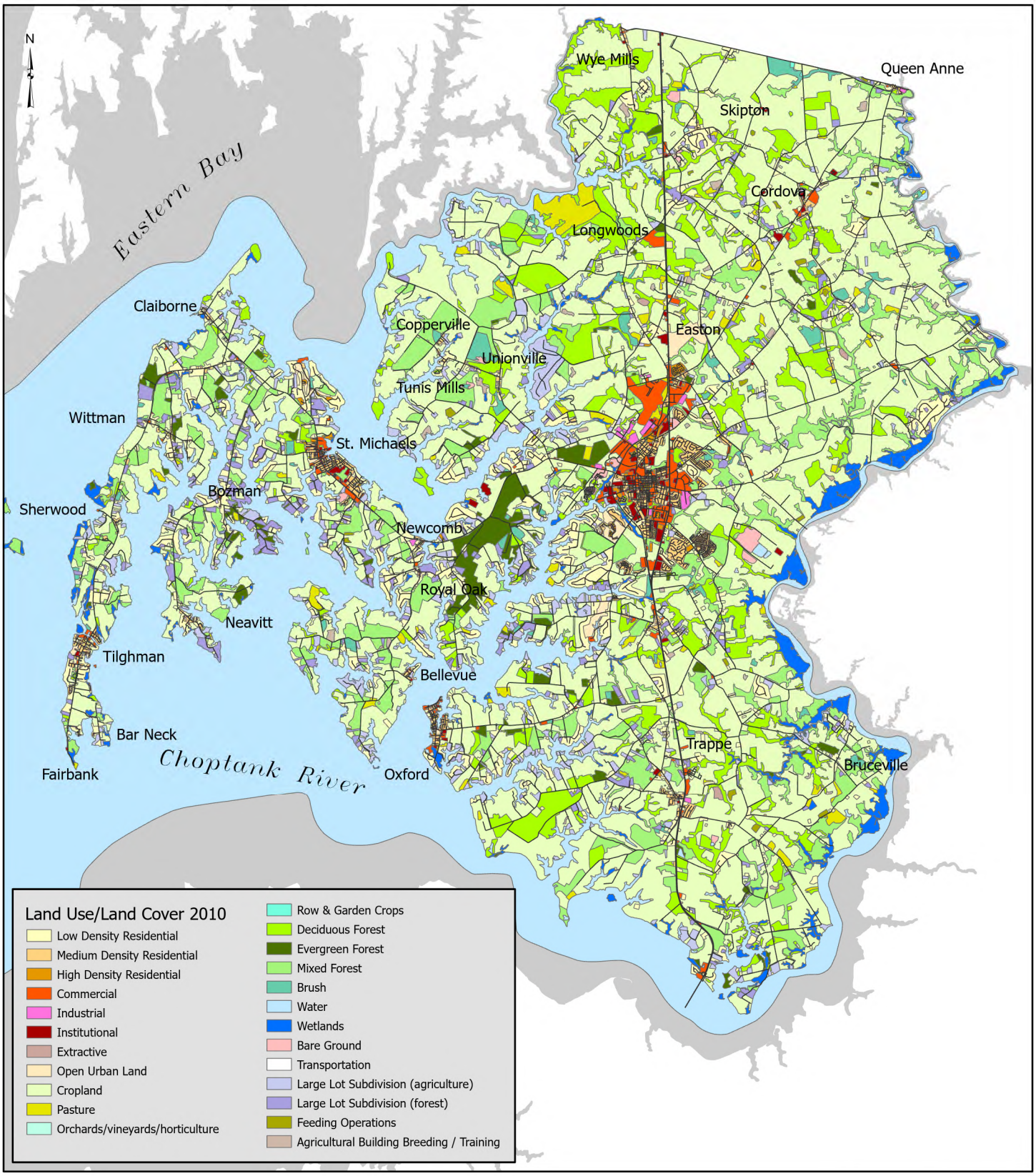
This Update also reviews procedures for amending the Plan and all the Plan amendments as presented in Chapter Three. The 2024 Report of the Review has incorporated all relevant amendments made to this section of the Talbot County Comprehensive Water and Sewer Plan between 2002 and 2024. The Controlling Authority shall be the water and sewer service provider for the incorporated municipalities or within the private water and sewer systems in the unincorporated areas of the county. The Controlling Authority for the County owned systems and the unincorporated areas of Talbot County is the DPW. An amendment schedule is also provided in Chapter Three of this Plan which lists the resolutions that have amended the Comprehensive Water and Sewer Plan between 1985 and 2024.

While Maps 5 and 6 generally depict existing (S/W-1) and planned (S/W-2, 3) service areas, Chapter Two provides a discussion of the allocation protocol for State Funded Growth and Capital Improvement Project (CIP) implementation as well as a more specific representation of the areas of existing and anticipated sewer and water services.

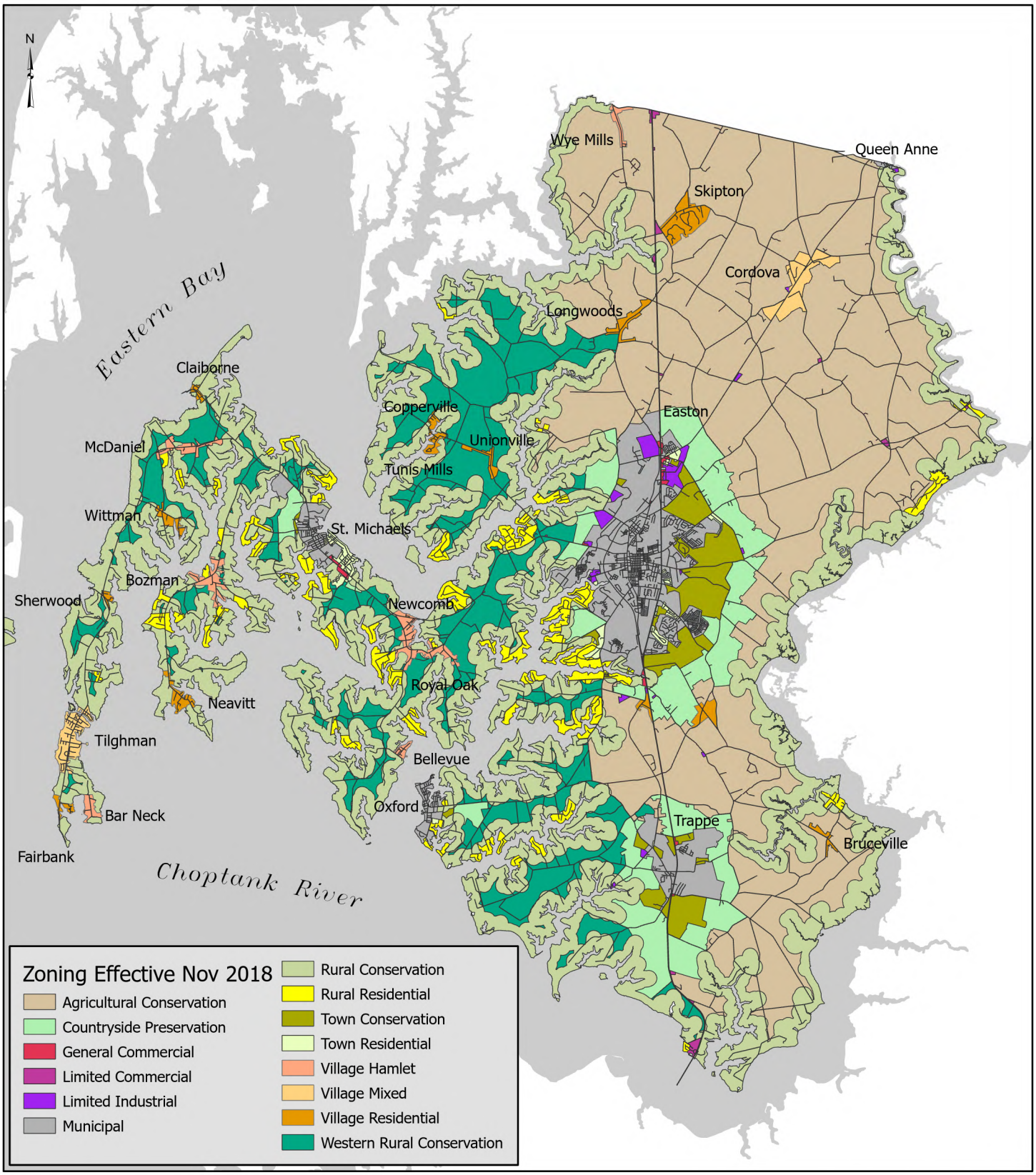
Changes and updates made to the appendices included in the 1992 Plan are included in the referenced appendices of this report. These updates replace outdated information shown in the 1992 Plan. Information in the 1992 Plan which has been directly replaced by updated appendices in the 2024 Report of the Review should be considered obsolete.



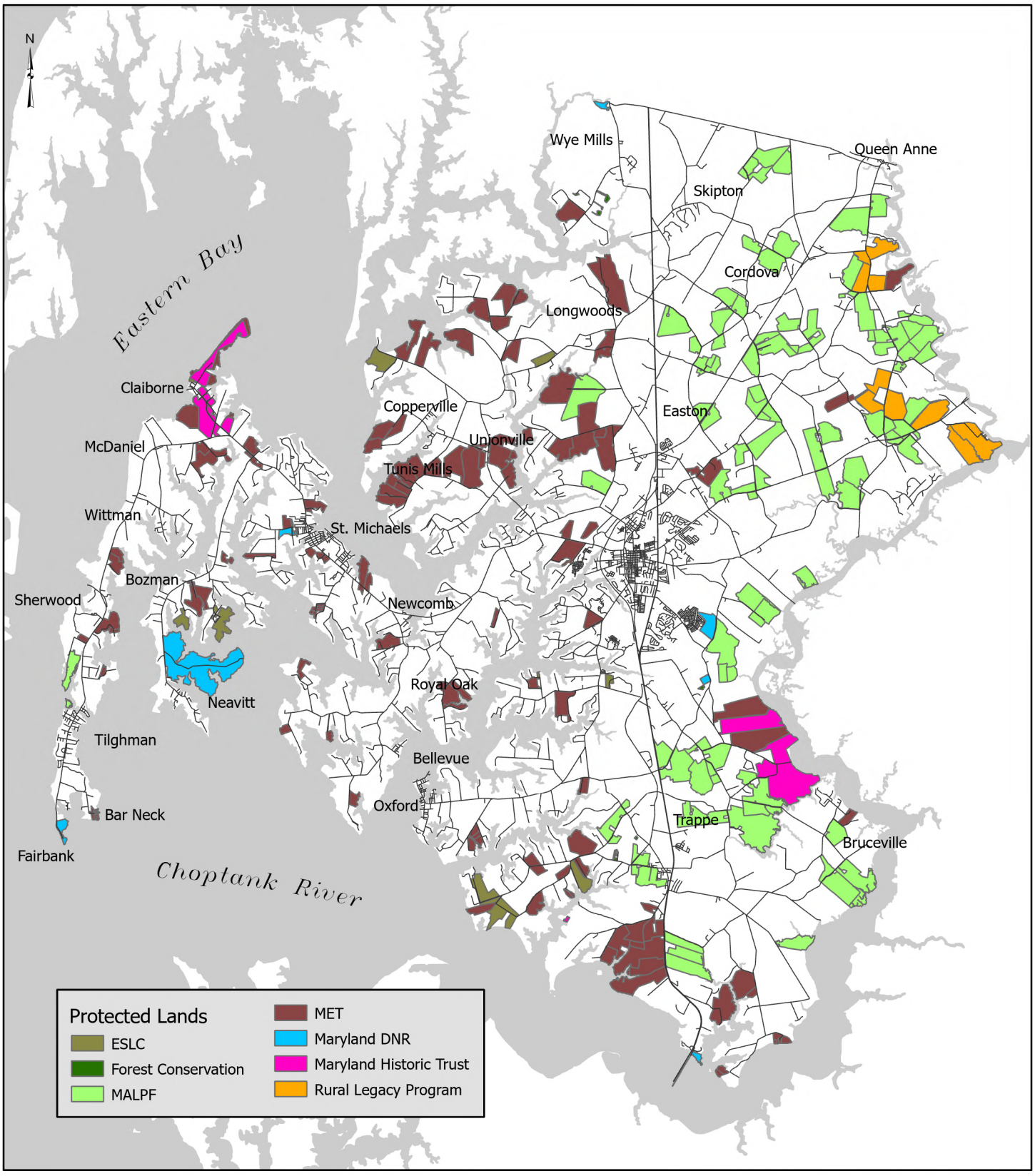
Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Priority Funding Area	DRAFT			
Map 1	Scale: Not to Scale	Date: 11/4/2024	Page: Introduction 9	



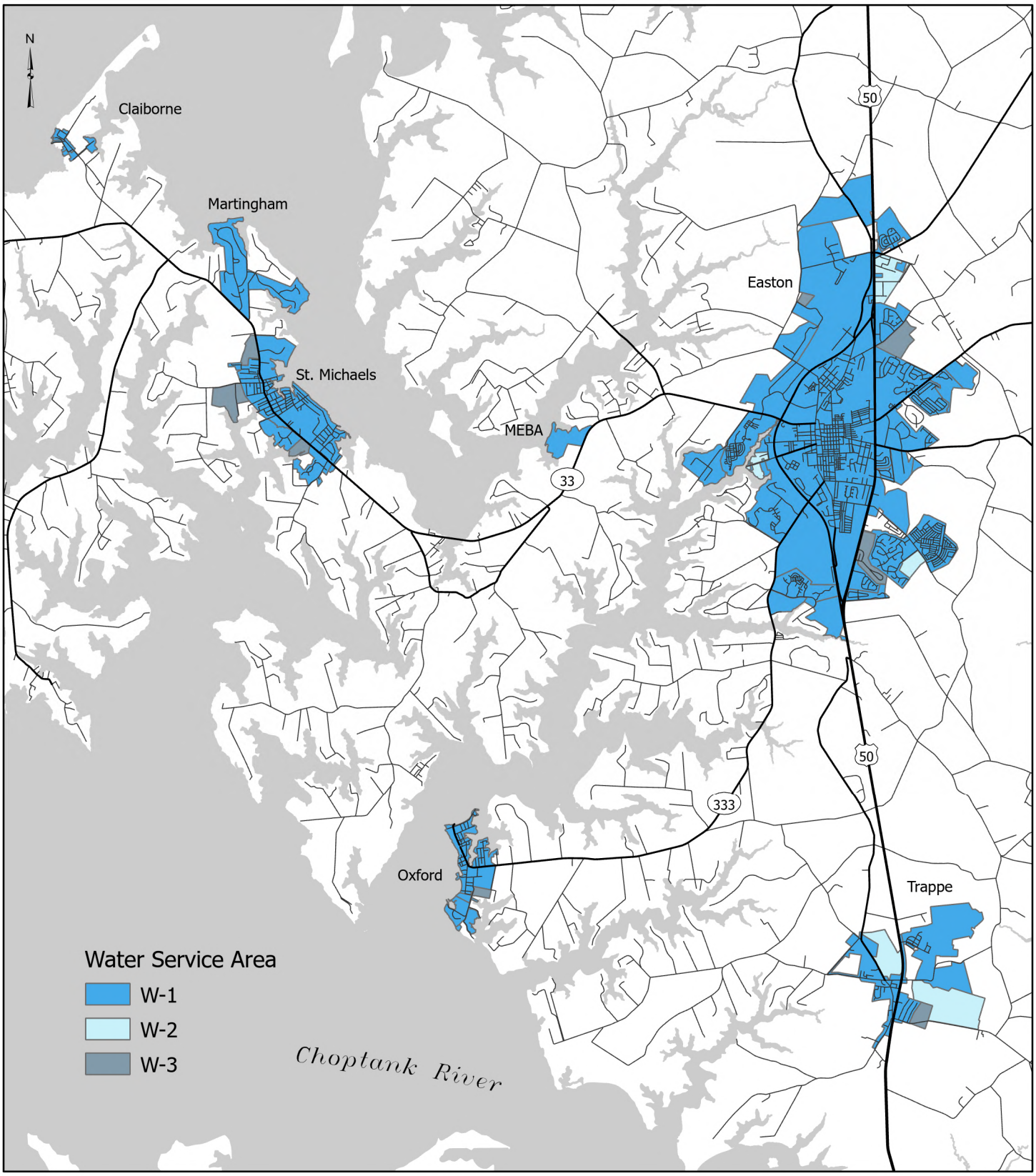
Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Land Use	DRAFT			
Map 2	Scale: Not to Scale	Date: 11/4/2024	Page: Introduction 10	



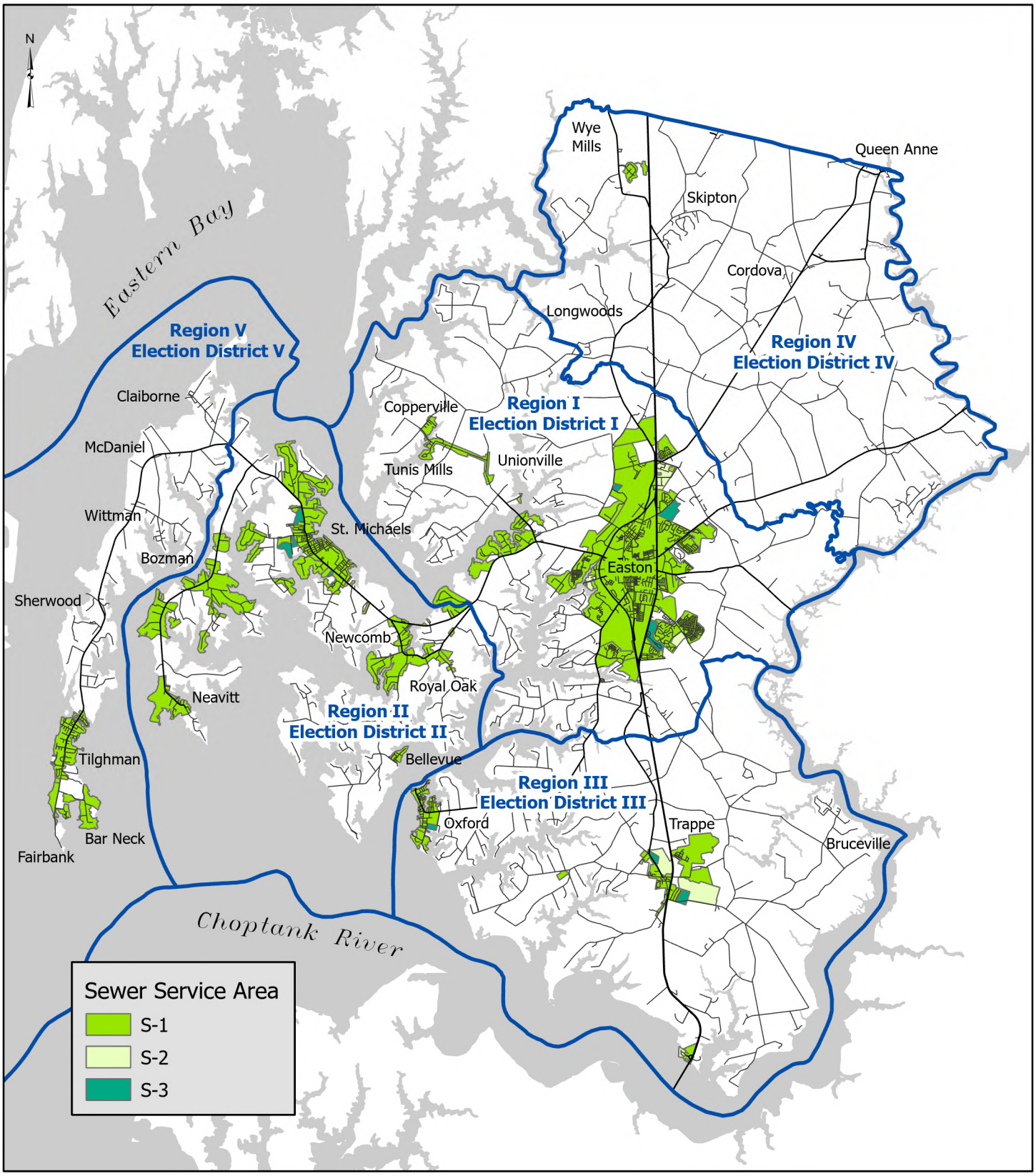
Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Zoning	DRAFT			
Map 3	Scale: Not to Scale	Date: 11/4/2024	Page: Introduction 11	



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Protected Lands	DRAFT			
Map 4	Scale: Not to Scale	Date: 11/4/2024	Page: Introduction 12	



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Water Service Area	DRAFT			
Map 5	Scale: Not to Scale	Date: 11/4/2024	Page: Introduction 13	



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Sewer Service Area	DRAFT			
Map 6	Scale: Not to Scale	Date: 11/4/2024	Page: Introduction 14	

i. 1992 Through 2024 Update Reference Document

1992 Update of the Comprehensive Water and Sewer Plan	2002 Report of the Review	2024 Report of the Review
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Definitions	Revised – See Chapter 1 of Report of the Review	No Change
Policies – Requirements	Revised – See Chapter 1 of Report of the Review	No Change
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CHAPTER TWO – GENERAL BACKGROUND INFORMATION	Reference 1992 Update	Revised
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Geology	No Change	No Change
Drainage	No Change	No Change
Soil Characteristics	No Change	No Change
Section II – Population	Revised – See Chapter 2 of Report of the Review	Revised – See Chapter 2 of Report of the Review
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Population Growth	Revised – See Chapter 2 of Report of the Review	Revised – See Chapter 2 of Report of the Review
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Schedule	Reference 1992 Update	Reference 1992 Update
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Existing Conditions and Proposed Facilities	Revised – See Chapter 2 of Report of the Review	Revised – See Chapter 2 of Report of the Review
Sludge Management Plan	Revised – See Chapter 2 of Report of the Review	No Change
Financial Management Plan	Revised – See Chapter 2 of Report of the Review	No Change
Section II – The Comprehensive Sewer Plan	Revised – See Chapter 2 of Report of the Review	No Change
Preface	Revised – See Chapter 2 of Report of the Review	No Change

1992 Update of the Comprehensive Water and Sewer Plan	2002 Report of the Review	2024 Report of the Review
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Schedule	Revised – See Chapter 2 of Report of the Review	No Change
Section III – Alternatives to the Sewer Plan	Revised – See Chapter 2 of Report of the Review	No Change
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Inventory of Existing Water Treatment Facilities	Revised – See Chapter 2 of Report of the Review	Revised – See Chapter 2 of Report of the Review
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Water Quality Problems Due to Storm Drainage Outfalls and Non-Point Sources	Reference 1992 Update	Reference 1992 Update
Comparison of Septage and Municipal Sewage	Reference 1992 Update	Reference 1992 Update
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CHAPTER ONE
GOALS, ORGANIZATION AND POLICIES

A. GOALS AND OBJECTIVES

It shall be the intention of this Plan to identify, define, and implement the necessary policies, plans, regulations, procedures and provisions for enforcement needed to accomplish or suitably address the following goals and objectives:

1. Protect the health, safety and welfare of the people of Talbot County and neighboring jurisdictions by improving and/or maintaining sanitary conditions of water resources.
2. Encourage and direct growth of the county in concentrated centers around existing centers of population that presently have adequate or potentially adequate water and sewer services. Conversely, it is the intent to discourage strip and scattered development.
3. Protect wetlands, waterfront, and critical areas of the Chesapeake Bay and promote development of portions of these areas for recreational and conservational purposes.
4. Promote self-supporting industrial development of the county in conformity with both the Talbot County Comprehensive Land Use and Water and Sewer Plans.
5. Prepare and adopt such ordinances, rules, regulations, policies, procedures, and amendments as may be necessary to implement and maintain the Comprehensive Water and Sewer Plan.
6. Assist the County Office of Environmental Health in approving all subdivision plats and building permits. Title 9, Subtitle 5 of the Annotated Code of Maryland requires that the County Office of Environmental Health's approval of plats and permits be in accordance with the Comprehensive Land Use and Water and Sewer Plans.
7. Provide for orderly updating, revision, and amending the Talbot County Comprehensive Water and Sewer Plan as directed by changes in needs during a review period.
8. Continue to provide qualified management of water resources in order to control and diminish water pollution and to preserve and maintain the necessary quality standard of streams, estuaries, wetlands, and groundwater for residential, industrial, commercial, recreational, and conservational use.
9. Identify and categorize sources of pollution from urban areas, agricultural areas, industrial wastes and soil erosion.
10. Develop and maintain a mapped database to assist in continued County planning efforts.
11. Administer all matters pertaining to water resources, waste disposal, stormwater management and sediment control.
12. Prepare a Policy Manual for water and sewer projects planned by the County.

13. Prepare feasibility studies as needed for water and sewer projects planned by the County.
14. Adopt and enforce legislation regulating pretreatment and discharge of industrial waste into stream waters and estuaries or into private, community, and public wastewater facilities.
15. Study the waste disposal problems at marinas and apply measures for assuring public and private compliance with applicable regulatory provisions for proper installation and use of Marine Waste Disposal Facilities.
16. Review the status of Facilities Plans and identify changes needed to meet current regulations.
17. Provide a Groundwater Protection Plan for regulations of new on-site wastewater disposal systems and protection of potable groundwater resources.
18. Identify available funding sources for sewer and water projects.
19. Provide Financial Management Plans for each publicly owned community sewer system.
20. Develop a sludge management policy for disposal of wastewater generated solids.
21. Encourage water conservation.
22. Develop a plan for future service extensions in the Region II and Region V Sanitary Districts, including wastewater treatment capacity expansion.
23. Develop a plan for future water supply to the villages of Claiborne and Tilghman Villages.
24. Comply with Talbot County Critical Area Land Management Policies.
25. Provide sewer use and billing regulations consistently applied in each County Sanitary District.
26. Provide a regulatory policy and inventory for Shared Sanitary Facilities.
27. Establish inventories for National Pollution Discharge Elimination System (NPDES) permitted wastewater facilities in the jurisdiction of this Plan, featuring use, flow allocation, expansion, and available capacity schedules.
28. Develop and implement a plan for septage treatment and disposal, serving active septic systems throughout the county.
29. Coordinate procedures or activities relating to the use of water resources such that wetlands are preserved and protected to the maximum extent possible.
30. Develop a Five-Year Capital Improvement Program that identifies the needs for water and wastewater treatment facilities, water storage and distribution systems, wastewater collection systems and equipment for the proper operation and maintenance of these facilities to assure safe and adequate systems for both water and sewer.
31. Develop Watershed-Based approaches that inventories all point and non-point source discharges and creates an active database on both point and non-point source discharges.

32. Develop, maintain, and integrate water quality and environmental data into a geographical information system (GIS) program.
33. Protect the water quality of the Chesapeake Bay and its tributaries and establish objectives to assure no degradation of current water quality by upgrading existing wastewater treatment facilities with the best available nutrient removal technologies as the sewer service areas of these facilities are expanded.
34. All water and sewer services providers manage their allocations in a cost-effective manner, consistent with the Maryland Economic Growth, Resource Protection and Planning Act of 1992 and the Smart Growth – Priority Funding Areas Act of 1997.
35. The Comprehensive Water and Sewer Plan shall serve as a planning tool that is consistent with the County Comprehensive Plan and implements Smart Growth by encouraging and directing growth of the County in concentrated centers in and around existing centers of population that presently have adequate or potentially adequate water and sewer services as stipulated in the second goal of this Plan.
36. Develop and maintain a GIS overlay that establishes a priority for development within the towns and County. The areas having the highest priority for development shall be those areas that are determined by the Maryland Department of Planning to conform to the statutory criteria for delineating PFAs. These will typically be within the towns and villages where adequate water and sewer services exist or efforts by either the County or the local government can improve water and/or sewer services.
37. Talbot County will develop policies that are acceptable to the Maryland Department of the Environment and the Maryland Department of Planning to extend water and/or sewer systems to areas having failing septic systems and are not meeting the statutory criteria of a Priority Funding Area through restricted/denied access water and/or sewer system extensions.

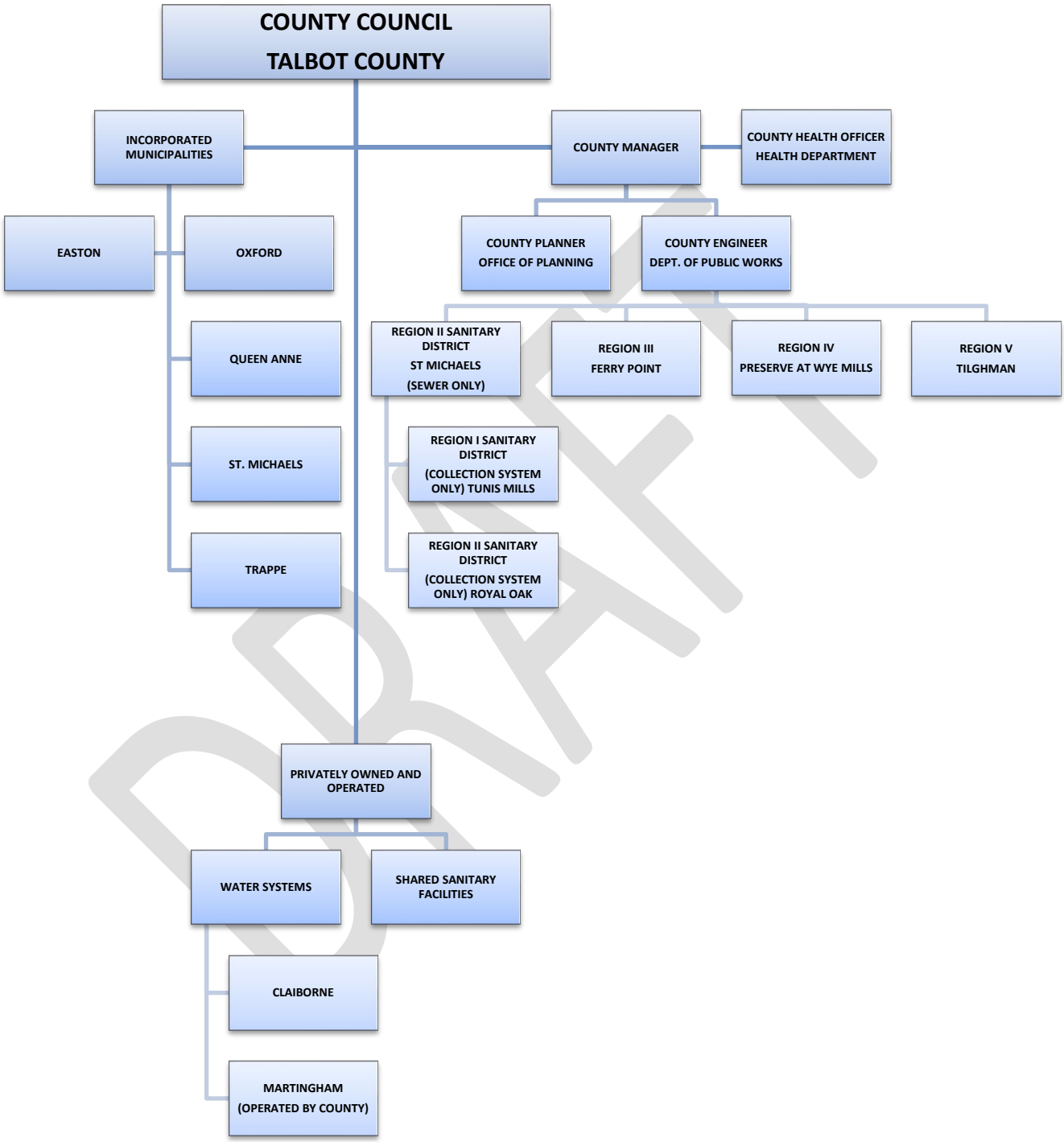
B. ORGANIZATION

The County Council of Talbot County is the controlling authority for all aspects of water and sewer facilities owned and/or operated by the County (Organization for the Management of Water and Sanitary Facilities chart). The Talbot County Department of Public Works is responsible to the County Council for the planning, design, construction, operation, maintenance, and Financial Management of County owned or operated facilities. These include the Region I wastewater collection facilities, Region II, Region III, Region IV, Region V wastewater collection and treatment systems, and Claiborne Water System.

Incorporated municipalities have their own governing bodies and/or utility commissions that are directly responsible for the management of their water and sewer systems, except for the Town of St. Michaels, whose sewer system is managed by the County (Region II Sanitary District).

The Martingham water system is privately owned by Martingham Utilities Cooperative and operated by Talbot County DPW. Claiborne currently is not incorporated but has two separate water companies supplying the public. Jensen's Hyde Park was a privately owned park with privately owned and operated water and sewer facilities but has since been incorporated into the Town of Easton (Easton Utilities) systems.

ORGANIZATION FOR THE MANAGEMENT OF WATER AND SANITARY FACILITIES TALBOT COUNTY, MARYLAND



NOTES:

1. Health Department includes jurisdiction of the Maryland Department of the Environment
2. Region I Sanitary District includes the Villages of Tunis Mills, Unionville, and Copperville
3. Region II Sanitary District includes the Villages of Royal Oak, Newcomb, and Bellevue

C. DEFINITIONS

The following technical words and phrases have been defined for this report.

1. "APPROVING AUTHORITY" means one or more officials, agents, or agencies of local government designated by the local governing body or specified by other provisions of Environmental Article, Title 9, Subtitle 5, of the Annotated Code of Maryland, to take certain actions as part of implementing this Plan.
2. "CAPITAL IMPROVEMENT PROGRAM" means any listing of all water and wastewater treatment facilities, water storage and distribution systems, wastewater collection systems and equipment requests for funding to assure the proper operation and maintenance of these facilities that provides for safe and adequate systems for both water and sewer.
3. "COMMUNITY SEWER SYSTEM" means any system, whether publicly or privately owned, serving two (2) or more individual lots for the collection and disposal of sewage or industrial wastes of a liquid nature, including various devices for the treatment of such sewage and industrial wastes.
4. "COMMUNITY WATER SUPPLY SYSTEM" means a source of potable water and a distribution system, including treatment and storage facilities, whether publicly or privately owned, serving two or more individual lots.
5. "CONTROLLING AUTHORITY" means a governmental body empowered by the County or municipality to provide for management, operation, and continuous preventive and corrective maintenance of a shared sanitary facility.
6. "COUNTY COMPREHENSIVE WATER AND SEWER PLAN" or "Plan", means a comprehensive plan, and all amendments and revisions to it, for the protection of surface, ground, and tidal water resources, and the provision of adequate water supply and sewer systems, whether an individual or community system or publicly or privately owned, throughout the county, including incorporated municipalities.
7. "DEPARTMENT" means the Maryland Department of the Environment.
8. "EQUIVALENT DWELLING UNIT" means an estimated daily water supply or sewer capacity required to serve a detached single-family residence.
9. "FACILITY PLAN" means a planning document pertaining to the development and use of a specific facility or facilities.
10. "EXISTING SERVICE AREA" means that area which is currently served by a community water supply of sewer system.
11. "FINAL PLANNING STAGES" means a work or works of community and multi-use water supply and sewer facilities for which contract plans and specifications have been completed, sanitary sewer, or water construction permits have been issued, or public works agreements have been executed.
12. "IMMEDIATE PRIORITY" means a work or works of community, multi-use, or shared sanitary facilities for which final planning or design is completed or in

progress and the beginning of construction is scheduled to start within two (2) years following the date of adoption of the Plan, and/or amendments and revisions thereto.

13. "INDIVIDUAL SEWER SYSTEM" means a system of sewers, piping treatment tanks, or other facilities serving a single undividable lot or one equivalent dwelling unit and disposing of sewage or individual wastes of a liquid nature, in whole or in part, on or in the soil of the property, into any waters of this State, or by other methods.
14. "INDIVIDUAL WATER SUPPLY SYSTEM" means a system of piping, pumps, tanks, or other facilities utilizing a source of ground or surface water to supply potable water to a single undividable lot or one equivalent dwelling unit.
15. "MARINA" means dock, wharf, or basin providing mooring for boats which contain on-board toilet facilities, operated under public or private ownership either free or on a fee basis for the convenience of the public or club membership.
16. "MULTI-USE SEWER SYSTEM" means a single system serving a single lot and more than one (1) equivalent dwelling unit, whether owned or operated by an individual or group of individuals under private or collective ownership, for the collection and disposal of sewage or industrial wastes of a liquid nature, including various devices for the treatment of such sewage and industrial wastes having a capacity in excess of 5,000 gallons per day (GPD).
17. "MULTI-USE WATER SUPPLY SYSTEM" means a single system of piping, pumps, tanks, or other facilities utilizing a source of ground or surface water to supply a group of individuals or more than one equivalent dwelling unit on a single lot and having a capacity in excess of 5,000 GPD.
18. "NON-POINT SOURCE" means pollution originating from surface run-off, for which no specific outfall can be identified.
19. "PROGRAMMED" means plans for future water and/or sewer service areas are proposed with no commitment for public funding nor approval for extending water and/or sewer service has been granted by the controlling authority for immediate priority status.
20. "SANITARY FACILITIES OR SYSTEMS" means any sewer system for the collection, handling, treatment, and disposal of liquid wastewater, septage, or sewage sludge; or water supply system for the distribution, treatment and storage of potable water; whether an individual, multi-use, or community system, or publicly or privately owned.
21. "SEPTAGE" is all solid and liquid contents of chemical toilets, septic tanks, seepage pits, privies, and watertight holding tanks.
22. "SEWAGE SLUDGE" means the accumulated semi-liquid suspension, settled solids, or dried residue of these solids that is separated from wastewater in a treatment plant, whether or not these solids have undergone further treatment.
23. "SEWER SERVICE AREA" is that area currently served by a community, multi-use, or shared sewer sanitary facility, or for which such service is allocated or reserved.

24. "SHARED SANITARY FACILITIES" means any sanitary facilities, owned in common by the users or the Controlling Authority, serving two (2) or more detached single family dwelling units, or commercial facilities, on separately recorded land lots or parcels in the unincorporated areas of Talbot County, Maryland.
25. "SIX TO TEN YEAR PERIOD" means that period 6 to 10 years following the date of adoption of the Plan and/or amendments or revisions thereto.
26. "THREE TO FIVE YEAR PERIOD" means that period 3 to 5 years following the date of adoption of the Plan and/or amendments or revisions thereto.
27. "UNDER CONSTRUCTION" means a work or works of community, multi-use, or shared sanitary facilities where actual construction is progressing, or where a notice to proceed with a contract for such work has been issued as of the adoption date of this Plan and/or amendments or revisions thereto.
28. "WATER SERVICE AREA" means that area currently served by a community, multi-use, or shared water facility, or for which such service is allocated or reserved.
29. "W-1", "S-1" means areas served or to be served by community, multi-use, or shared sanitary facilities which either existing, under construction, or have immediate priority status. "W" and "S" shall respectively denote water and sewer sanitary facilities (typical for all classifications).
30. "W-2", "S-2" means areas where improvements or extensions to existing, or construction of new community, multi-use, or shared sanitary facilities are programmed for progress to "W-1", "S-1" classification within a THREE TO FIVE YEAR PERIOD.
31. "W-3", "S-3" means areas where improvements or extensions to existing, or construction of new community, multi-use, or shared sanitary facilities are programmed for progress to "W-1". "S-1" classification within a SIX TO TEN YEAR PERIOD.

D. POLICIES – REQUIREMENTS

The 2024 Report of the Review examines the Policies as presented in the 2002 Report of the Review and the 1992 Plan. No changes were made to the revisions completed in the 2002 Report of the Review. Within the text of the 1992 Plan and the Appendices, the Annotated Code of Maryland Regulations were recodified as Title 26 from Title 17. All discrepancies associated with COMAR recodification within the 1992 Plan were made to reflect current codification for titles, subtitles and chapters in the 2002 Report of the Review. As for federal and State agencies, various activities that were conducted by the National Center for Environmental Health pertaining to discharge of wastewater to a stream are enforced by the U.S. Environmental Protection Agency (EPA) and those activities dealing with the environment at the State level are enforced by the Maryland Department of the Environment. Any and all discrepancies related to past agencies shall reflect the existing enforcing federal and/or State Agency.

D.1. Individual Water Supply and Sewer System Installation Requirements

As presented in the 1992 Plan, the installation of individual water supply or individual sewer systems shall be subject to the following requirements:

A. All individual sanitary systems in Talbot County must be issued a Sanitary Construction Permit from the Talbot County Office of Environmental Health prior to installation, replacement, and/or major repair and upgrade, in accordance with the provision of Article 617 Paragraph 11.03.0 of the Talbot County Code.
B. An individual sanitary system may not be permitted to be installed on a lot or property parcel for which an adequate community sanitary system is available. Availability shall generally mean the lot or parcel is in the proper sewer service area.
C. If an existing community sanitary system is available but inadequate due to the lack of treatment capacity or the inability to meet the discharge limitations as defined within the National Pollution Discharge Elimination System (NPDES) permit, or if a community sanitary system is not available, an interim individual water and sewer system may be used provided that:
    1) Such interim systems are adjudged by the local health department to be adequate, safe, and in compliance with applicable State and local regulations, including COMAR 26.04.02 and the Talbot County Groundwater Protection Plan.
    2) Permits for such interim systems shall bear a notice regarding the interim nature of the Permit and state that connection to a future community system shall be made within one (1) year or less after such system becomes available;
    3) If interim systems are used, provisions shall be made, whenever possible, to locate such systems so as to permit connection to the public facilities in a most economical and convenient manner.

D.2. Capped Water and Sewer Policy

As presented in the 1992 Plan, the Capped Water and Sewer Policy shall be referenced.

In order to prevent street and other damage encountered in providing public sanitary utility service to developed areas, and to provide for efficient and effective connection to public utility service, the following policy is presented for sewer and water line installation in areas where public sewer and water service is not available at the time of street and residential construction but will be made available at some future time, as classified herein:

A. Requests for such advance installations will only be accepted by the approving authority where interim systems are permitted by the Water and Sewer Plan in S-1, S-2, W-1, and W-2 use areas.
B. Each application for a sewer or water service construction permit must be accompanied by a letter from the County Health Officer requesting that such installation be permitted.
C. Building permits, subdivision plats, and septic tank approvals shall include a provision requiring the connection of the premises to community sewer and water within twelve (12) months of announced availability.
D. Water and Sewer lines shall be designed and installed in accordance with applicable municipal or County specifications and in compliance with the State of Maryland Plumbing Regulations.
E. The connection of a "dry" system shall be plugged with a visible and readily inspectable plug at the point of connection to the existing system.

D.3. Requirements for Proposed Privately Owned Community Water and Sewer Systems (Shared Sanitary Facilities)

As presented in the 1992 Plan, the County Council enacted legislation regulating shared sanitary facilities on February 12, 1991. This legislation defines requirements for ownership, permits, design, construction, operation, maintenance, replacement, modification, management, and financing of privately owned community water and sewer systems. The Shared Sanitary Facilities Regulation (Bill 443) are included in Appendix 11 of the 1992 Plan.

D.4. Financial Requirements for Community and Multi-Use Sewer Systems

As presented in the 1992 Plan, financial requirements for Privately owned Community and Multi-Use Sewer Systems and Publicly-Owned Community Sewer Systems were outlined as follows:

D.4.1. Financial Requirements for Privately Owned Community and Multi-Use Sewer Systems (Shared Sanitary Facilities)

New or proposed privately owned community or multi-use sewer systems or extensions are required to provide Financial Management Plans as included in COMAR 26.03.02.021.2. An inventory of financial management plans for privately owned shared sanitary facilities were included in Appendix 7 of the 1992 Plan.

Before the Maryland Department of the Environment may issue a permit for the construction of an extension to an existing or planned, self-contained, privately-owned community or multi-use sewer system:

A. The project must be described in the County Plan in the correct service area category designation and designated by the appropriate map symbol.
B. A Schedule FS, Financial Management Statistics, is no longer required by the Maryland Department of the Environment.
C. An agreement must be developed and executed between the Talbot County Department of Public Works and the owner of the proposed sewer system which provides that the owner deposit into an escrow account funds to cover the repair or replacement of the highest cost treatment plant unit. (The Talbot County Department of Public Works may accept a binding financial arrangement, such as a letter of credit or other type of legal document in lieu of said escrow account.) In addition, the agreement may require that a separate account be established which provides sufficient funds for the initial operation and maintenance of the system. This latter requirement will remain in effect until operating costs are fully supported by revenue. Finally, the agreement must provide that the owner establish a fund for replacement of the system twenty years after initial construction. The Talbot County Department of Public Works shall provide an informational copy of the executed agreement to the local (town) government. Since new sewer systems have no historical financial data, the anticipated revenues, and expenses for the first two years of operation shall be estimated.
D. The Financial Management Plan for privately owned community or multi-use sewer systems shall be compatible with State and local regulations pertaining to shared facilities.

D.4.2. Financial Requirement for Publicly Owned Community Sewer System

All publicly owned community Sewer systems are required to have a Financial Management Plan included within the Comprehensive Water and Sewer Plan in accordance with COMAR 26.03.02.02.1. This regulation was prepared to comply with the Chesapeake Bay initiative: water and sewer planning, to allow the Maryland Department of the Environment to monitor the fiscal health of sewer systems and assure the long-term reliability of these systems. Each publicly owned community sewer system is considered a separate entity for fiscal evaluation within the local operating agency. Appendix 7 of the 1992 Plan contains the inventory of current financial management plans for all publicly owned sewer systems in Talbot County.

D.5. Groundwater Protection Plan

As presented in the 1992 Plan, the Talbot County Groundwater Protection Plan (GPP) was developed in 1987 in accordance with COMAR 26.04.02 (adopted in 1985). The purpose of the GPP is to identify areas where on-site sewer disposal systems may be allowed using less than a four-foot (4 ft) unsaturated treatment zone. A treatment zone of less than four feet (4 ft) is allowed only if the receiving aquifer is designated as Type III (Type III means an aquifer having: a) A transmissivity less than 1,000 gallons/day/foot, a permeability less than 100 gallons/day/square foot and a total dissolved solids concentration greater than 6,000 mg/liter) pursuant to COMAR 26.08.01, or the aquifer has a limited potential to serve as a drinking water aquifer.

The Talbot County GPP establishes the density, design, criteria and construction requirements for all on-site sewage disposal systems in Talbot County. The county is divided into two management areas:

Area A, which requires maximum protection of shallow drinking water aquifers; and

Area B, where the shallow aquifers used for sewage disposal are protected from deeper drinking water aquifers by more than five (5) feet of confining materials.

The "Management Summary – Talbot County Groundwater Protection Plan", including delineation of Areas A and B, as well as design criteria tables for each area, and the complete GPP, is contained in Appendix 5. The office of responsibility for the Groundwater Protection Plan is the Talbot County Health Department Office of Environmental Health.

D.6. Sludge Disposal Requirements

As presented in the 1992 Plan, the Sludge Disposal Requirements shall comply with current regulations. The 1992 Plan and current ordinances should be referenced for historical information pertaining to the Sludge Disposal Requirements for Talbot County.

D.6.1. Current State Regulations

The State law governing sewer sludge disposal is in Section 9-230 to 9-249, Annotated Code of Maryland. The State's requirements are detailed in COMAR 26.04.06 administered by the Department of the Environment. This regulation applies only to sewage sludge (from wastewater treatment plants) and requires a Sewage Sludge Utilities Permit for each disposal site. A disposal site is usually either agricultural land (Class I Sewage Sludge only) or an approved sanitary landfill. Incineration is allowed but not practiced in Talbot County.

Land application areas must provide a two-foot (2 ft) buffer between the sludge and groundwater. Also, crops for direct human consumption cannot be grown on the area for three (3) years subsequent to the sludge application. The sludge and application areas are subject to continued monitoring and laboratory analysis and must not exceed maximum concentrations for metals and other pollutants. All Sludge Utilities Permit Applications received by the State are forwarded to the County who may request a public information meeting and may consult with the State regarding issuance of the permit.

Collection and disposal of septage is regulated by the Maryland Department of the Environment under COMAR 26.04.02 and 26.04.06. These regulations establish new standards for Maryland's Septage Management Program. Under this program, septage is required to meet the same standards currently required for the utilization/disposal of sewage sludge. Specifically, septage must be treated by a process to significantly reduce pathogens prior to land application. Land application of septage may continue until appropriate stabilization facilities are available. Septage application during this interim period must meet the previous requirements for discharge sites including setbacks and soil testing. The most difficult of these requirements to meet is the requirement that septage application take place at least 2,000 feet from any adjacent homesites.

D.6.2. Current County Regulations

The Talbot County Zoning Ordinance (Talbot County Bill 450 as amended by Bill 459) contains provisions for regulatory sludge application. The County Planning Office must be notified one day prior to sludge application. A manifest must accompany each load of sewage sludge. A monthly summary of sludge application must be filed with the County Planning Office and the Office of Environmental Health. Sludge storage facilities are allowed for sludge generated in Talbot County only.

D.6.3. Current Septage Policy

A bio-solids facility was acquired to serve the County septage needs mandated by Department of the Environment. This facility is named the Talbot County Bio-Solids Utilization Facility. In 2017, the County began operating the Talbot County Bio-Solids Utilization Facility (TCBUF). Due to competition from neighboring counties, Talbot County assessed a rate per gallon of treatment that does not cover the operation and maintenance of the facility, debt, and the repair and replacement of equipment. The deficit is covered by the County general fund. Septage received at the TCBUF is lime stabilized and spray irrigated onto a nutrient uptake crop. Per the septage management plan adopted via Resolution 141, Talbot County will control septage collection and disposal by issuing disposal permits. These disposal permits will make contract haulers and the entity generating the septage responsible for materials and/or contents that are treated and disposed of at the Talbot County treatment and disposal facility.

D.6.4. Sludge Management Plan

Chapter Four (Section 1-b) of the 1992 plan includes the Sludge Management Plan for Talbot County which identifies the quantity and quality of sewage sludge produced at each sewage treatment plant, describes the current method of disposal of or use sewage sludge, tabulates permit data, discusses methods of disposal or use or sewage sludge, and identifies specific problems associated with sludge handling and processing at existing sewage treatment plants. The Sludge Management Plan also addresses septage treatment and disposal.

D.7. Allocation Policies and Administrative Policies for Sewer Facilities

As presented in the 1992 Plan, sewer extensions within the service areas of publicly owned sewer systems are governed by each individual Town or Sanitary District in accordance with their specific requirements. Within Talbot County, the only utilities that have written policies are Easton, and the Region II and Region V Sanitary Districts of the County.

These policies and regulation provide for allocating treatment plant capacity and provide other requirements for extension of sewers.

Included in Appendix 3 of the 1992 Plan are Copies of the following:

- Easton Sewer Service Tariff, 7/28/89.
- Region II Sanitary District – Region II Allocation Plan (12/22/87),
- Region V Sanitary District
- Talbot County Bill No. 148, An act to create Talbot County Region No. 5 Sanitary District…and to Provide for construction of facilities for that District.
- Talbot County Wastewater Facilities Administration Policy

Included in the appendices of this Report of the Review are additions to, or updated versions of, the following 1992 Plan's Appendix 3 documents:

- Easton Sewer Service Tariff, Latest Revision 1/18/22
- Talbot County Bill No. 326, An act to create Talbot County Region No. 4 Sanitary District

Other regulatory documents of use to developers and industries that pertain to sewer use in unincorporated Talbot County includes:

Bill No. 61 – An act regulating the use of public and private sewers and drains, private wastewater disposal, the installation and connection of building sewers, and the discharge of waters and wastes into the public sewer systems of the Talbot County Sanitary Commission.

Talbot County Code, Title 14, Primarily for Region II Sanitary District – Management and Construction Standards.

Bill No. 126 – Sewer service rates for Region II Sanitary District.

Bill No. 224 – Sewer service rates for Region II Sanitary District.

Copies of these may be obtained from the Talbot County Department of Public Works or the office of the County Council.

E. AMENDMENT PROCEDURE

The Amendment Procedure was presented in the 1992 Plan. The updated plan is provided in Chapter 3 of the 2024 Report of the Review with revised forms and tables. The Maryland Department of the Environment will issue water/sewer construction permits only for properties designated as W-1, S-1 or W-2, S-2. Property owners wishing to change the priority status of their land for either water or sewer service, may request an amendment to the Comprehensive Water and Sewer Plan in accordance with the procedure prescribed by Chapter 3, herein.

F. FINANCIAL ASSISTANCE FOR WATER AND SEWER PROJECTS

Financial assistance for sewer and water construction projects are available from several State and Federal sources. Assistance may be in the form of a loan, a bond pool, a grant or a combination of these.

The Maryland Water Infrastructure Financing Administration (MWIFA) was established to provide state and federal financial assistance in the form of low interest rate loans, loan forgiveness, and grant funding for eligible water quality and drinking water capital projects. Funding program through the MWIFA include:

- Water Quality Revolving Loan Program (WQRLF)
- Drinking Water Revolving Loan Program (DWRLF)
- Water Supply Assistance Grant Program
- Bay Restoration Fund - Wastewater Grant Program
- Bay Restoration Fund - Septic System Upgrade Program
- Linked Deposit Program

Both loan programs receive federal funding from the United States Environmental Protection Agency (EPA) and offer below market interest rate State and Federal loans to eligible borrowers.

MWIFA is authorized to issue revenue bonds subject to approval of the State Board of Public Works and Secretary of the Maryland Department of the Environment. Bonds issued by MWIFA do not constitute a debt or the full faith and credit pledge of the State or any political subdivision. The bonds are paid solely from MWIFA revenues as pledged under bond indenture for each of the above Funds. MWIFA works very closely with MDE's Engineering and Capital Projects Program (ECPP), which is the entity responsible for management of water quality, drinking water, and stormwater and flood mitigation capital projects to protect public health and water quality.

USDA provides federal assistance for water and wastewater projects through various funding programs including:

- Water and Waste Disposal (WWD) Loan & Grant Program in DE, MD
- Search Grant Program
- Water and Environmental Program (WEP)
- Revolving Funds for Financing Water and Wastewater Projects Revolving Fund Program

Through Rural Utilities Service Water and Environmental Programs (WEP), rural communities obtain the technical assistance and financing necessary to develop drinking water and waste disposal systems. WEP provides funding for the construction of water and waste facilities in rural communities and is proud to be the only federal program exclusively focused on rural water and waste infrastructure needs of rural communities with populations of 10,000 or less. WEP also provides funding to organizations that provide technical assistance and training to rural communities in relation to their water and waste activities. WEP is administered through National Office staff in Washington, DC, and a network of field staff in each state.

G. WATER CONSERVATION

G.1. General

As outlined in the 1992 Plan, the Maryland Water Conservation Plumbing Fixtures Act of 1984 (MWCPFA) (Article 56A, Section 3-605 and 3-606) was enacted for the purpose of requiring the installation or water-conserving water closets, urinals, sinks and showerheads in buildings constructed or remodeled after February 15, 1980. The Act prohibits the sale of non-water-conserving fixtures in the state of Maryland. Enforcement of the Act is assigned to the local code inspectors.

All jurisdictions within Talbot County are actively implementing the MWCPFA or promoting water conservation other than through adopting/enforcement of the Maryland State Plumbing Code. Only approved fixtures are available at retail outlets thus meeting the water conserving

standards of the State Plumbing Code. Licensed plumbers are complying with provisions of the code as regards installation.

The majority of rural counties, Talbot included, participate with the State in monitoring and implementing conservation measures when groundwater levels, surface water flows and precipitation accumulations place Talbot County in any of the drought classifications, watch, warning or emergency, as declared by the Governor of Maryland.

G.2. Benefits

There are several benefits of water conservation that could be realized now among the jurisdictions. Benefits occur on two levels to the community as a whole and to the individual consumer.

Benefits include:

1) The elimination or postponement of how capital expenditures related to storage tank construction or well development.
2) A reduction in Hydraulic loadings to centralized waste treatment facilities and hence more reserve capacity;
3) A reduction in hydraulic loading to septic tank systems and hence fewer failing septic tanks;
4) A lessening of the need for expansion of energy generating capacity, and
5) A reduction in water supply and sewer facility operating cost.

Community water conservation benefits are often significant but will vary from locality to locality. However, the direct benefits of in-home conservation to individual consumers are readily apparent. For example, by installing water conservation plumbing fixtures (low-flow shower heads, faucet aerators, flow restrictors, etc.) average homeowners in the Washington/Baltimore area can, at little expense, reduce their home water use by nearly 50,000 gallons per year without altering their lifestyles. The total savings on water/sewer bills in one year could amount to more than $208.00 based on 2022 dollars. Hot water saved in one year could amount to approximately 23,000 gallons, resulting in an annual savings of nearly $625.00 based on 2022 dollars for those with electric water heaters.

G.3. Water Conservation Policy

A. Each county water and sewer plan must contain documentation that compliance with the Maryland Water Conservation Plumbing Fixtures Act (MWCPFA), as codified in Article 56A Section 3-605 and 3-606 Annotated Code of Maryland, is being achieved.

B. The document shall include:
   1) Designation of the county agency responsible for the enforcement of MWCPFA;
   2) A summary of county programs to assure implementation of and compliance with MWCPFA, including a description of:
      (a) A procedure that assures compliance with MWCPFA before the issuance of a certificate of occupancy.
      (b) Local actions taken to assure compliance, including the prohibition of the sale of non-water conserving plumbing fixtures.
      (c) The local procedures used to ensure that agreements between a developer and a building to assure compliance with MWCPFA are made a part of the record plat process or a part of a county building, plumbing, or occupancy permit, or bill of sale.
   3) County is currently complying with the MWCPFA.

G.4. Current Situation

All the municipalities within Talbot County, and the County, have implemented the MWCPFA and are actively promoting water conservation. The policy of this plan shall be to promote and encourage water conservation in the municipalities and the unincorporated areas of the county through specific code provisions of buildings, plumbing, and occupancy permit and inspection regulations, pertaining to the use and installation of water conserving fixtures.

H. CAPITAL IMPROVEMENT PROGRAM

Within the 2024 Report of the Review, a Five-Year Capital Improvement Program has been created to identify the needs for water and wastewater treatment facilities, water storage and distribution systems, wastewater collection systems and equipment for the proper operation and maintenance of these facilities to assure safe and adequate systems for both water and sewer. Under this program, a procedure will be established to develop and obtain funding requests from local government to be incorporated into the Talbot County Comprehensive Water and Sewer Plan. As projects are approved for funding, Talbot County will develop approved funding projects lists to be forwarded to the Maryland Department of the Environment for incorporation within the State's Infrastructure Inventory and Management Program.

I. COUNTY AND MUNICIPAL REVIEW

On an annual basis, the County will review with the incorporated municipalities their water and/or sewer service areas, the municipal facility plans, programs and policies to update the capital improvement project tables and review future water and/or sewer extension requiring the programming of future areas for water and/or sewer service designations. The County will

complete the reviews prior to June 1 of a given year and submit a resolution outlining future changes to the water and/or sewer service areas, capital improvement program and any policy changes that have occurred since the last annual review.

CHAPTER TWO

EXISTING WATER SYSTEMS

A. PHYSICAL FEATURES

The location of Talbot County is on the west-central edge of the Delmarva Peninsula that extends between the Atlantic Ocean and the Chesapeake Bay. The County is located between the parallels of 38°34' and 38°57' north latitude and has an area of 462.51 square miles – 271.82 square miles of land and 190.69 square miles of water and more than 600 miles of tidal shoreline. The county is bounded on the north by Queen Anne's County, on the east and south by Tuckahoe Creek and the Choptank River, and on the west by the Chesapeake Bay.

The topography, geology, drainage and soil characteristics are detailed in the 1992 Plan. For information pertaining to the topography, geology, drainage and soil characteristics, the 1992 Plan should be reviewed.

B. POPULATION

As presented in the 1992 Plan, population change is governed by three variables; birth, death and net migration, all of which are influenced by a number of factors. In Talbot County, population trends are affected by household size, retired and semi-retired people attracted to the area, employment, interest rates (the economy in general), and zoning restrictions.

The 1992 Plan detailed various aspects of population forecasting using data from the U.S. Bureau of Census and the Maryland Department of Planning. The 2024 Report should be referenced for current information pertaining to population density and growth projections. This information has been used to populate tables showing the recent Census information. These Tables have been included in the 2024 Report of the Review to provide current census data and data adopted in the 2016 Comprehensive Plan.

Table 1. 2020 Population by Election District

District Number	Election District	Population	Growth Since 2000
1	Easton	21,662	22.9%
2	St. Michaels	5,567	-1.2%
3	Trappe	4,130	-7.4%
4	Chapel	3,853	-6.9%
5	Bay Hundred	1,875	-3.7%
Total Population		37,087	
Source: U.S. ACS (2020) Demographic and Housing Estimates 5-year Summary			

Table 2. 2020 Population of Incorporated Municipalities

Municipality	2010 Census	2020 Census	Increase/Decrease	Percent (%)
Easton	15,954	17,101	1,147	7.1%
St. Michaels	1,029	1,049	20	1.9%
Oxford	651	611	(40)	-6.1%
Trappe	1,077	1,177	100	9.3%
Queen Anne	222	192	(30)	-13.5%
Total for Towns	18,933	20,030	1,197	6.3%
Total for County	37,782	37,526	(256)	-0.7%
Source: U.S. Census (2020) DEC Redistricting Data and DEC Total Populations				

Table 3. Population Density by Election District: 1970 – 2020

Density (Person per Square Mile)

District	1970	1980	1990	2000	2010	2020
Easton	153.4	167	212	241.6	267.2	292.9
St. Michaels	149.1	157	179	190.4	183.8	177.3
Trappe	55.1	57	66	72.3	66.5	60.7
Chapel	34.1	41	46	50.7	50.6	50.6
Bay Hundred	119.7	117	119	118.6	116.4	114.1
Total	90.7	94.2	112.4	124.4	128.9	133.4

Table 4. Maryland Department of Planning and U.S. Census Bureau

2020 Census

Municipalities	Population	% Change from 2000 to 2020
Easton	17,101	46.1%
St. Michaels	1,049	-12.1%
Trappe	1,177	2.7%
Oxford	611	-20.7%
Queen Anne	192	2.25%
Talbot County	37,526	10.9%
Eastern Shore	449,226	13.4%
Maryland	6,177,224	16.6%

Table 5. Talbot County Population by Age Group

Age Group	2020 Census uses the American Community Survey for age and sex data	
	Number	Percent
Under 5	1,521	4.1
5 - 19	6,053	16.3
20 – 64	18,684	50.4
65 & over	10,829	29.2
Source: U.S. ACS (2020) Demographic and Housing Estimates 5-year Summary		

Table 6. Population Forecast for Talbot County 1970 – 2030

	1970	1980	1990	1995	2000	2005	2010	2015	2020	2030	2040
Total	23,682	25,604	30,549	32,605	33,812	34,800	37,782	36,700	37,526	42,900	44,000
Average Annual	1970 - 1990		1990 - 2000		2000 - 2010		2010 - 2020		2020 - 2030		2030 - 2040
	0.78%		1.78%		1.02%		-0.01%		14.3%		2.6%
Source: Talbot County Planning Office (2016 Comprehensive Plan) and 2020 U.S. Census											

C. LAND USE AND PRIORITY FUNDING AREAS

The land use maps developed by the Maryland Department of Planning and under revision by Talbot County can be found in Map 2 in Chapter 1. The Priority Fund Areas Map as depicted by the Maryland Department of Planning and under revision by Talbot County can be found in Map 1 in Chapter 1. The priority funding area boundaries have been incorporated into the existing and proposed water and sewer service areas to clearly define water and sewer service areas residing within the priority funding areas.

D. SAFETY AND ADEQUACY OF WATER AND SEWER SYSTEMS

The stated objective of the Clean Water Act is to restore and maintain the chemical, physical and biological integrity of the nation's waters. To achieve this objective, the national goals are as follows:

a. Achievement of a level of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water; and
b. Elimination of the discharge of pollutants into surface waters; and
c. Discharge of toxic pollutants in toxic amounts shall be prohibited.

To achieve the goals and objectives of the Clean Water Act and Safe Drinking Water Act, regional and watershed-based approaches are needed to ensure the adequacy and safety of the waters within Talbot County. Because of the varying dynamics of natural waters, existing public water supply systems and centralized wastewater treatment plants must be properly operated, maintained, upgraded and expanded as hydraulic and pollutant loading characteristics change over time. For areas lacking public water supply systems and centralized wastewater treatment facilities, planned water and wastewater services may be required to ensure that the requirements of the Safe Drinking Water Act and the Clean Water Act are met.

Because the safety and adequacy of public water supply systems and centralized wastewater treatment plants in Talbot County must be ensured, Capital Improvement Plans for the next five years have been incorporated into the Comprehensive Water and Sewer Plan. The Five-Year

Capital Improvement Plan outlines the proposed measures to upgrade or expand as well as improve the operation and maintenance of these water and wastewater treatment facilities that are provided in the following section of this Plan.

E. EXISTING AND PROPOSED WATER SYSTEMS

The water systems throughout Talbot County consist of privately owned, individual well systems, community systems, and publicly owned water treatment and distribution systems. For details relating to geologic formations and specific information on the aquifers in Talbot County, the 1992 Plan should be referenced. This section of the 2024 Report of the Review updates the inventory of existing and proposed water facilities.

E.1. GENERAL

Per the 2016 Talbot County Comprehensive Plan, there are 329 active Groundwater Appropriation Permits issued by the Maryland Department of Natural Resources to groundwater users in Talbot County. Groundwater Appropriation Permits (GAP) are issued to all well water users except for farms and single-family dwellings with individual wells. Appropriation permits for the County total 6.4 million gallons per day (MGD) yearly average daily flow, and 11.0 MGD average daily use in the highest usage month.

E.2. INVENTORIES

The following pages identify the existing water treatment and supply systems for the various incorporated and unincorporated areas in Talbot County. Included in the inventory of these public water supply systems are the water source, well depth, pump capacity, treatment, storage, distribution, and population within the service area. In addition to the description of the existing water supply system, the capital improvement projects programmed for these systems has been listed in a Table identifying the project, the proposed fiscal year the project will be completed and other relevant comments to assure the safety and adequacy of these water systems.

In addition to the detailed description of the water systems, water service area maps have been incorporated in each respective water system service area for all incorporated and unincorporated areas in Talbot County. These water service area maps depict the areas having immediate priority status and programmed for progress to extend water service for the respective incorporated municipality or unincorporated area served by a public water supply system. The water service area maps were developed using Maryland Property View, a geographical information system software product developed by Maryland Department of Planning. These maps and figures are for planning purposes only and do not impose an obligation on Talbot County or the incorporated municipalities to provide water service to the anticipated areas programmed for progress.

EASTON WATER SYSTEM

The following resolutions expanded the Easton Water Service Area:

1. 7/9/2002 – Resolution 101 - Easton Water/Sewer Extension Cooke's Hope
2. 6/24/2003 – Resolution 104 – Reclassify and remap certain properties within the town of Easton Tax Map 26, Parcel 45 (Swann Haven Limited Partnership 2001), Tax Map 59 (Hoffman), Tax Map 45, Parcel 56 (Trippe Creek), Tax Map 34, Parcel 126 (part of Glenwood Property located adjacent to Ratcliff Manor) and Tax Map 34, Parcel 42, Lots 1 through 15, and Section A through D (part of Glenwood Property located adjacent to Ratcliff Manor.
3. 12/23/2003 – Resolution 109 – Reclassify and remap Tax Map 42, Parcels 56 and 242, lots 29, 30, 31, 35, and 36 as W-1
4. 12/23/2003 – Resolution 110 – Extend the Easton service area to include Tax Map 42, Parcel 59, as W-1.
5. 12/23/2003 – Resolution 111 – Extension to the Easton service area to include Tax Map 34, Parcel 126, as W-1. (Easton Village Dr)
6. 3/28/2006 – Resolution 131 – Extension to the Easton service area to include Tax Map 26, Parcels 45 and 186 as W-1.
7. 12/12/2006 – Resolution 135 – Extension to the Easton service area to include Tax Map 34, Parcels 51, 92, 103, 107, 200, 205, 210, 202, and 208 and Tax Map 35, Parcels, 7, 15, 18, 39, 50, 57, 72, 82, 88, 91, and 100 as W-1 (Clifton Industrial Park).
8. 4/17/2007 – Resolution 137 – Extension to the Easton service area to include Tax Map 34, Parcel 121, as W-1 (Londonderry)
9. 1/13/2009 – Resolution 158 – Extension to the Easton service area to include Tax Map 17, Parcels 75, 38, 129 and 75 as W-1.
10. 12/23/2008 – Resolution 159 – Remap Tax Map 17, Parcels 75, 38, and 129 as primary growth areas. Update land use plan to include the following sentence: "Regional medical facilities and hospitals should not be located in rural or undeveloped areas of the County that do not have readily available access to water, sewer, police, and fire protection or other necessary infrastructure.".
11. 6/23/2009 – Resolution 165 – Extension to the Easton service area to include Tax Map 17, Parcel 39 and Tax Map 25, Parcels 13, 17 and Parcel 207, lots 19-25 as W-1.
12. 6/28/2011 – Resolution 184 – Updates to the water infrastructure on the hospital property including a new elevated water storage tank and to extend Easton Utilities water system to the properties annexed by Easton Town Council Resolution No. 5955.
13. 10/14/2014 – Resolution 216 - Extension to the Easton service area to include "The Properties", located in the Talbot Commerce Park adjacent to the Town of Easton, as W-1.
14. 7/26/2016 – Resolution 229 – Extension to the Easton service area to include certain properties located in the South Clifton neighborhood as W-1
15. 8/8/2017 – Resolution 246 – Extension to the Easton service area to include certain properties located at Easton Point. Amend Table 7 and 16 to authorize capital projects to

extend water from the Easton Water Systems to "The Properties".

16. 8/23/2022 – Resolution 331 – Extension to the Easton service area to include two parcels of real property, Tax Map 26, Parcel 45 and Tax Map 26, Parcel 186 as W-1

Capital improvement projects for the Easton Water Service Area were added by the following Resolutions:

1. 4/26/2022 – Resolution 315 – Replacing the Town of Easton's Glebe water treatment plant with upgraded technology. ($8.6 million)
2. 2. 7/12/2022 – Resolution 330 – Construction of a new south well for the Town of Easton. ($1.5 million)

The Town of Easton presently draws water from the Magothy Aquifer (Wells No. 6, 7 and 8) and the Upper Patapsco Aquifer (Wells No. 11 and 12). These wells provide an average of 1.8 million gallons per day to an estimated population of 17,430 (year 2022) and many industrial, commercial, and institutional establishments. The system Elevated Storage Capacity is 2.0 million gallons. Service area expansions to surrounding areas are expected to continue to match the demands of development. The existing service and programmed areas for progress for the Town of Easton's Water System are presented in Map 7.

Source – Wells –Magothy, Patapsco Formations

Well No. 6 Permit No. TA1971G005(06)

a. 1,045 feet deep – 550 gallons/minute submersible pump

b. Treatment – Chlorination

Well No. 7 Permit No. TA1971G005(06)

a. 1,057 feet deep – 450 gallons/minute submersible pump

b. Treatment – Chlorination

Well No. 8 Permit No. TA1971G005(06)

a. 1,092 feet deep – 600 gallons/minute submersible pump

b. Treatment – Chlorination

Well No. 11 Permit No. TA1971G205(05)

a. 1,189 feet deep – 1,000 gallons/minute submersible pump

b. Treatment – Iron removal and chlorination

Well No. 12 Permit No. TA1971G205(05)

a. 1,157 feet deep – 700 gallons/minute submersible pump

b. Treatment – Iron removal and chlorination

Storage – 1.0 million gallon (MG) elevated tank (Matthewstown Tank, built 1963)
1.0 million gallon (MG) elevated tank (Clifton Tank, built 2004)

Treatment Plant Hydraulic Capacities: 1.0 million gallons per day (MGD) daily average flow on an annual basis (2.0 MGD daily average during month of maximum use) as defined in the Appropriation Permit TA1971G005(06) for wells 6, 7, 8; and 2.0 MGD daily average flow on an annual basis (3.0 MGD daily average during month of maximum use) as defined in the Appropriation Permit TA1971G205(05) for wells No. 11 and 12.

Distribution – pipeline sizes 2" through 16"

Service Area – The service area is generally the town corporate limits. The present population served is approximately 17,430 (2022 estimate).

TABLE 7. EASTON WATER SYSTEM
CAPITAL IMPROVEMENT PROJECTS

PROJECT DESCRIPTION	PROPOSED FISCAL YEAR	COMMENTS
New Well No. 14 (Magothy Aquifer)	FY2023/2024	$1,725,000
Cast Iron Water Main and Valve Replacements	FY2023	$1,000,000
Looping Water Mains	FY2023	$250,000
New Water Treatment Plant (Commerce Drive)	FY2024	$10,200,000

Cast Iron Water Main and Valve Replacements	FY2024	$1,000,000
Matthewstown Tank – Cleaning & Painting	FY2024	$500,000
Looping Water Mains	FY2024	$250,000
Cast Iron Water Main and Valve Replacements	FY2025	$1,000,000
Looping Water Mains	FY2025	$250,000
Well No. 12 – Replacement of Pump and Column Pipe	FY2026	$130,000
Cast Iron Water Main and Valve Replacements	FY2026	$1,000,000
Looping Water Mains	FY2026	$250,000
Cast Iron Water Main and Valve Replacements	FY2027	$1,000,000
Looping Water Mains	FY2027	$250,000
Well No. 6 – Replacement of Pump and Column Pipe	FY2028	$130,000
Well No. 8 – Replacement of Pump and Column Pipe	FY2028	$130,000
Cast Iron Water Main and Valve Replacements	FY2028	$1,000,000

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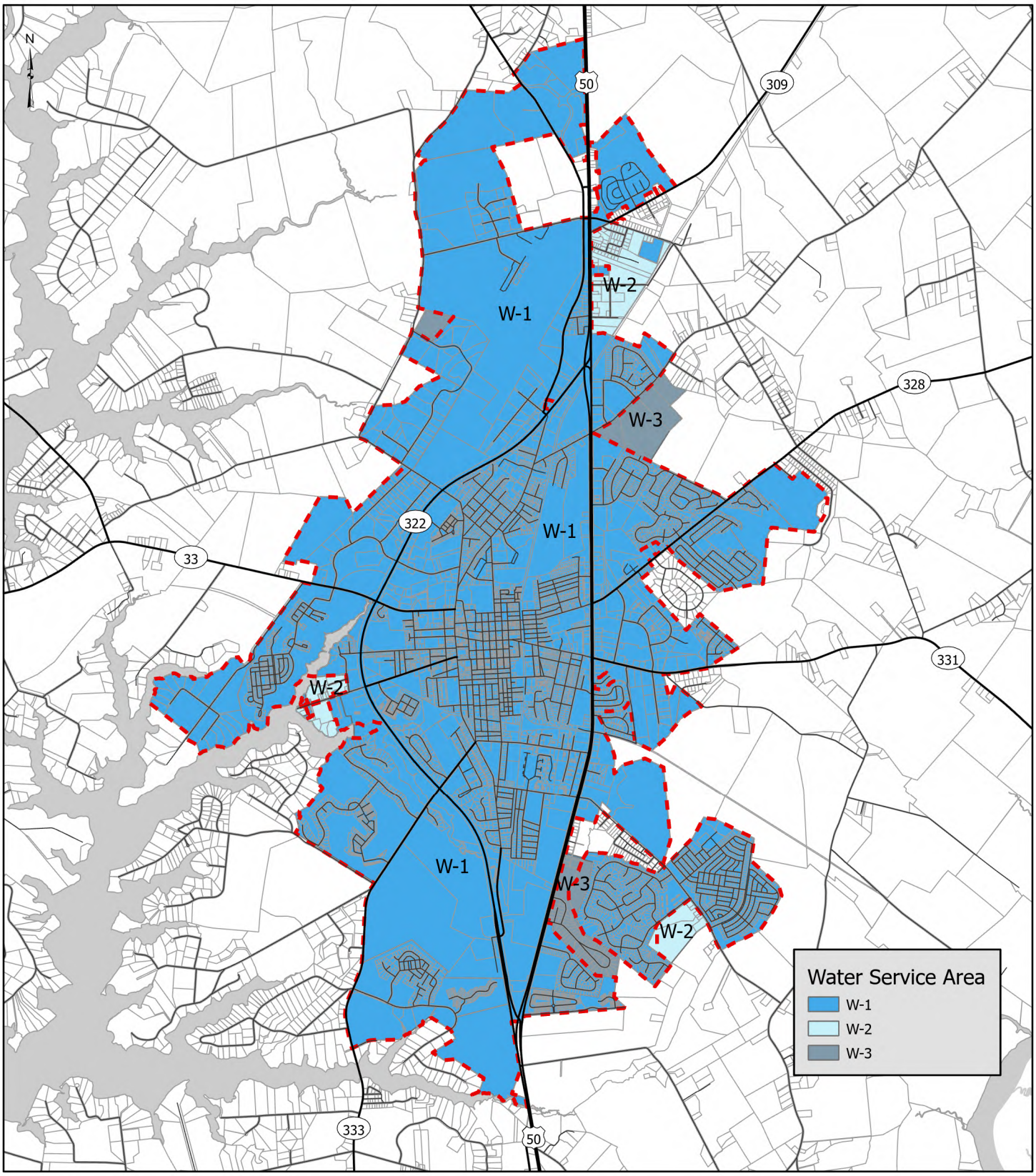
Looping Water Mains	FY2028	$250,000
Cast Iron Water Main and Valve Replacements	FY2029	$1,000,000
Looping Water Mains	FY2029	$250,000
Cast Iron Water Main and Valve Replacements	FY2030	$1,000,000
Looping Water Mains	FY2030	$250,000
Well No. 7 – Replacement of Pump and Column Pipe	FY2031	$130,000
Cast Iron Water Main and Valve Replacements	FY2031	$1,000,000
Looping Water Mains	FY2031	$250,000



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Town of Easton Water Service	DRAFT			
Map 7	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 10	

OXFORD AREA WATER SYSTEM

The following Resolutions expanded the Oxford Water Service Area:

1. 7/10/07 – Resolution 142 – Extended Water and Sewer to Tax Map 53, Parcels 102, (4659 Bachelors Point Road, Oxford, MD 21654) Parcel 194 (105 Rhonda Ave, Oxford, MD 21654) and Parcel 152 (904 S. Morris Rd. Oxford, MD 21654)
2. 7/26/16 – Resolution 228 – Extended Water and Sewer to Tax Map 53, Parcel 128, Lot 1 (4659 Bachelors Point Road, Oxford, MD 21654)
3. 10/11/22 – Resolution 335 – Reclassify Water and Sewer for Tax Map 53, Parcel 77 from W-2 and S-2 to W-1 to S-1 (4480 Bachelors Point Road)

The following Resolutions added the following capital improvement projects:

1. 10/11/22 – Resolution 336 – Adding of Modifying the Capital Project for Fiscal Years 2023 and 2024 to add a New Capital Project in the amount of $4.718 million for Water system

Oxford currently utilizes two (2) wells each approximately 590 feet deep to draw water from the Aquia Aquifer. The wells presently supply 128,000 gpd to approximately 651 full-time residents, or approximately 766 Equivalent dwelling Units (EDU). Individual water meters were previously installed for all residential and commercial customers and replaced in 2009 with radio read capability. Oxford currently serves water customers within the limits of the town and does not anticipate expansion of the existing service area. Negligible population increases are expected within the planning period. Since the previous update, the Town of Oxford has completed various water line replacements, abandoned Well No. 1, installed a new well, and installed additional treatment within the water system. The existing service and programmed areas for progress for the Town of Oxford's Water System are presented in Map 8.

Source – Wells – Aquia Formation

Well No. 1 Permit No. TA70G002(04) - Abandoned

Well No. 2 – Permit No. TA-81-0271 (Drilled in 1983)

a. 587 feet deep – 275 gpm submersible pump – 8" diameter casing
b. Treatment – Chlorine disinfection/residual, Arsenic Removal by adsorption

Well No. 3 – Permit No. TA-95-0880 (Drilled in 2007)

a. 590 feet deep – 350 gpm submersible pump – 8" diameter casing
b. Treatment – Chlorine disinfection/residual, Arsenic Removal by adsorption

Storage - 1 – 100,000 gallon LEG (built 2000)
1 – 100,000 gallon elevated tank (built 1988)

Allocated Capacity:

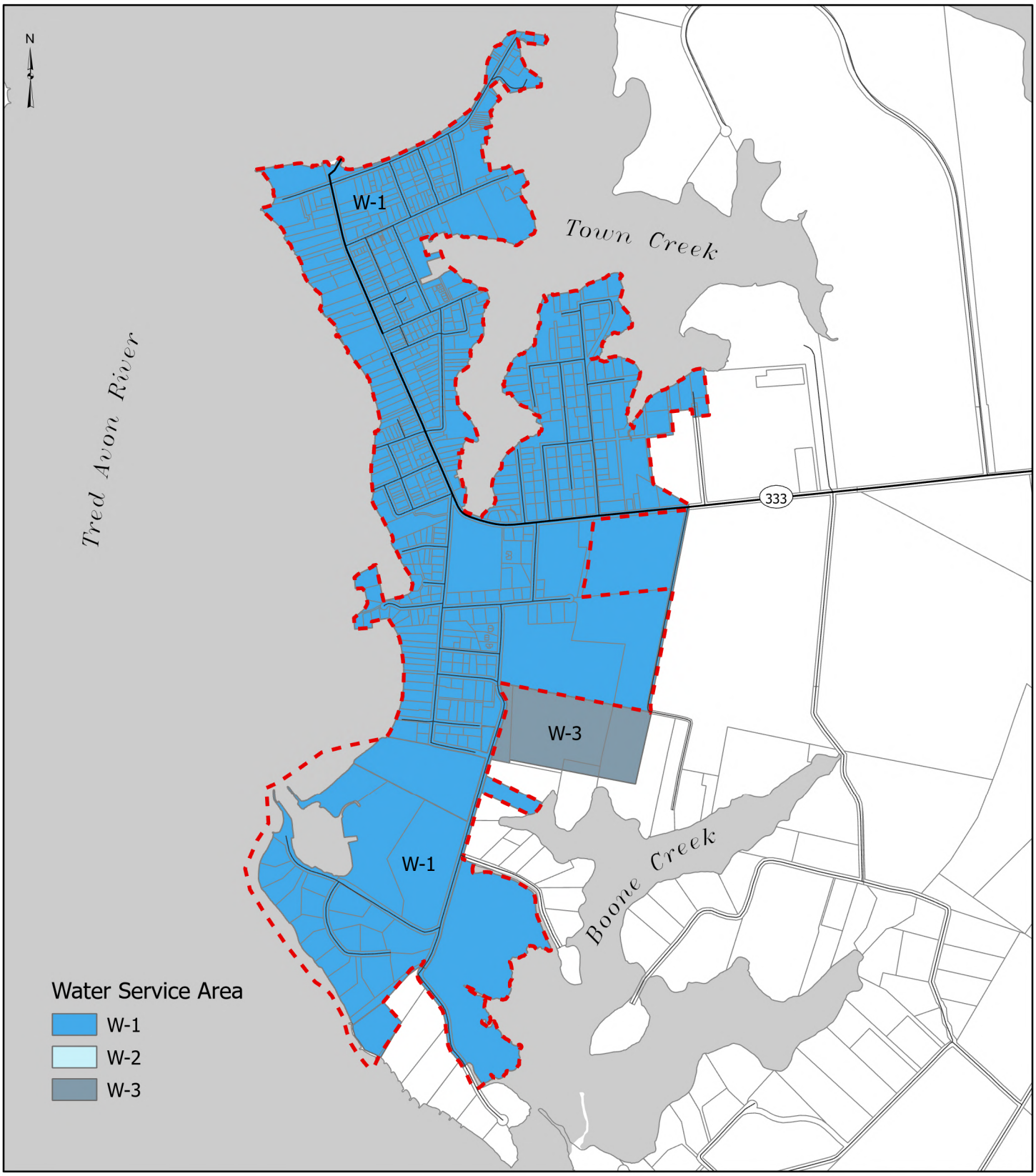
140,000 gallons per day annual average
232,000 gpd maximum month use

Distribution – distribution lines vary from 6" to 8" in diameter

Service Area – The Corporation limits of the Town – Serving 766 EDU.

TABLE 8. OXFORD WATER SYSTEM CAPITAL IMPROVEMENT PROJECT

PROJECT DESCRIPTION	PROPOSED FISCAL YEAR	COMMENTS
New Well Supply	FY 2023	Explore for better water quality source
Water Meter & Billing Software Replacement	FY2023	Replace meters, billing software and tower mounted receivers
SCADA Upgrade	FY 2024	Incorporate water system into Town's SCADA systems
Water Treatment Plant Upgrades	FY 2024	Connect to new (better quality) water source or rehabilitate treatment facilities
Water Main Replacements	FY 2024, 2025 2026	Replacement of aging water mains



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Town of Oxford Water Service	DRAFT			
Map 8	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 13	

ST. MICHAELS WATER SYSTEM

The following Resolutions expanded the St. Michaels Water Service Area:

1. 03/27/07 – Resolution 136 – Extended water to Tax Map 32, Parcel 7 (Hattons Garden)
2. 11/15/16 – Resolution 236 – Reclassify Tax Map 32, Parcel 36 (Shannahan Well Company) (25145 St. Michaels Road, St. Michaels, MD 21663) from unprogrammed to W-1 – S-1

St. Michaels draws water from the Aquia Greensand Aquifer through two (2) wells each approximately 450 feet deep. The water system is permitted for an average daily flow of 325,000 gpd with a daily permitted average of 450,000 gallons for the month of maximum use. These wells provide an average of 260,000 gallons per day to an estimated population of 2,500 persons both within the corporate limits and outside to the Bentley Hay-Rio Vista service area. Total storage capacity is 500,000 gallons. Storage is adequate to meet water and fire needs during the tourist season. The existing service and programmed areas for progress for the Town of St. Michaels' Water System are presented in Map 9.

Source – Wells – Aquia Formation

Well No. 2 Permit No. TA79G004(02)

a. 458 feet deep – 480 gpm electric turbine pump – 10" diameter casing
b. Treatment – Chlorination/Ferric/Muriatic Acid and greensand filter for arsenic

Well No. 3 Permit No. TA79G004(02)

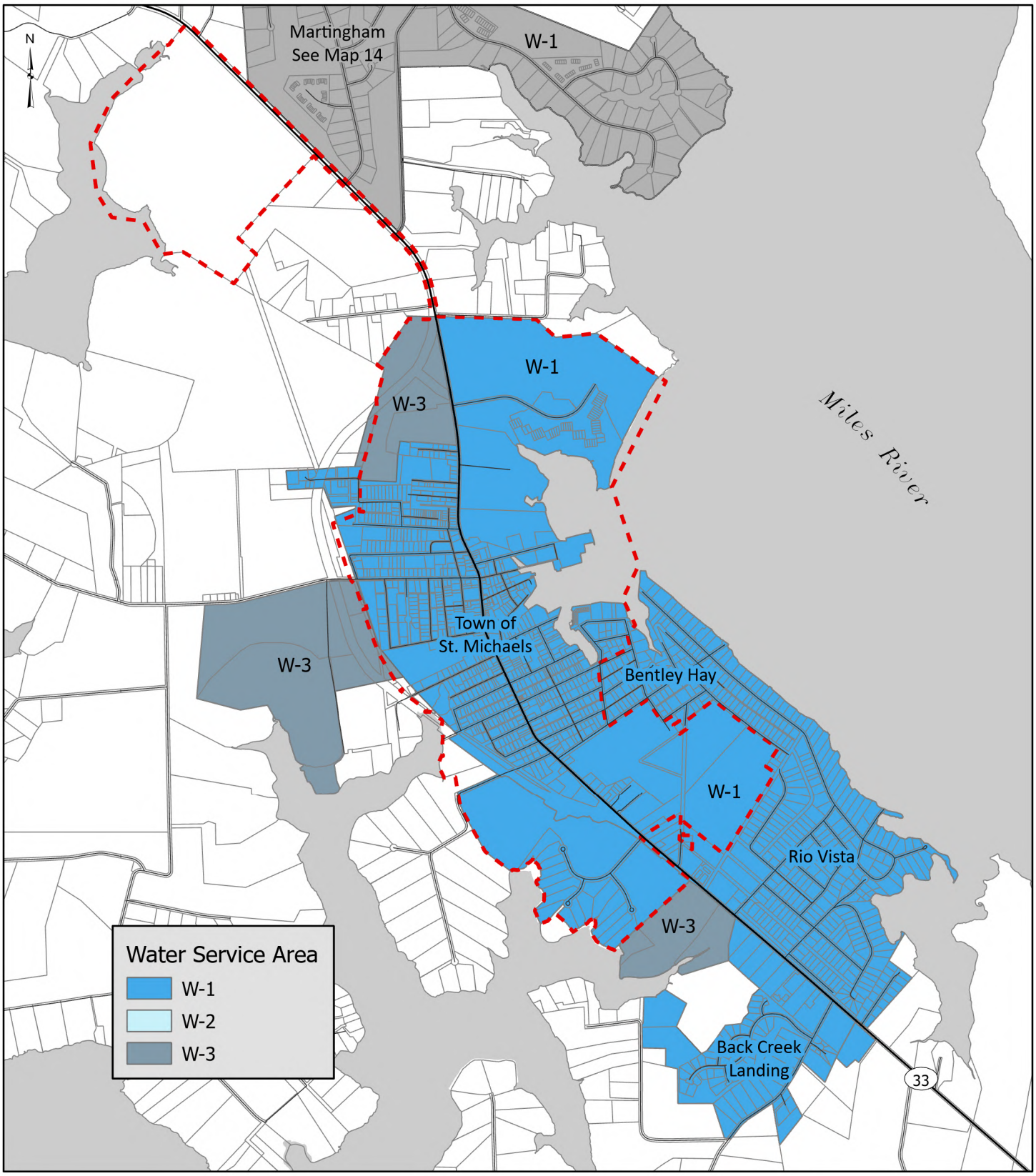
a. 485 feet deep –500 gpm electric turbine pump – 12" diameter casing
b. Treatment – Chlorination/Muriatic Acid and arsenic absorption

Storage - 1 – 200,000 gallon south elevated tank
1 – 300,000 gallon north elevated tank

Distribution – distribution lines vary from 2" to 10" in diameter

Service Area – About one half of the service area is inside Town limits and about one-half is outside including the Rio Vista, Bentley Hay service area.

TABLE 9. ST. MICHAELS WATER SYSTEM CAPITAL IMPROVEMENT PROJECTS		
PROJECT DESCRIPTION	**PROPOSED FISCAL YEAR**	**COMMENTS**
Rehabilitation of South Tank	FY2022	Currently underway with a completion date of November 2022
Install Advanced Metering Infrastructure AMI (smart meters) on all commercial and residential properties	2022-23	Meters to be installed in early 2023 with a completion date of September, 2023
Rehabilitation of North Tank	FY2027/2028	
Develop new well through study	FY2024-25	Complete a Feasibility Study for a third well
Evaluate Arsenic Issue	On-going	1 of 2 arsenic media changed in 2022 in Well 3
Replace arsenic media #2 for well 3	2024-2025	
Replace arsenic media in Well 2	FY2032-33	



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Town of St. Michaels Water Service	DRAFT			
Map 9	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 16	

TRAPPE AREA WATER SYSTEM

The Trappe Area Sewerage System as presented in the 2002 Report of the Review was amended by the following Resolutions:

Resolution 281, as amended
Adopted by the Talbot County Council: August 11, 2020

Resolution 347, as amended
Adopted by the Talbot County Council: May 14, 2024

Resolution 348, as amended
Adopted by the Talbot County Council: May 14, 2024

The present population of the Town of Trappe is 1,180, and the Town has 553 existing water accounts.

As identified in the goals of Chapter One of this Plan, growth of the county is to be encouraged and directed in concentrated centers around existing centers of population that presently have adequate or potentially adequate water and sewer services. To plan water service to meet the needs of future growth, the water service provider, the Town of Trappe, created three water service districts. The water service presently being provided in the Town of Trappe is referred to as the Trappe Water District.

The Lakeside Water District serves the Lakeside Planned Neighborhood development on the east side of U.S. Route 50. On the northern end of Town, a third water service district, White Marsh Water District, will serve parcels annexed into the Town of Trappe in the White Marsh Development Area.

Trappe East Water District

The well pumping capacity will be increased by the development and connection of the Lakeside Piney Point well constructed adjacent to Piney Hill Road. The development of the well will include pumps and water treatment facilities. Water treatment will be a Hypochlorite Disinfection system in a water treatment building. This water treatment building will support the addition of the Matawan well in a future phase. A 10” water main will be extended from the Piney Point well to the existing 10” water main located near the intersection of Piney Hill Road and U.S. Route 50. Adequate chlorine contact time will be achieved in the length of the new main. The existing 10” water main extends north to Timberwind Lane and currently serves the residences on Timberwind Lane. Water service to the first phase of the Lakeside development will be provided by a 10” water main extension of the existing 10” main and will run along the alignment of the proposed Lakeside Boulevard. All areas of development will be fed from the main in the Boulevard. The main in the Boulevard will be extended in future phases and will ultimately loop back to a point in the existing Town water system near the intersection of Barber Road and U.S. Route 50.

A new 250,000-gallon storage tank will be constructed when it is determined that additional storage is required to meet fire flow demands and minimum pressure requirements. Additionally, the storage tank will be required when the first Matawan well is brought into service. Due to differences in fluoride concentrations, the Lakeside wells and water distribution system will be equipped with isolation valves to allow for the independent operation of both regions of the Town water system. The water tower will be required once the regions have been isolated.

Additional couplets of wells will be brought online in accordance with pumping capacity needs.

The information presented in Map 10 is for planning purposes. The Water Districts have been defined using various colors, shading and hatches defining the areas of existing water service and future water service areas and the Priority Funding Areas as defined by the Town of Trappe and the County and those Priority Funding Areas approved by the State. This map does not impose and obligation on Talbot County or the Town of Trappe to provide water service to areas not presently being served. Prior to extending water service into the growth areas, the Town of Trappe would ensure that the existing water system (as may be improved by a developer) has capacity to serve the growth areas, and the safety and adequacy of its public water supply system is maintained for all its users.

Lakeside Development Phasing

The following table shows the equivalent dwelling units ("EDUs") for all phases of the Lakeside Development as confirmed by the Town of Trappe and the developer on June 30, 2023:

Table 10. Lakeside Development EDUs

Phase 1: Lakeside Village	
	EDUs
Phase 1, Section A - Residential	94
Phase 1, Section A - Community Use (estimated)	6
Phase 1, Section B – Residential	25
Phase 1, Section B.2 - Residential	6
Phase 1, Section C - Residential	200
Phase 1, Section C - Community Use (estimated)	6
Phase 1, Section D - Residential	180
Total EDUs	517 (12 estimated)

Phase 2: Lakeside Park (all estimated)	
	EDUs
Residential	153
Residential	340
Commercial	56
Total EDUs	549
Phase 3: Lakeside Commons (all estimated)	

	EDUs
Residential	500
Total EDUs	500

Phase 4: Lakeside Run (all estimated)	
	EDUs
Residential	386
Residential	115
Total EDUs	501

Phase 5: Lakeside Center (all estimated)	
	EDUs
Residential	500
Total EDUs	500

Phase 6: Shops at Lakeside (all estimated)	
	EDUs
Commercial:	307
Total EDUs	307

Total Number of EDUs for the Lakeside Development: 2,874

The foregoing phases and EDUs are based on the June 25, 2021 Phasing Plan approved by the Town of Trappe and are included in this Plan at MDE's request[1]. As noted above, the EDUs for the community uses for Phase 1 and Phases 2 through 6 are estimates only. EDUs will ultimately be allocated in accordance with applicable Town laws, policies, and regulations as lots are subdivided and commercial uses are developed and are limited to the permitted capacity as set forth in this Plan and all permits and other approvals issued by MDE and other authorities having jurisdiction. The phases represent defined land uses only and do not represent the timing or sequence of development; provided, however, that all phases of the Lakeside Development, or portions thereof, classified as W-2 or W-3 shall be reclassified as W-1 through an amendment to this Plan before receiving water service from the Town of Trappe. Flows shall be monitored by

[1] On November 4, 2020, D. Lee Currey, Director of MDE's Water and Science Administration, sent a letter to County Council President Chuck Callahan, in which he stated that the EDUs for the different phases of the Lakeside development are "necessary to assess the adequacy of the water and sewer systems to accommodate and serve those EDUs." Mr. Currey further requested that the County provide "updated EDUs for Phases 2 and 3 in the next Amendment" for the Town of Trappe. On April 24, 2023, Dinorah Dalmasy, Program Manager for MDE's Water and Science Administration, sent a letter to Council President Callahan, in which she requested that the County provide updated EDUs for "all phases" of the Lakeside development in an update to the CWSP. On July 21, 2023, Ms. Dalmasy sent another letter to the County Council President in which she clarified that MDE was seeking the finalized EDUs for Phase 1 of the Lakeside Development only and a best estimate of the EDUs for all other phases thereof and that such information could be provided to MDE as part of the 2023 Report of the Review.

the Town, with updates provided to the County at least annually, whether at an annual CWSP meeting or by separate letter to the County Engineer. The Town shall also promptly notify the County Engineer of any updates to the Phasing Plan for the Lakeside Development, including any changes in the phasing or allocation of EDUs from those set forth hereinabove. Any changes in the phasing or allocation of EDUs from those set forth hereinabove shall not require an update to the CWSP; however, such information may be incorporated as part of the amendment(s) proposing to reclassify any phases of the Lakeside Development from W-2 or W-3 to W-1.

Trappe Water District

The Town currently has two Water Appropriation and Use Permits, issued by MDE. The following information is related to the formations that serve as the Town's drinking water sources along with details related to the wells and water storage that provide pressurized water to the houses connected to the water distribution system that consists mostly of eight (8) inch diameter water pipes.

Piney Point Formation

Permit Number:	TA1979G006(05)
Allocation:	Water withdrawal granted by this permit is limited to: Daily average of 347,500 gallons on a yearly basis and Daily average of 497,000 gallons for the month and maximum use.
Source:	Six wells in the Piney Point formation
Locations:	Point(s) of withdrawal are/will be located south of Greenfield Avenue and west of Harrison Drive, southeast of Piney Hill Road, and north of Barber Road, Trappe, Talbot County, Maryland.

Matawan Formation

Permit Number:	TA1979G106(02)
Allocation:	Water withdrawal granted by this permit is limited to: Daily average of 300,500 gallons on a yearly basis and Daily average of 456,000 gallons for the month and maximum use.
Source:	Three wells in the Matawan formation
Location:	Point(s) of withdrawal are/will be located on the southeast of Piney Hill Road, southeast of Backtown Road, and north of Barber Road, Trappe, Talbot County, Maryland.

The Town has three wells in the Piney Point Aquifer. The Town holds the following permits:

Well No. 4 Permit No.: TA1979G006(05)
Well Tag: TA-67-W-99
a. 410 feet deep, 6-inch diameter with a pumping rate of 155 gallons per minute (gpm)
b. Treatment – Clorination

Well No. 5 Permit No.: TA1979G006(05)
Well Tag: TA-70-0134

a. 421 feet deep, eight-inch diameter with a pumping rate of 155 gpm
b. Treatment – Chlorination

Well No. 6 Permit No.: TA1979G006(05)
Well Tag: TA-21-0015

c. 425 feet deep, eight-inch diameter with a pumping rate of 155 gpm
d. Treatment – Chlorination

The three (3) Town wells each produce a flow around 155 gpm. The wells are all chlorinated with sodium hypochlorite prior to distribution and storage in the elevated storage tank. A backup generator serves all wells. Well No. 4 remains online, but due to the age and well casing conditions this well is susceptible to possible failure. Well field production is based on Well 5 and Well 6 online only. Current average water usage is approximately 74,000 gallons per day. The Town currently has one elevated storage tank of 250,000 gallons, which was built in 1997.

The capacity of the existing water system is based on well pumping capacity to meet average and peak daily demands and the ability of the wells, pumps and storage tank to meet minimum fire demands. Fire demands are evaluated based on the system's ability to provide 1,500 gpm for 2-hours while meeting the domestic demand (maximum day in the last 5 years) with the most productive well out of service.

Well Field Production with one (1) of the two (2) dependable wells online (Well 5 or Well 6).

Well Production:	155 gpm * 1,440 = 223,200 gpd.
Permitted Average Day Well Field Capacity:	347,500 gpd
Tank Capacity:	250,000 gallons
Fire Flow Demand:	1,500 gpm for 2-hours
Domestic Demand Maximum Day (Last 5-years):	185,900 gpd (129 gpm)

Trappe East Water District

Phase 1, Sections A and B of the Lakeside Development is under construction. The initial portion of Phase 1 of the Lakeside Development will utilize available capacity in the existing Trappe water system. Components of the Lakeside Water District will be updated after construction has been completed on the wells and water storage system.

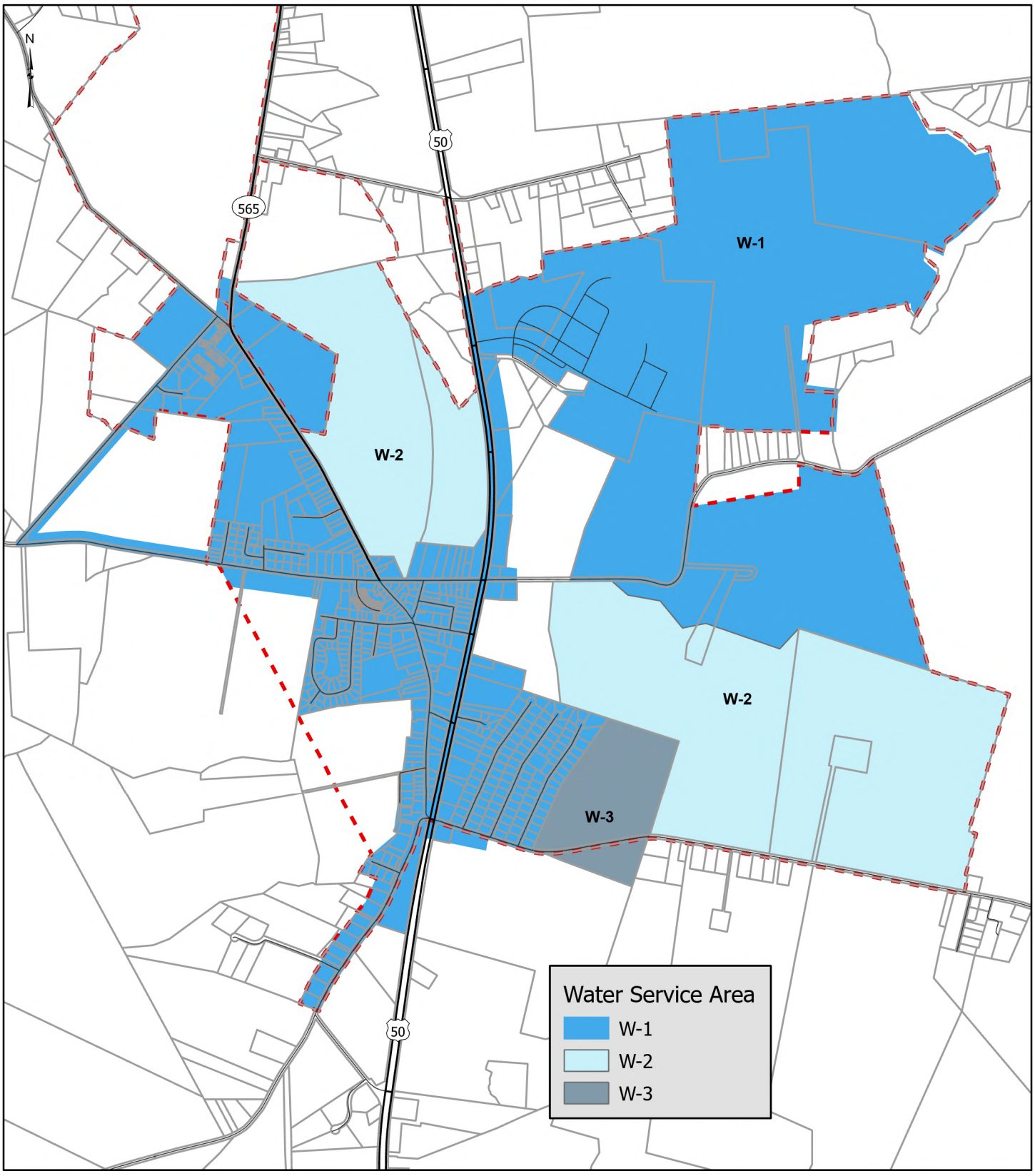
White Marsh Water District

Components of the White Marsh Water District will be updated after construction has been completed on the wells and water storage system.

TABLE 11. TRAPPE WATER SYSTEM

CAPITAL IMPROVEMENT PROJECTS

Project Description	Proposed Fiscal Year	Comments
Construct water distribution system for Lakeside District Phase 1	2022-2023	
Add water treatment facility and well couplet in Lakeside District	2023-2024	
Extension of water distribution system in Lakeside District	2023-2030	
Add 250,000 gallon elevated water tower in Lakeside District	2023-2024	
Add additional water treatment and well couplets in Lakeside District	2023-2030	Additional wells will be constructed and connected as water demand requires
Add water distribution system to White Marsh Village District	2025-2030	
New well and well treatment system (aquifer – Piney Point)	2025-2030	Cost of $1,150,000.00



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Town of Trappe Water Service	DRAFT			
Map 10	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 23	

TOWN OF QUEEN ANNE WATER SYSTEM

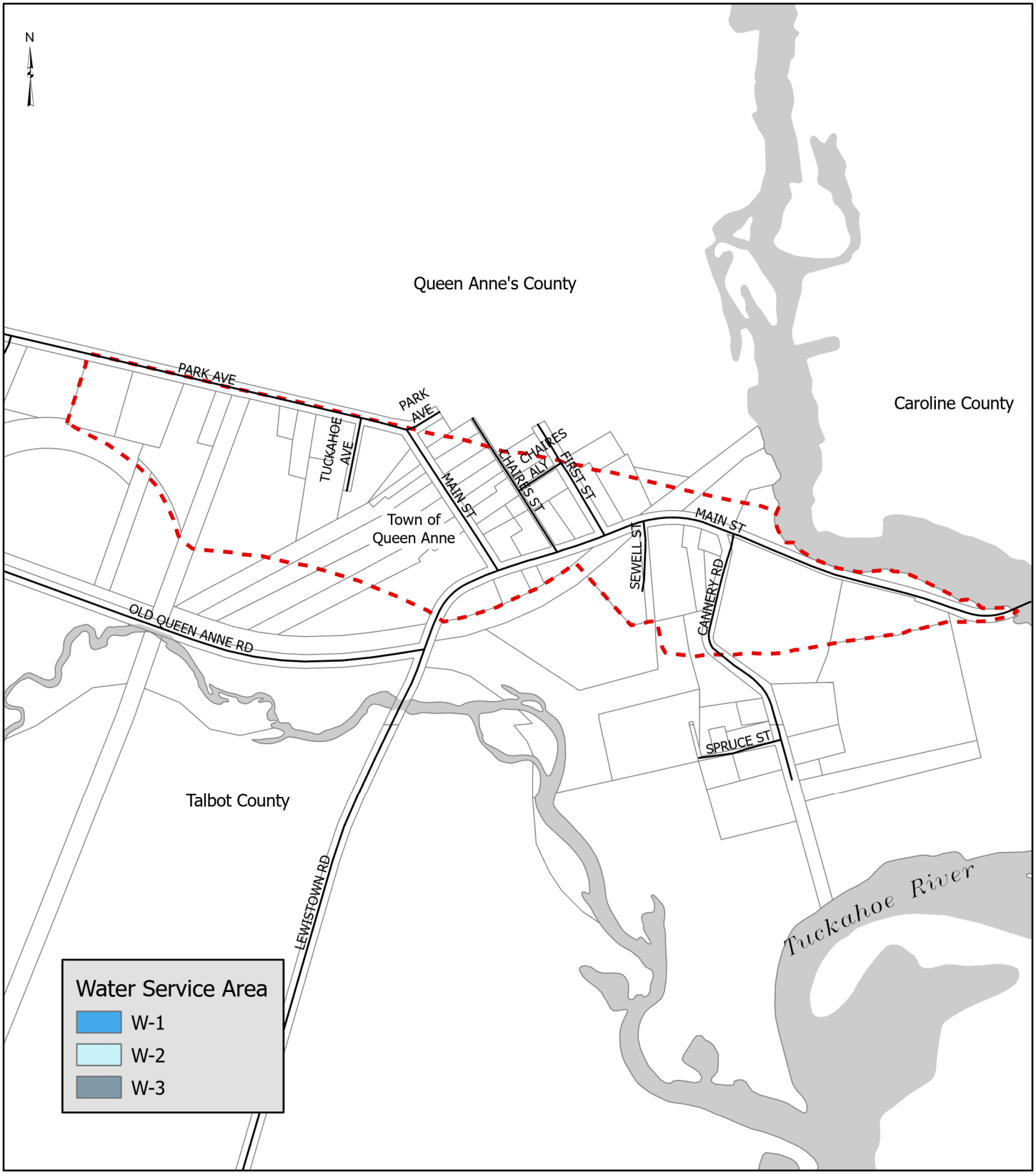
The Town of Queen Anne does not have a central water system. All the Town's water is extracted via privately owned wells. There is sufficient ground water to meet the needs of the Town. Queen Anne has limited areas suitable for wells because of the presence of septic systems. The Town does not plan on making any changes to their water supply.

Most of the wells are deep; however, a few are shallow. The shallow wells obtain enough water from the Wicomico Formation at depths of 20-30 feet; however, water from these wells is high in iron content. The deep wells appear to achieve better water quality utilizing the Cheswold Formation, found at 80-100 feet, or the Piney Point aquifer at 160-200 feet. There is little issue of salt intrusion.

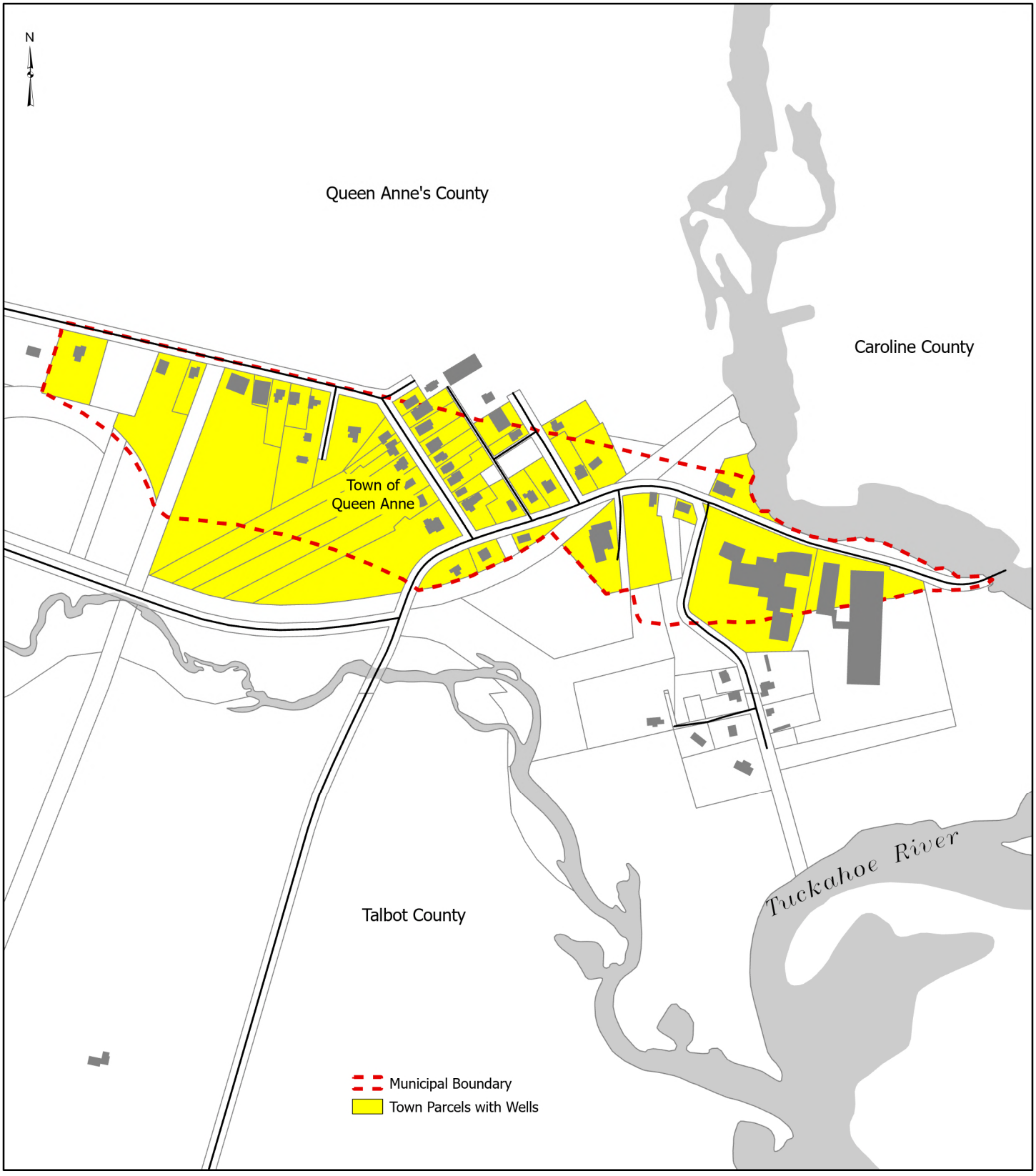
The Queen Anne water main and hydrant system, originally used for fire suppression, has collapsed and is no longer used. The Town's needs are satisfied using the Town's fire hoses to pump water from Tuckahoe Creek for their firefighting purposes. The fire hoses are capable of pumping water from Tuckahoe Creek to the middle of town. The Town may also connect to the Hydrant at Hillsboro boat ramp.

TABLE 12. TOWN OF QUEEN ANNE WATER SYSTEM CAPITAL IMPROVEMENT PROJECTS

PROJECT DESCRIPTION	PROPOSED FISCAL YEAR	COMMENTS
N/A	N/A	N/A



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Town of Queen Anne Water Service	No public water service in the town of Queen Anne. **DRAFT**			
Map 11	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 25	



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Town of Queen Anne Water Wells	Approximately 42 domestic supply wells. No public water service. **DRAFT**			
Map 12	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 26	

CLAIBORNE WATER SYSTEM

Claiborne is served by two private water systems, one serving fifteen (15) homes and the other serving twenty-eight (28) homes. The two systems are adjacent, and each has a well penetrating the Aquia Aquifer providing 13,000 gallons per day. Both systems have a very limited amount of storage. Each house has one R.O. filter for potable water within the Bay Hundred Water Company. The two existing service areas for the water systems are presented in Map 13.

Bay View Company, Inc. (Claiborne)

Source – Wells – Aquia Formation

Well No. 1 Permit No. TA952054

a. 369 feet deep – 25 gpm submersible pump (installed in 2014) – 4" diameter PVC casing
b. Treatment – Disinfection with sodium hypochlorite
c. Equipped with a generator for emergency power

Storage – 2 119-gallon pressure tanks

Distribution –4" diameter asbestos cemented pipes installed in 1966

Service Area – 15 Homes

TABLE 13. BAY VIEW COMPANY, INC. (Claiborne) WATER SYSTEM CAPITAL IMPROVEMENT PROJECTS		
PROJECT DESCRIPTION	**PROPOSED FISCAL YEAR**	**COMMENTS**
N/A	N/A	N/A

Claiborne Water Company Inc.

Source – Wells – Aquia Formation

Well No. 1 Permit No. TA83GAP015

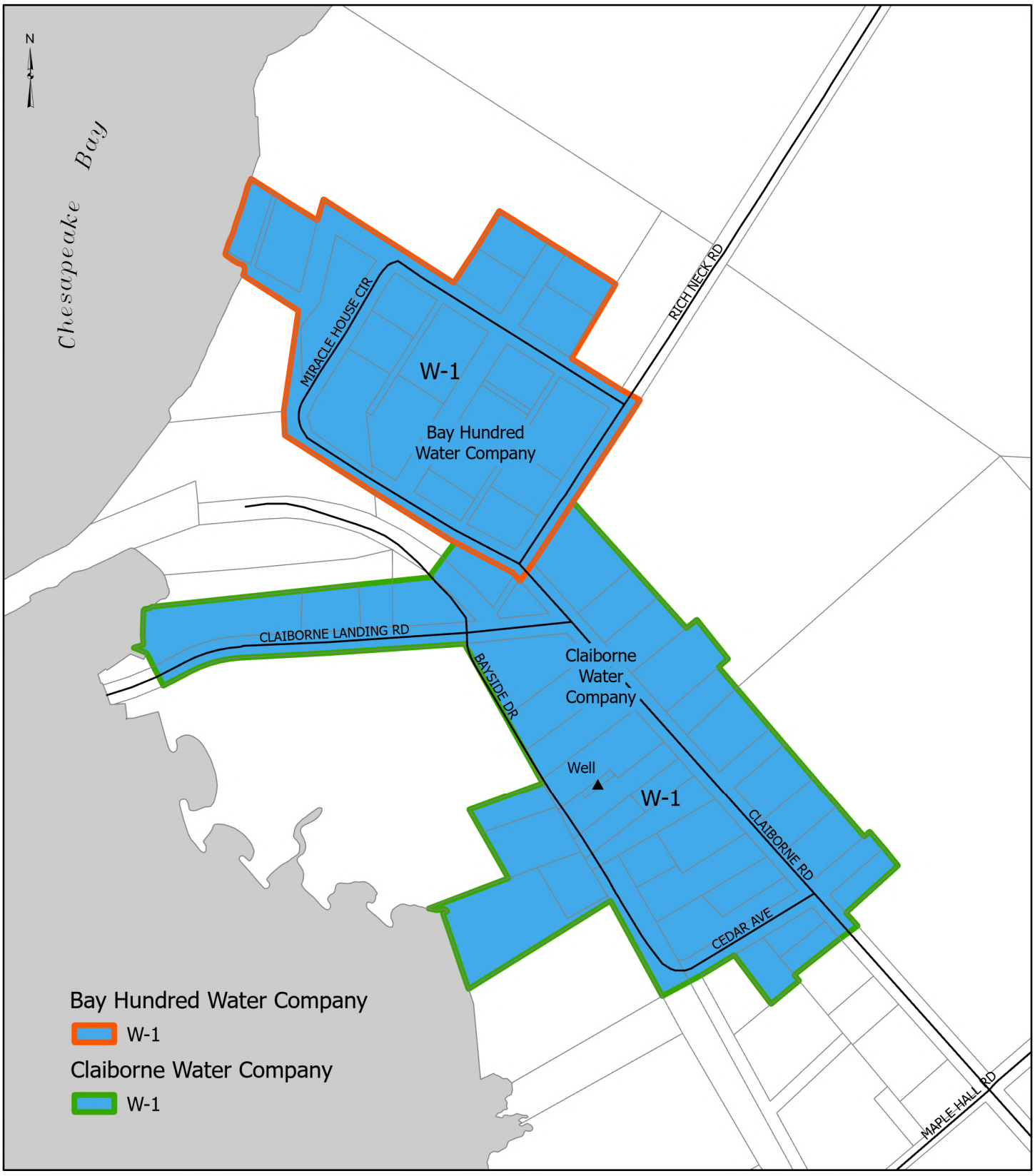
a. 350 feet deep – 50 gpm submersible pump (drilled in 1983) – 4" diameter casing
b. Treatment – Disinfection with sodium hypochlorite

Storage – 1 – 1,000-gallon tank pressure tank with 250 gallons liquid capacity

Distribution – Original small diameter (3/4" and 1") galvanized steel pipes (possibly built in 1940's) were replaced with PVC in the early 2000s by Doty Plumbing. Services are the responsibility of the homeowners, but most have been replaced by the property owners.

Service Area – 28 Homes

TABLE 14. CLAIBORNE WATER COMPANY, INC. CAPITAL IMPROVEMENT PROJECTS		
PROJECT DESCRIPTION	**PROPOSED FISCAL YEAR**	**COMMENTS**
N/A	N/A	N/A



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Claiborne Water Service	DRAFT			
Map 13	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 28	

MARTINGHAM WATER SYSTEM

The following Resolution added a capital project to the Martingham Water System:

1. 4/26/22 – Resolution 317 – Capital project to replace the emergency generator and upgrade the electric controls. The emergency generator is shared with the wastewater system, and the capital project was estimated to cost $360,000.00.

Martingham draws water from two wells, each approximately 400 feet deep. These wells provide 43,000 gallons per day to a population of 421 persons. Water goes through an Arsenic treatment plant which can treat up to 100,000 gallons per day. Martingham's water main is fed by three (3) distribution pumps from a 75,000-gallon storage facility. The existing service areas for the Martingham Community's Water System are presented in Map 14.

The Martingham Utilities Cooperative constructed a new arsenic removal Water Treatment System in 2009. Since the new system was placed in service, arsenic levels have been less than the national standard of 10 part per billion (ppb). However, the water does contain very low, allowable, levels of arsenic. The EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Source – Drinking Water Treatment Plant T-3/5-Arsenic

Well No. 1 Permit No. TA85G013(01)

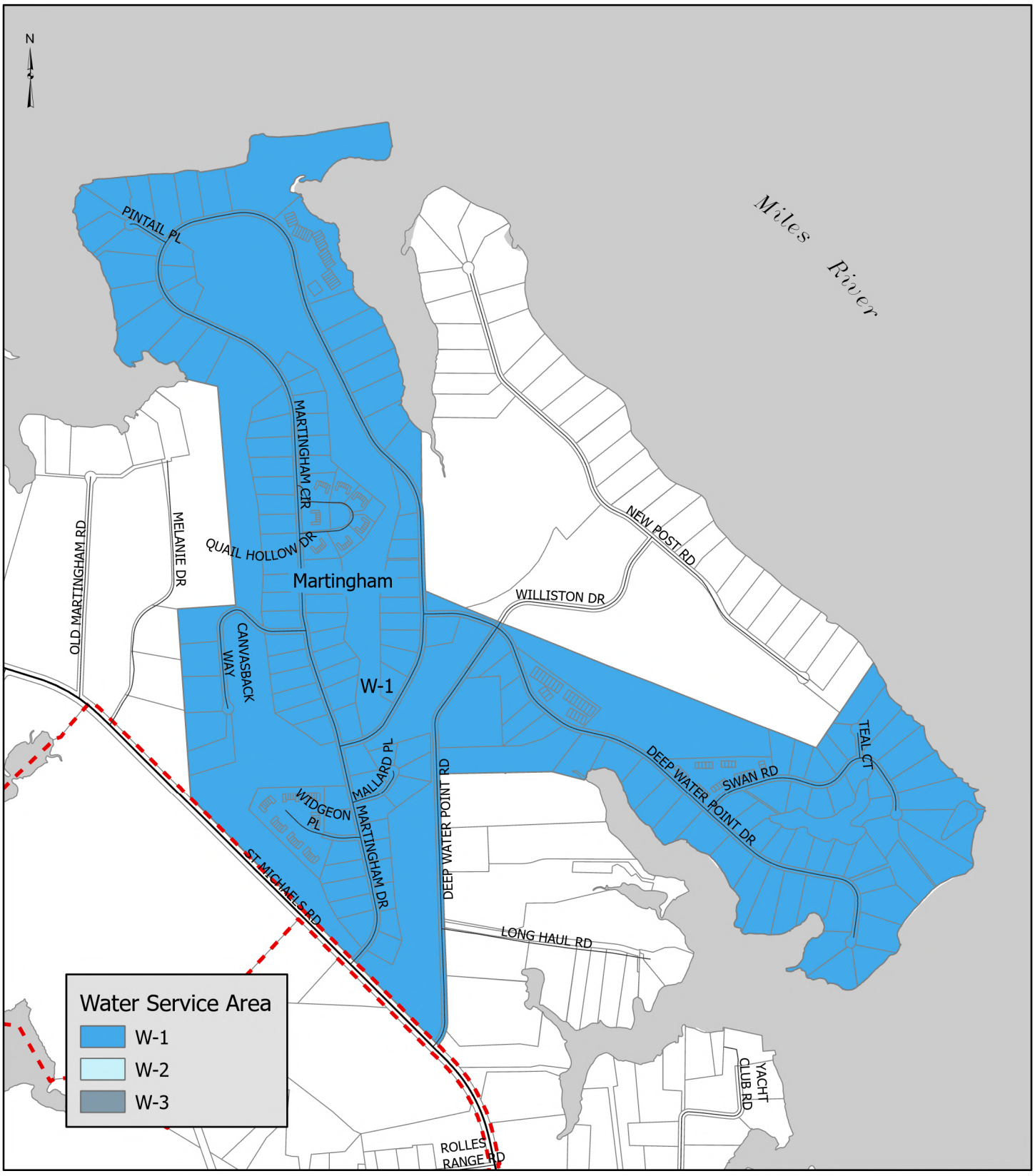
a. 405 feet deep – 330 gpm submersible pump (new pump in 2020) – 6" diameter casing

Well No. 2 Permit No. TA85G013(01)

a. 395 feet deep – 300 gpm submersible pump – 6" diameter casing
   Arsenic Treatment Plant 100,000 gpd Chemical Treatment Cl2 FeCl3

Storage – One (1) – 75,000-gallon tank at ground level with booster pump (2019-2022)

TABLE 15. MARTINGHAM WATER SYSTEM CAPITAL IMPROVEMENT PROJECTS		
PROJECT DESCRIPTION	**PROPOSED FISCAL YEAR**	**COMMENTS**
Arsenic Removal Water Treatment System added	2009	New water treatment system added to remove arsenic and meet EPA drinking water standards
Resolution 317 – Replace Emergency Generator and update and upgrade electrical controls	FY2023-2027	Talbot County seeking low-interest loans and/or grant funding through the Maryland Drinking Water Fund
Upgrade water meters to electronic water meters	FY2023-2027	



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Martingham Water Service	DRAFT			
Map 14	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 31	

HYDE PARK WATER SYSTEM

As of the 2002 Report of the Review, the Hyde Park Water System had served 168 mobile home lots. Average daily demand was 19,300 gallons to serve 261 people. As of the 2024 Report of the Review, the Town of Easton water system and service has been extended to Hyde Park which has been incorporated into the overall Town of Easton Water System. The Hyde Park Water System is no longer a separate privately owned system.

CALHOON M.E.B.A. ENGINEER SCHOOL WATER SYSTEM

The school's water system draws water through four wells. Wells A-1 and A-2 service the school, living quarters, and cafeteria and is chlorinated. A 10,000-gallon ground storage tank was constructed in 1994. Wells B-1 and B-2 service the manor house and adjacent five (5) wooden structures at an average demand of less than 1,000 gallons per day. These wells are chlorinated. The school can serve just under 300 people, but due to currently low industry demands for marine personnel the service population is about 150 people. The existing service and programmed areas for progress for the Calhoon M.E.B.A. Engineer School's Water System are presented in Map 15.

Source – Wells – Aquia

Well A-1 No. TA-94-0568 and A-2 No. TA-94-1389

a. Depth is 570 feet, flow rate - 150 GPM, 6" Diameter casing
b. Treatment – Chlorination
c. Softener system

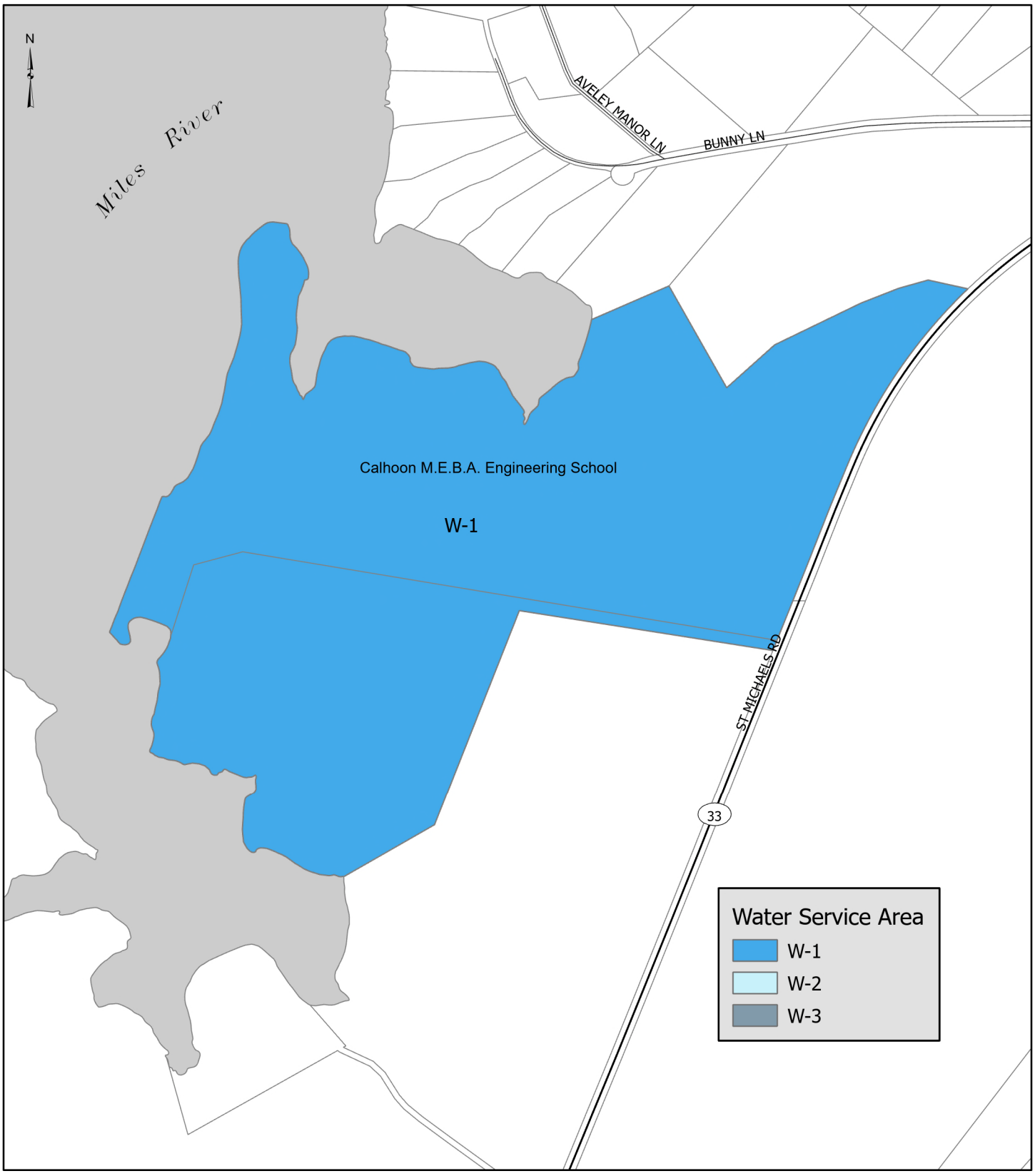
Well B-1 No. TA-19-0093

a. Depth is 570 feet, flow rate - 20 GPM, and 4" diameter casing
b. Treatment - Chlorination

Storage – Calhoon M.E.B.A. Engineer School Campus

TABLE 16. CALHOON M.E.B.A. ENGINEER SCHOOL WATER SYSTEM CAPITAL IMPROVEMENT PROJECTS

PROJECT DESCRIPTION	PROPOSED FISCAL YEAR	COMMENTS
N/A	N/A	N/A



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Calhoon M.E.B.A Engineering School Water Service	DRAFT			
Map 15	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 34	

LESSER DEVELOPED AREAS

For the small unincorporated areas of Copperville, Tunis Mills, Unionville, Royal Oak, Newcomb, Bellevue, Bozman, Wittman, Neavitt, Tilghman, Avalon, Fairbanks, Matthews, Bruceville, Sherwood, Bar Neck, Longwoods, and Cordova it is concluded that, due to sparse population and/or adequate supplies from wells, these areas do not currently warrant consideration of community water systems unless they experience future nitrate problems and unless federal and/or State funds become available for water development.

EXISTING SEWER SYSTEMS

E.1. DETAILED INFORMATION ON EXISTING SEWER SYSTEMS

Within the unincorporated areas of Talbot County and some areas within the boundaries of the incorporated municipalities, privately owned on-site disposal systems are used. For details relating to the Soil Characteristics and the Groundwater Protection Plan, the 1992 Plan should be referenced. This section updates various existing and proposed sewer service area maps and figures for planning community and publicly owned sewer systems in the future.

E.2. GENERAL

Wastewater systems in Talbot County are quite varied, ranging from individual septic systems with sub-surface disposal to municipal systems utilizing mechanical and biological systems. To properly accommodate a system using shallow sub-surface disposal, appropriate soil types must be available. The sands, sandy loams and silt loams located generally east of U.S. 50 are, in general, good for sub-surface discharge except in areas of high groundwater. The silty and clayey soils, located generally west of U.S. 50, have low permeabilities for sub-surface discharge. However, this area also contains the greatest population concentration outside the municipalities due to the attraction of waterfront properties. The unsuitability of the silty and clayey soils, coupled with a high water table and low elevations, render the western portion of the County susceptible to system failures.

Land application treatment/disposal is used in some wastewater systems in Talbot County and prevents the concentration of pollutants in a body of water and allows recharge of the sub-surface aquifers. The other means of disposal include treatment with discharge to surface waters or groundwater (infiltration ponds).

E.3. INVENTORIES

The following sewer system descriptions identify the existing wastewater treatment and sewer collection systems for the various incorporated and unincorporated areas in Talbot County. Included in the inventory of these wastewater treatment and sewer collection systems are the receiving stream, pump station(s), pumping flow rate(s), and method of wastewater treatment. In addition to the description of the existing wastewater treatment and sewer collection system, the capital improvement projects programmed for these systems have been listed in a table identifying the project, the proposed fiscal year the project will be completed, and other relevant comments to assure the safety and adequacy of the wastewater treatment and sewer collection system.

The sewer service area maps have been incorporated in each respective sewer service area for all incorporated and unincorporated areas in Talbot County. These sewer service area maps depict the areas having immediate priority status and programmed for progress to extend sewer service. The sewer service area maps were developed using Maryland Property View, a geographical information system software product developed by the Maryland Department of Planning. These maps and figures are for planning purposes only and do not impose an obligation on Talbot County or the incorporated municipalities to provide sewer service to the anticipated areas programmed for progress.

E.5. ADDITIONAL INFORMATION

For additional information concerning the following topics, please refer to the 1992 Comprehensive Water and Sewer Plan for Talbot County.

SLUDGE MANAGEMENT PLAN

FINANCIAL MANAGEMENT PLANS

SECTION II – THE COMPREHENSIVE SEWER PLAN

SECTION III – ALTERNATIVES TO THE SEWER PLAN

EASTON SEWER SYSTEM

The following Resolutions expanded the Town of Easton Sewer Service Area:

1. 7/9/2002 – Resolution 101, a resolution to extend the service area of the water and sewer systems of the Easton Utilities Commission to certain areas within the service limits of the Town of Easton
2. 6/24/2003 – Resolution 104, a resolution to extend the service area of the water and sewer systems of the Easton Utilities Commission to certain areas within the service limits of the Town of Easton
3. 12/23/2003 – Resolution 109, a resolution to extend the service area of the water and sewer systems of the Easton Utilities Commission to certain areas that include Tax Map 42, a portion of parcel 56 and parcel 242, lots 29, 30, 31, 35, and 36, as W-1 and S-1
4. 12/23/2003 – Resolution 110, a resolution to extend the service area of the water and sewer systems of the Easton Utilities Commission to certain areas that include Tax Map 42, Parcel 59, as W-1 and S-1
5. 12/23/2003 – Resolution 111, a resolution to extend the service area of the water and sewer systems of the Easton Utilities Commission to certain areas that include Tax Map 34, Parcel 126, as W-1 and S-1
6. 3/28/2006 – Resolution 131, a resolution to extend the service area of the water and sewer systems of the Easton Utilities Commission to certain areas that include Tax Map 26, Parcels 45 and 186, as W-1 and S-1
7. 12/12/2006 – Resolution 135, a resolution to extend the service area of the water and sewer systems of the Easton Utilities Commission to certain areas that include Tax Map 34, Parcels 51, 92, 103, 107, 200, 205, 210, 202, and 208 and Tax Map 35, Parcels 7, 15, 18, 39, 50, 57, 72, 82, 88, 91 and 100 as W-1 and S-1
8. 4/17/2007 – Resolution 137, a resolution to extend the service area of the water and sewer systems of the Easton Utilities Commission to certain areas that include Tax Map 34, Parcel 121, as W-1 and S-1
9. 1/13/2009 – Resolution 158, a resolution to extend the service area of the water and sewer systems of the Easton Utilities Commission to certain areas that include Tax Map 17, Parcels 38, 129, and 75 as W-1 and S-1
10. 12/23/2008 – Resolution 159, a resolution to re-map Tax Map17, Parcels 75, 38, and 129 as primary growth areas; (2) to amend the land use plan regarding hospitals and medical facilities
11. 6/23/2009 – Resolution 165, a resolution to extend the service area of the water and sewer systems of the Easton Utilities Commission to certain areas that include Tax Map 17, Parcel 39 and Tax Map 25, Parcels 13 and 17 and Parcel 207, lots 19-25 as W-1 and S-1

12. 6/28/2011 – Resolution 184, a resolution to extend the service area of the water and sewer systems of the Easton Utilities Commission sewer system to the newly annexed hospital property and community center and to add new water and sewer infrastructure on the hospital property
13. 9/25/2012 – Resolution 198, a resolution to add a spray irrigation project to the CIP table
14. 3/26/2013 – Resolution 203 – Easton new capital project Easton Airport
15. 10/14/2014 – Resolution 216, a resolution to reclassify and remap certain properties located in the Talbot Commerce Park from the current priority status of "Unprogrammed" to "W-1" and "S-1"
16. 7/26/2016 – Resolution 229, a resolution to reclassify and remap certain properties located in the South Clifton neighborhood from the current priority status of "Unprogrammed" to "W-1" and "S-1"
17. 8/8/2017 – Resolution 246, a resolution to reclassify and remap certain properties located at Easton Point from the current classification of "W-2" and "S-2" to "W-1" and "S-1" and to authorize capital projects to extend water and sewer service from the Easton Water and Wastewater Systems to the properties
18. 6/11/2019 – Resolution 272, a resolution to support extension of sewer from the Town of Easton wastewater treatment plant to the Talbot County Community Center
19. 8/23/2022 – Resolution 331, a resolution to reclassify and remap property located at 29659 Matthewstown Road shown on Tax Map 26 as Parcel 45 and shown on Tax Map 26 as Parcel 186, from "W-2" and "S-2" to "W-1" and "S-1

The following Resolutions amended the capital improvement projects for the Easton Sewer Service Area:

1. 9/25/2012 – Resolution 198, a resolution to add a spray irrigation project to the CIP table
2. 3/26/2013 – Resolution 203, a resolution to a replace the existing pump station at the Easton Airport with a gravity sewer line
3. 8/8/2017 – Resolution 246, a resolution to reclassify and remap certain properties located at Easton Point from the current classification of "W-2" and "S-2" to "W-1" and "S-1" and to authorize capital projects to extend water and sewer service from the Easton Water and Wastewater Systems to the properties
4. 6/11/2019 – Resolution 273, a resolution to add a new capital project in the amount of $2,806,000 for the relocation of the Windmill Wastewater Pump Station; and, add a new capital project in the amount of $2,267,000 for the replacement of the Windmill Wastewater Force Main
5. 4/26/2022 – Resolution 315 – Capital project to replace the Town of Easton's Glebe Water Treatment Plant

6. 7/12/2022 – Resolution 330 – Capital project for the construction of a new south well for the Town of Easton.
7. 10/10/2023 – Resolution 345 – A resolution to add or modify a capital project in the amount of $12.0 million for the purpose of replacing and/or rehabilitating sewers to mitigate Inflow and Infiltration

The Town of Easton is presently served by an Enhanced Nutrient Removal (ENR) Wastewater Treatment Facility (WWTF) with the most recent three (3) year (2019-2021) average daily effluent flow of 2.797 million gallons per day (mgd). The facility has a design capacity of 4.0 mgd and permitted effluent limits on Total Nitrogen of 4.0 milligrams/liter (mg/l) and Total Phosphorus of 0.3 mg/l, as given in NPDES Permit MD0020273. The NPDES Permit gives total permitted annual cumulative discharges of 48,729 lbs of Total Nitrogen and 3,655 lbs of Total Phosphorus. In 2021 Easton's WWTF discharged 12,526 lbs of Total Nitrogen and 634 lbs of Total Phosphorus. The permit has other discharge limits. Total Nitrogen and Total Phosphorus are the most limiting for Easton, from a capacity point of view.

The WWTF has a 50-acre Primary Lagoon and a 13-acre Secondary Lagoon which are used for storage during high flow events and for facilitating ENR maintenance. Any flow stored in the lagoons is capable of being processed through the ENR facility.

The existing service and programmed areas for progress for the Town of Easton's Sewer System are presented in Map 16.

Easton WWTF

Point of discharge – Councell Creek, then into the Choptank River.

Pumping Stations:

Easton has six (6) "Major" pump stations that collect and pump wastewater to the WWTF, and fourteen (14) "Minor" pump stations that collect and pump wastewater to a "Major" pump station. The force-mains from the major stations are connected to a header system that conveys the wastewater to the WWTF.

Major Wastewater Pumping Stations (WWPS):

No.1 – North WWPS – With two (2) macerators, three (3) 150HP Pumps – 1,410 gpm for each centrifugal pump, 16" force main.

No. 2 – South WWPS – With two (2) macerators, three (3) 75HP Pumps – 1,450 gpm for each centrifugal pump, 20" force main.

No. 3 – Windmill WWPS – With a macerator, two (2) 75HP Pumps – 1,725 gpm for each centrifugal pump, 12" force main.

No. 4 – Clifton WWPS – With a macerator, two (2) 60HP Pumps – 972 gpm for each centrifugal pump, 8" force main.

No. 5 – Calvert WWPS – With a macerator, two (2) 98HP Pumps – 1,300 gpm for each centrifugal pump, 16" force main.

No. 6 – Easton Club East WWPS – With a macerator, generator, two (2) 20HP pumps – 400 gpm for each centrifugal pump, 8" force main.

Minor Wastewater Pumping Stations:

No. 1 – Mathewstown WWPS – With a macerator, generator, two (2) 15HP Pumps – 425 gpm for each centrifugal pump, 4" force main.

No. 2 - Aurora WWPS – Two (2) 3HP Pumps – 50 gpm for each grinder pump, 4" force main.

No. 3 - Chapel East WWPS – Two (2) 15HP Pumps – 300 gpm for each centrifugal pump, 4" force main.

No. 4 – Cooke's Hope WWPS – With a generator, two (2) 10HP Pumps – 380 gpm for each centrifugal pump, 6" force main.

No. 5 - Easton Club WWPS – With a macerator, two (2) 3HP Pumps – 66 gpm for each centrifugal pump, 2" force main.

No. 6 - Easton Village WWPS - With a macerator, generator, two (2) 7.5HP Pumps – 185 gpm for each centrifugal pump, 6" force main.

No. 7 - Glenwood WWPS – Two (2) 3HP Pumps – 50 gpm for each grinder pump, 4" force main.

No. 8 – Golton WWPS – Two (2) 10HP Pumps – 475 gpm for each centrifugal pump, 4" force main.

No. 9 - Goldsborough WWPS – With a generator, two (2) 16.5HP Pumps – 475 gpm for each centrifugal pump, 8" force main.

No. 10 - Hughlett WWPS – Two (2) 3.5HP Pumps – 70 gpm for each grinder pump, 4" force main.

No. 11 - Johnson WWPS – Two (2) 2HP Pumps – 10 gpm for each grinder pump, 4" force main.

No. 12 - Peachblossom WWPS – Two (2) 10HP Pumps – 380 gpm for each centrifugal pump, 8" force main.

No. 13 - Port WWPS – Two (2) 5HP Pumps – 50 gpm for each grinder pump, 4" force main.

No. 14 - Lakelands WWPS – With a macerator, generator, two (2) 3HP – 128 gpm for each centrifugal pump, 4" force main.

All pump stations and the WWTF have redundant power systems, except for the Windmill Pump Station, which has a capital project in Table 17 below that will provide redundant power to the Windmill Pump Station.

The Enhanced Nutrient Removal Wastewater Treatment Facility consists of the following major components/systems:

Headworks - Screenings and grit removal from the raw wastewater.

5-Stage Biological Reactors - Biological activity (biomass) conducts the biological and chemical removal of nutrients from the wastewater.

Secondary Clarifiers - Settling tanks separate clarified effluent from the biomass then biomass is returned to the biological reactors.

Effluent Sand Filters - Remove fine particulates from the secondary clarifier effluent.

Disinfection - Ultra-Violet (UV) light for disinfecting the filtrate from the effluent filters.

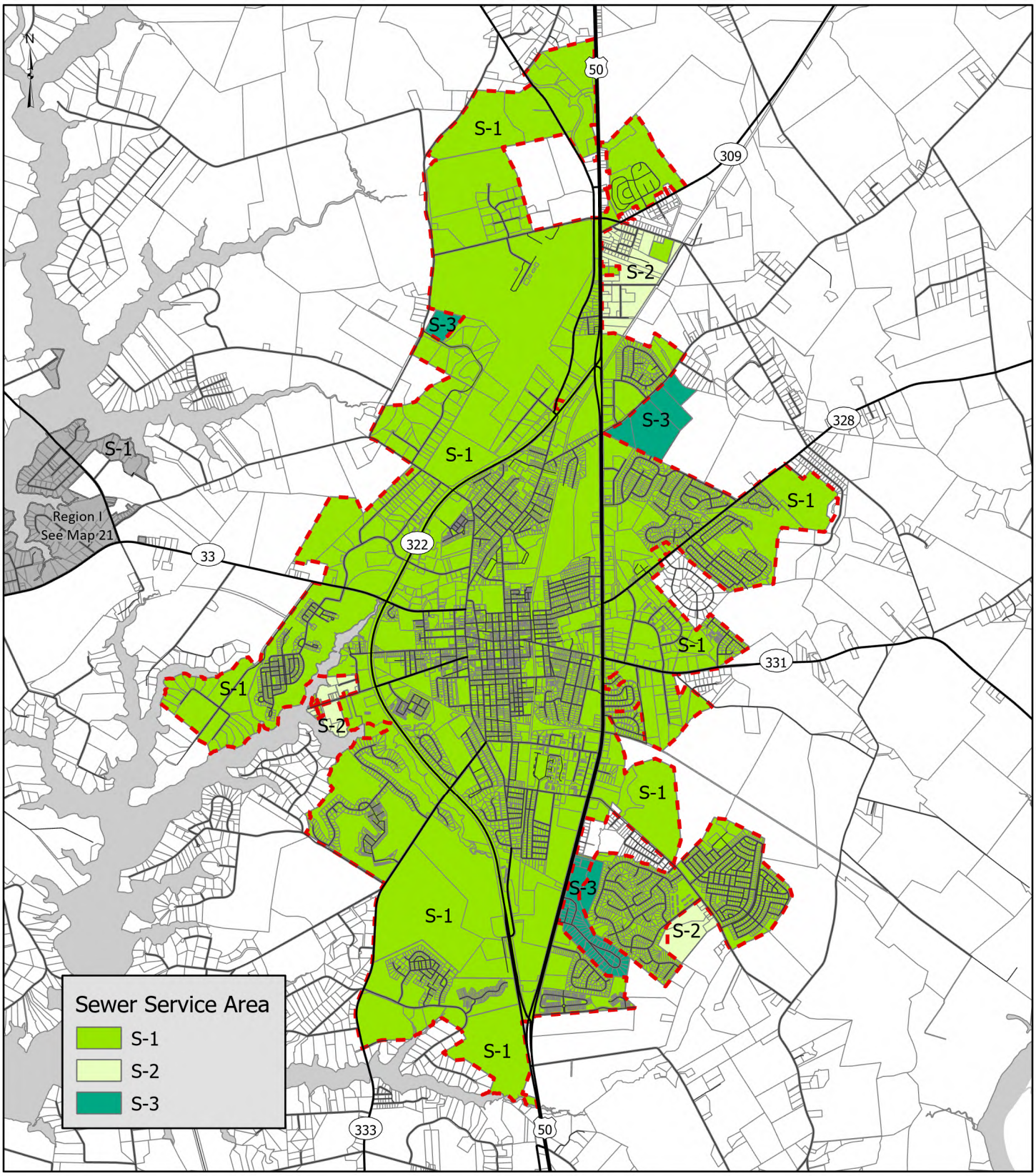
Post Aeration - Aerating the final effluent prior to discharge to the receiving stream.

Solids Processing - Processing excess biomass from Biological Reactors into a "Class A" Biosolid.

Storage Lagoons – One (1) 50-acre primary lagoon and one (1) 13-acre secondary lagoon, used for storge of high flows and for facilitating ENR maintenance.

TABLE 17. EASTON SEWER SYSTEM CAPITAL IMPROVEMENT PROJECTS		
PROJECT DESCRIPTION	**PROPOSED FISCAL YEAR**	**COMMENTS**
Windmill Pump Station Replacement	FY2023	$2,800,000.
Windmill Force Main Replacement	FY2023	$2,418,000.
Sewer Main and Manhole Refurbishment	FY2023	$1,000,000.
Calvert Pump Station Refurbishment	FY2023	$165,000
Sewer Main and Manhole Refurbishment	FY2024	$1,000,000.
WWTF Engineering for Larger Capacity Sludge Dryer	FY2025	$1,500,000.
Sewer Main and Manhole Refurbishment	FY2025	$1,000,000.
WWTF Reactor #2- Aerator #503 & #504 Gearbox & Motor Rebuilds, and Repainting Aerator Paddles	FY2025	$290,000.
Sewer Main and Manhole Refurbishment	FY2026	$1,000,000.

WWTF Clarifiers #1 & #2 Gearbox Replacement and Painting of Skimming Arms, Scapes, and Structure	FY2026	$540,000.
WWTF UV System Replacement	FY2026	$325,000.
WWTF Sludge Dryer Replacement	FY2026 & 2027	$7,400,000.
Sewer Main and Manhole Refurbishment	FY2027	$1,000,000.
Sewer Main and Manhole Refurbishment	FY2028	$1,000,000.
Sewer Main and Manhole Refurbishment	FY2029	$1,000,000.
WWTF Reactor #1- Aerator #501 & #502 Gearbox & Motor Rebuilds, and Repainting Aerator Paddles	FY2030	$290,000.
Sewer Main and Manhole Refurbishment	FY2030	$1,000,000.



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Town of Easton Sewer Service	DRAFT			
Map 16	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 45	

HYDE PARK SEWER SYSTEM

As of the 2002 Report of the Review, the Hyde Park Sewer System had served 168 mobile home lots. The two-stage stabilization lagoon system with a design capacity of 58,000 gpd had processed an average of 17,000 gpd. The treated effluent was disposed of in a 1.0-acre infiltration pond. As of the 2024 Report of the Review, the Town of Easton sewer system and service has been extended to Hyde Park and has been incorporated into the overall Town of Easton Wastewater System. The Hyde Park Wastewater System is no longer a separate privately owned system but has been incorporated into the Town of Easton sewer service area.

OXFORD AREA SEWER SYSTEM

The following Resolutions expanded the Oxford Sewer Service Area:

1. 07/10/2007 – Resolution 142 – Extended Water and Sewer to Tax Map 53, Parcels 102, 194, and 152
2. 7/26/2016 – Resolution 228 – Extended Water and Sewer to Tax Map 53, Parcel 128, Lot 1 (4659 Bachelors Point Road, Oxford)
3. 10/11/22 – Resolution 335 – Reclassify Water and Sewer for Tax Map 53, Parcel 77 from W-2 and S-2 to W-1 to S-1 (4480 Bachelors Point Road)

The following Resolutions added the following capital improvement projects:

1. 11/27/2012 – Resolution 199 – To upgrade the wastewater treatment plant from biological nutrient removal standards to enhanced the nutrient removal standards
2. 10/11/2022 – Resolution 336 – Capital project for water system improvements

Refer to Map 17, Oxford Area Sewer System Plan for existing and planned sewer service areas. Oxford is presently served by an Enhanced Nutrient Removal (ENR) treatment system. The existing treatment facilities currently treats 80,000 gallons per day. This newly improved system has a design capacity of 150,000 gallons per day and will be sufficient for Oxford's future growth through the planning period. Treated effluent is discharged to Town Creek following treatment including UV disinfection.

Point of Discharge – Town Creek, a tributary of the Tred Avon River

Pumping Station:
No. 1 – Bank Street P.S. – Two (2) 175 gpm pumps; 4" diameter force main and generator backup.
No. 2 – Bonfield P.S. – Two (2) 105 gpm pumps; 4" diameter force main – generator backup.
No. 3 – Main P.S. - Two (2) 415 gpm pumps; 6" diameter force main and generator backup.
No. 4 – Bachelors Point P.S. – Two (2) 150 gpm pumps; 4" diameter force main – generator backup.

Treatment Plant:
ENR Treatment (MD Discharge permit No. 15- DP-0644) including:

- Influent screening,
- Grit removal,
- Flow equalization (previous lagoon)
- Wave oxidation treatment reactor

- Secondary clarifiers
- Denitrification filters
- Sludge storage and dewatering belt press, and
- Chemical storage and feed system for
    - Supplemental alkalinity (caustic soda)
    - Supplemental carbon (methanol)
    - Phosphorus removal (poly-aluminum chloride)

Design Capacity: 150,000 gallons per day.

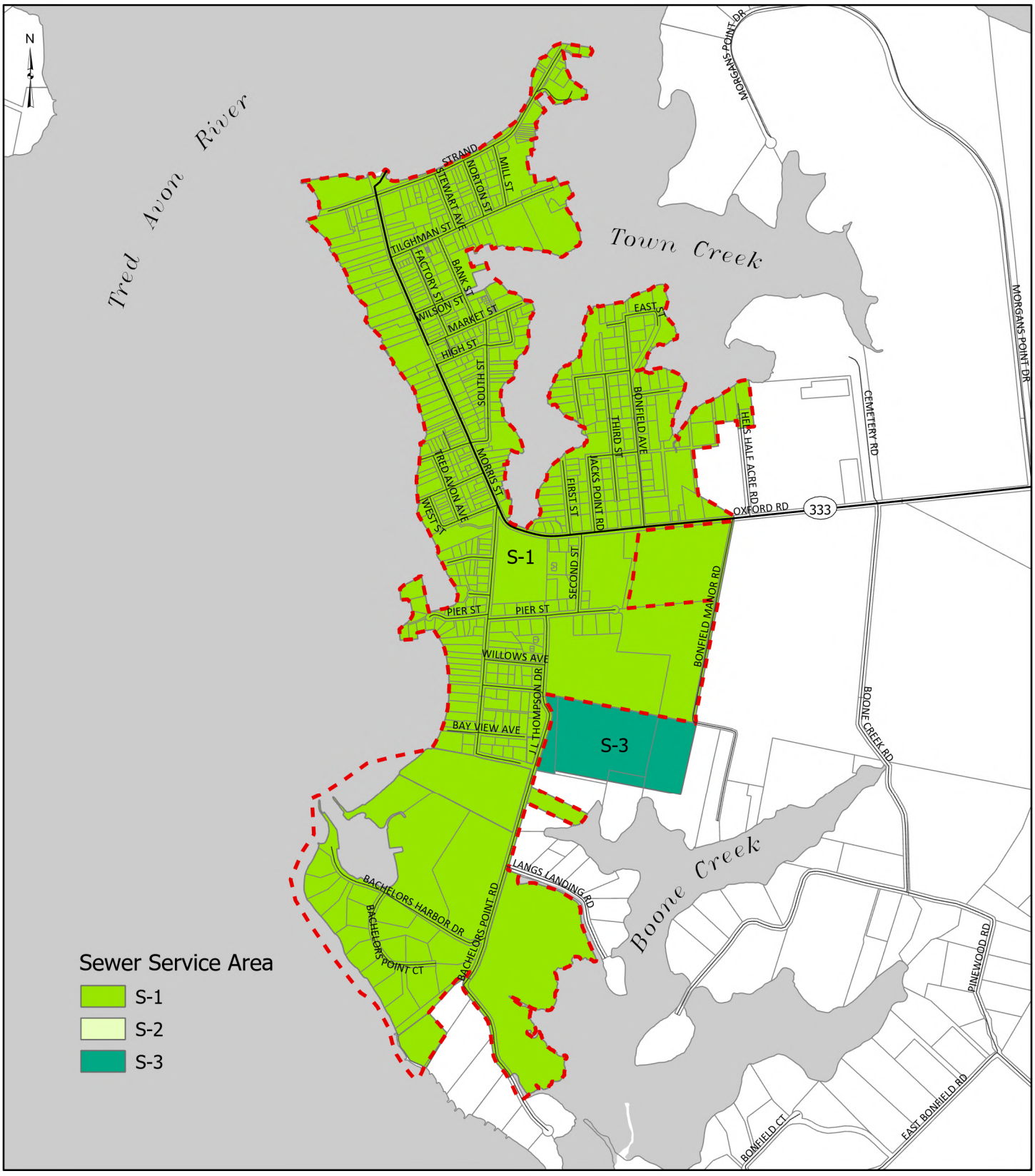
Disinfection: Ultraviolet (UV)

Post Aeration: Diffused air.

Effluent Meter: V-notch with ultrasonic

TABLE 18. OXFORD SEWER SYSTEM CAPITAL IMPROVEMENT PROJECTS

PROJECT DESCRIPTION	PROPOSED FISCAL YEAR	COMMENTS
Sewer Collection System Repairs	FY 2024	Ongoing improvements
Bank Street/Bonfield/Bachelors Point Pump Stations	FY 2025	Rehabilitation to improve flood resiliency and connect to SCADA



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Town of Oxford Sewer Service	DRAFT			
Map 17	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 49	

TRAPPE AREA SEWERAGE SYSTEM

The Trappe Area Sewerage System as presented in the 2002 Report of the Review was amended by the following Resolutions:

Resolution 259, as amended
Adopted by the Talbot County Council: May 22, 2018
Resolution 281, as amended
Adopted by the Talbot County Council: August 11, 2020
Resolution 338, as amended
Adopted by the Talbot County Council: April 9, 2024
Resolution 347, as amended
Adopted by the Talbot County Council: May 14, 2024
Resolution 348, as amended
Adopted by the Talbot County Council: May 14, 2024

As identified within the goals of Chapter One of this Plan, growth of the county is to be encouraged and directed in concentrated centers around existing centers of population that presently have adequate or potentially adequate water and sewer services. To plan sewer service to meet the needs of future growth, the sewer service provider, the Town of Trappe, created sanitary sewer service districts. The sewer service presently being provided in the Town of Trappe is referred to as the Trappe Sewer District. To address the sanitary sewer needs in the growth area around the Town of Trappe, the Town created two additional sewer service districts.

The Trappe East Sewer District serves parcels located in the Town on the east side of U.S. Route 50 in the Lakeside Development. On the northern end of Town, a second sewer service district, White Marsh Sewer District, will serve the White Marsh Development Area.

Trappe East Sewer District
The delineated development area around the Town of Trappe is shown on Map 18. The factors that influence the size of development areas for the Town of Trappe include the growth potential of the Town, the presence of natural growth constraints such as wetlands, the Chesapeake Bay Critical Area, and the availability of water and sewer service. It is the goal of the Town to serve the areas annexed pursuant to a policy of planned growth. As land is annexed into the Town of Trappe, these areas would be reclassified as immediate priority status for sewer service after amending the Talbot County Comprehensive Water and Sewer Plan. Once the area has been reclassified as immediate priority status, this will mean that the area is to be served by the Town of Trappe that will progress to being under final design and/or construction phase, or is existing.

An Enhanced Nutrient Removal ("ENR") 0.50 million gallon per day ("MGD") Membrane Bio-Reactor ("MBR") wastewater treatment plant (the "Lakeside WWTP") and collection system will be designed and constructed in phases and operated to serve the Lakeside Development within the Trappe East Sewer District. This type of design eliminates operating challenges associated with the low flows generated by early phases of development and the inability of a WWTP constructed to full build-out capacity to operate properly at initial low flows.

In accordance with the discharge permit 19-DP-3460 ("Permit 19-DP-3460") issued by MDE on October 27, 2022, the permitted flow for the Lakeside WWTP is 100,000 gallons per day, which will allow approximately 400 residential units to be built. An initial flow of 37,500 gallons per day may be directed from the Lakeside Development to the existing Trappe District wastewater treatment plant, with all such flows to be redirected to the Lakeside WWTP once constructed and operational. Such initial flow is part of the 100,000 gallons per day authorized under Permit 19-DP-3460. The Lakeside wastewater treatment system may be expanded in phases as needed. MDE Permit 19-DP-3460 requires a major modification for any future expansion of the Lakeside wastewater treatment system. Such expansion shall also require an amendment to this Plan. Permit 19-DP-3460 is a groundwater discharge permit where treated effluent from the Lakeside WWTP will be disposed of by spray irrigation on lands within the Trappe East Sewer District.

The information presented in Map 18 is for planning purposes. The Sewer Districts have been defined using various colors, shading and hatches defining areas of the existing sewer service and future sewer service areas and the Priority Funding Areas as defined by the Town of Trappe and the County, and those Priority Funding Areas approved by the State. This map does not impose an obligation on Talbot County or the Town of Trappe to provide sewer service into the growth areas. Prior to extending sewer service into the growth areas, the Town of Trappe would ensure that the existing sewer system (as may be improved by a developer) has capacity to serve the growth areas and the safety and adequacy of its public sewer supply system maintained for all its users.

Lakeside Development Phasing

The following table shows the EDUs as confirmed by the Town of Trappe and the developer on June 30, 2023:

Table 19. Lakeside Development EDUs

	EDUs
Phase 1, Section A - Residential	94
Phase 1, Section A - Community Use (estimated)	6
Phase 1, Section B – Residential	25
Phase 1, Section B.2 - Residential	6
Phase 1, Section C - Residential	200
Phase 1, Section C - Community Use (estimated)	6
Phase 1, Section D - Residential	180
Total EDUs	517 (12 estimated)

Residential	EDUs
Residential	153
Residential	340
Commercial	56
Total EDUs	549

	EDUs
Residential	500
Total EDUs	500

	EDUs
Residential	386
Residential	115
Total EDUs	501

	EDUs
Residential	500
Total EDUs	500

	EDUs
Commercial:	307
Total EDUs	307

Total Number of EDUs for the Lakeside Development: 2,874

The foregoing phases and EDUs are based on the June 25, 2021 Phasing Plan approved by the Town of Trappe and are included in this Plan at MDE's request[2]. As noted above, the EDUs for the community uses for Phase 1 and Phases 2 through 6 are estimates only. EDUs will ultimately be allocated in accordance with applicable Town laws, policies, and regulations as lots are subdivided and commercial uses are developed and are limited to the permitted capacity as set forth in this Plan and all other approvals issued by MDE and other authorities having jurisdiction. The phases represent defined land uses only and do not represent the timing or sequence of development; provided, however, that all phases of the Lakeside Development, or portions thereof, classified as S-2 or S-3 shall be reclassified as S-1 through an amendment to this Plan before receiving sewer service from the Town of Trappe.

Flows shall be monitored by the Town, with updates provided to the County at least annually, whether at an annual CWSP meeting or by separate letter to the County Engineer. The Town shall also promptly notify the County Engineer of any updates to the Phasing Plan for the Lakeside Development, including any changes in the phasing or allocation of EDUs from those set forth hereinabove. Any changes in the phasing or allocation of EDUs from those set forth hereinabove

[2] On November 4, 2020, D. Lee Currey, Director of MDE's Water and Science Administration, sent a letter to County Council President Chuck Callahan, in which he stated that the EDUs for the different phases of the Lakeside development are "necessary to assess the adequacy of the water and sewer systems to accommodate and serve those EDUs." Mr. Currey further requested that the County provide "updated EDUs for Phases 2 and 3 in the next Amendment" for the Town of Trappe. On April 24, 2023, Dinorah Dalmasy, Program Manager for MDE's Water and Science Administration, sent a letter to Council President Callahan, in which she requested that the County provide updated EDUs for "all phases" of the Lakeside development in an update to the CWSP. On July 21, 2023, Ms. Dalmasy sent another letter to the County Council President in which she clarified that MDE was seeking the finalized EDUs for Phase 1 of the Lakeside Development only and a best estimate of the EDUs for all other phases thereof.

shall not require an update to the CWSP; however, such information may be incorporated as part of the amendment(s) proposing to reclassify any phases of the Lakeside Development from S-2 or S-3 to S-1.

Financial Management of Trappe East Sewer District

The Trappe East Sewer District WWTP will be constructed by the developer of the Lakeside community, then dedicated to, and owned and operated by, the Town of Trappe. All Trappe East Sewer District collection infrastructure will be planned, designed and constructed by the developer of the Lakeside community and maintained by the developer until it is dedicated to and accepted by the Town of Trappe.

Charges and Assessments

(a) *Connection Charges.* The Town, by ordinance or resolution, may make a charge for each water and sewer connection. The funds derived from these charges may be used for payment of principal and interest on and debt financing, accumulating funds for growth-related capital improvements, and for the purchase of large capital equipment for the systems. The Town evaluates the fee structure for these connections on an annual basis.

(b) *Front Foot Benefit Assessments.* As of December, 2019, the Town has no front foot benefit assessments in place. The Town may elect to assess front foot charges if there is placement of water or sewer service lines along Town or State roads which would enable the property owner to elect connection to Town water or sewer service at a future date. This charge is used to recover the cost of constructing the water and sewer lateral lines and is paid annually from the inception of service for a period of years. Private front foot benefit assessments in the Lakeside community are collected by the developer of the community and are not a charge of, or collected by, the Town.

(c) *Usage Charges*. For the purpose of providing funds to maintain and operate its water supply and sewerage systems, and for the payment of any indebtedness, the Town may assess charges which shall consist of either a base charge for service and a variable charge based on water consumption, or a minimum ready-to-serve charge. These charges are due when presented and late accounts accrue interest and are subject to enforcement action, including suspension of service. For the purpose of providing funds to finance the design, engineering, construction and extension of water supply or sewerage system, the Town is authorized to borrow money through the issuance and sale upon the full faith and credit of the Town of its general obligation bonds. However, all new infrastructure to serve the Lakeside Development will be constructed at the development's expense and may be financed through bond issuance(s) by the Town that would be repaid through assessments upon the Trappe East special tax district.

SCHEDULE FS – FINANCIAL MANAGEMENT STATISTICS

Trappe East Sewer District

	Buildout*
Sewer Charge Revenue:	$2,300,000
Connection Charge Revenue:	$-
Front Foot Assessment Revenue:	$-
Other (Interest & other reimbursements):	$-
Total Revenue:	$2,300,000

Operation & Maintenance Expense:	$560,000
Administration Allocation:	$ 30,000
Capital Reserve:	$335,000
Total Expense:	$925,000
Operating Income or (Loss):	$1,105,000

**Projection based on flow, revenue and operational assumptions. O&M expenses and appropriate capital reserves will be re-evaluated by the Town following issuance of the construction permit for the Trappe East Sewer District WWTP and reflected in an updated Financial Management Plan submitted to MDE.*

Trappe Sewer District

The Sewerage System Plan for existing and planned sewer service for the Town of Trappe is presented in Figure 23. The Trappe Sewer District wastewater treatment plant is a secondary treatment system using Biolac Wave Oxidation Process with chlorination/de-chlorination and sand filtration prior to discharging the effluent into an unnamed tributary of La Trappe Creek. The wastewater treatment system has a design and permit limitation of 200,000 gallons per day (gpd).

The existing 0.2 MGD WWTP is approaching 20 years of service for the Town of Trappe and is in need of upgrades to achieve Enhanced Nutrient Removal (ENR) discharge permit limitations and to continue to serve the Town. In cooperation with the State of Maryland, the Town of Trappe has entered into an ENR Agreement for funding assistance to upgrade the existing facility to ENR standards and reduce the nutrient load to the Chesapeake Bay. The WWTP upgrade has been initiated with a Preliminary Engineering Report (PER) which began in 2018 to evaluate options to achieve ENR treatment. There are two options the Town is considering which will ultimately depend on available funding. As the Town of Trappe will eventually own the Lakeside WWTP, the first option, which is preferred by the Trappe Council, is to decommission the Trappe WWTP and send wastewater to the Lakeside WWTP for treatment. Treated effluent equal to the quantity of raw wastewater received from the Trappe Sewer District would then be discharged to the existing point discharge location at the unnamed tributary of La Trappe Creek.

Alternatively, the Town of Trappe will construct a Wave-Oxidation Treatment System and construct mechanical dewatering at the existing WWTP site and ultimately own, maintain, and operate two wastewater treatment plants. Expansion of the Lakeside ENR WWTP to provide treatment capacity for the entirety of the Town's wastewater flow may be completed more quickly and cost effectively; but the level of funding support available for each alternative may be determinative of the Town's direction.

Treatment Plant

Biolac, Wave Oxidation Process– 200,000 gpd
Disinfection – Chlorination/Dechlorination
Point of discharge – Unnamed Tributary of La Trappe Creek

Flow Data Wastewater Treatment Plants					
Design Parameters				Flow	
Name or Service Area	Hydraulic Design Flow (MGD)	Organic (mg/l)		Avg. Day* (MGD)	Max. Day (MGD) And Date**
		BOD	TSS		
Trappe Sewer District (Existing Service Area)	0.200	210	450	0.140	0.363 (4/15/04)

* Per Effective Date of Plan
** During Previous Fiscal Year

Pumping Stations

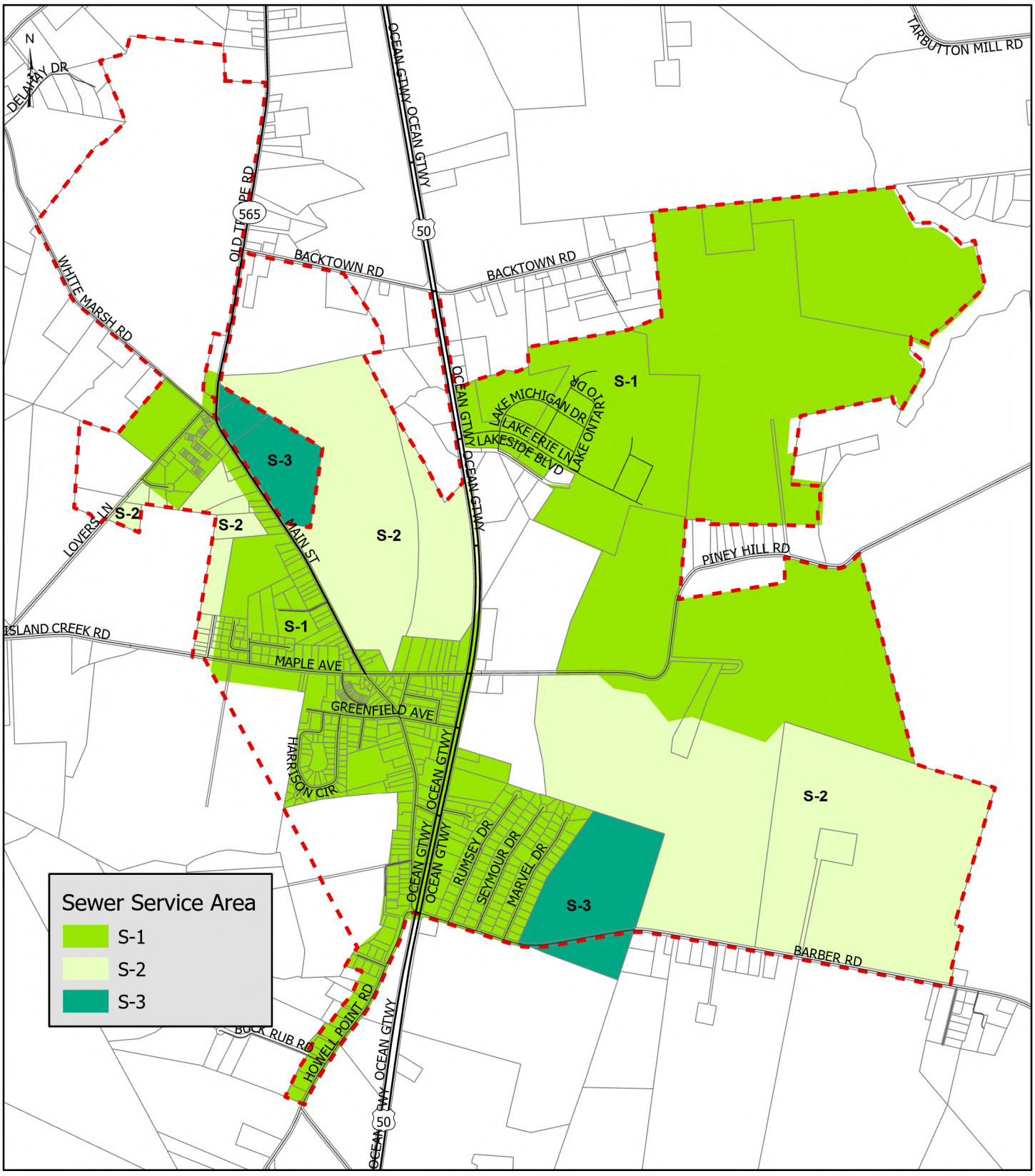
Inventory and Summary of Existing Pump Station	
Location	**Description**
1. South Main Street & U.S. Route 50	Two pumps each 5 HP, 255 gpm and a 4-inch diameter force main, equipped with an emergency generator
2. Greenfield Avenue	Two pumps each 7.5 HP, 350 gpm and 8-inch and 6-inch diameter force mains, equipped with an emergency generator shared with water wells
3. White Marsh School	Two pumps each 3 HP, 80 gpm and a 6-inch diameter force main
4. Lakeview Drive	Two pumps each 85 gpm and a 4-inch diameter force main
5. Rumsey Drive	Two grinder pumps each 125 gpm and a 4-inch diameter force main
6. Marvel Drive South	Two grinder pumps
7. Marvel Drive North	Two grinder pumps
8. Shelby Acres	Two grinder pumps

TABLE 20. TRAPPE SEWERAGE SYSTEM

CAPITAL IMPROVEMENT PROJECTS

Project Description	Proposed Fiscal Year	Comments
New Phased 0.50 MGD WWTP, storage and spray irrigation for Trappe East Sewer District	2020-2030	WWTP, storage and spray irrigation construction will be phased

Construct Phases 1 and 2 sewer collection and pumping systems for Trappe East Sewer District	2020-2030	Collection system, including regional pump stations, will be phased
Construct additional phases of sewer collection and pumping system for Trappe East Sewer District	2023-2030	N/A
Extend sewer collection system along Howell Point Road	2025	N/A
Extend sewer collection system to White Marsh Village District	2025-2030	N/A
Upgrade the Trappe Sewer Area existing 0.20 MGD WWTP to ENR Treatment or Expand Lakeside WWTP	2023	Initiate design. $13,531,000.00. Upgrade the level of treatment to Enhanced Nutrient Removal treatment to reduce nutrient discharge to the Chesapeake Bay and remove sludge in existing lagoon. Treatment may be provided through upgrade of existing WWTP or expansion of Lakeside WWTP and construction of forecemains to connect Town collection system to Lakeside WWTP.
Functional replacement of existing pump stations and gravity sewer lines	2023-2028	$1,975,500.00. Repair and replace 7 existing pump stations and gravity sewer lines throughout the Town of Trappe



Title/Project: Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Town of Trappe Sewer Service	Notes: DRAFT			
Map 18	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 57	

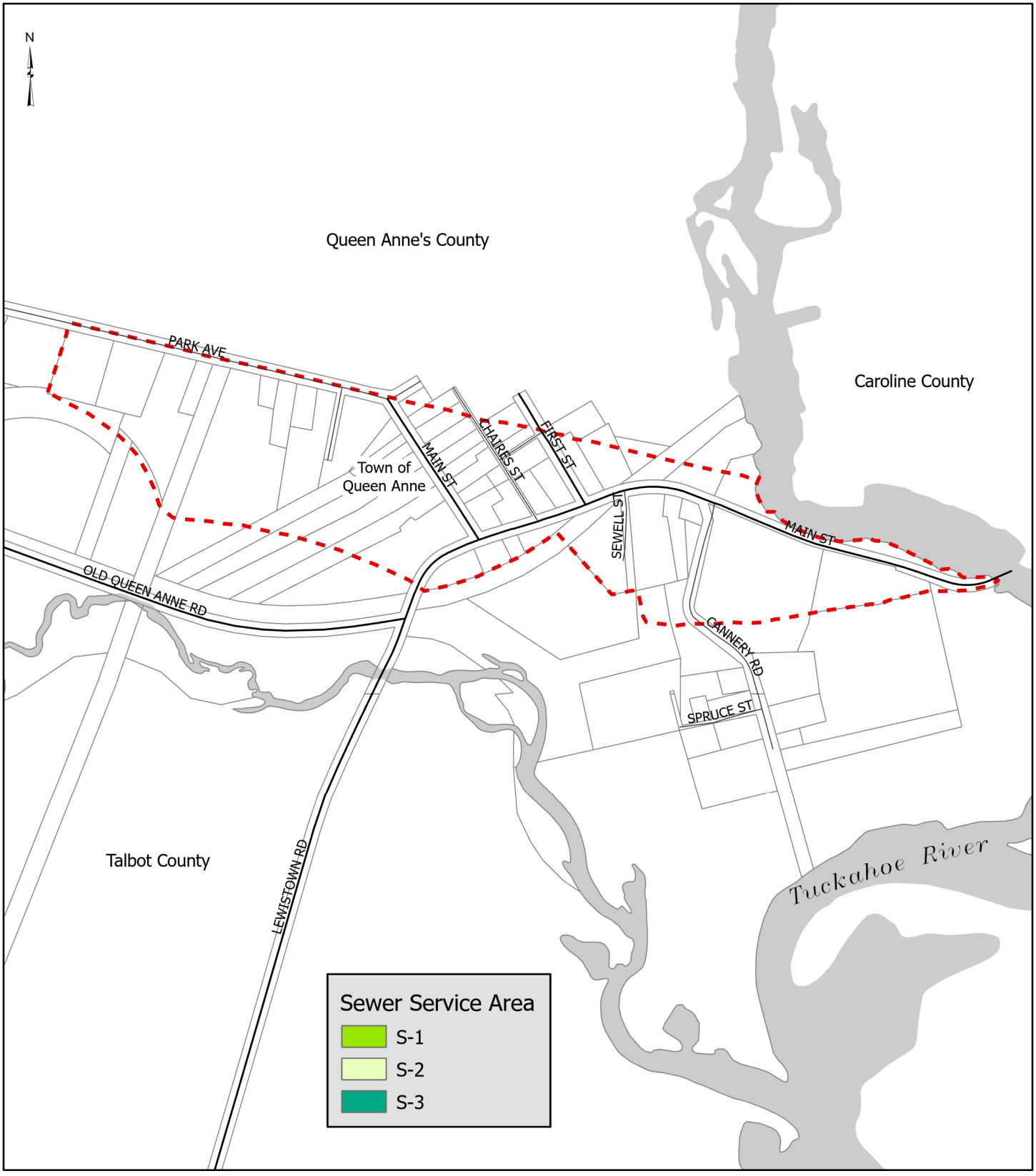
TOWN OF QUEEN ANNE SEWER SYSTEM

The Town of Queen Anne's sewer needs are fully satisfied by privately owned septic systems. Most septic systems are independent, and few are shared between residences. Due to well-draining, sandy soil, the septic systems work sufficiently without significant issues. The Town does not plan on pursuing a central public sewer system.

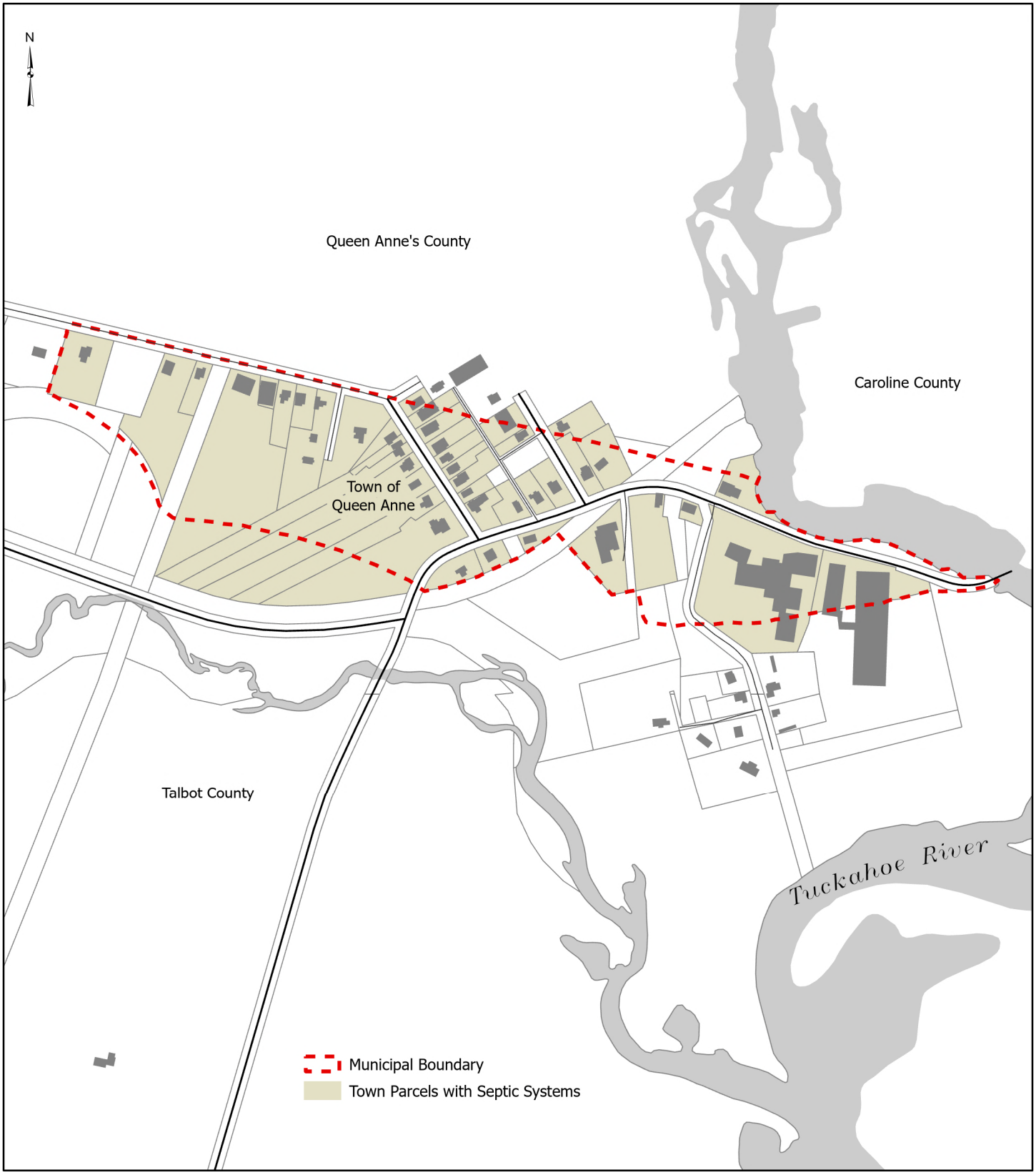
Several of the large single-family homes in Town have been converted into multi-family units. The Town feels that this continued conversion of large homes into smaller units may present challenges in the future due to the lack of a central water and sewer system.

TABLE 21. TOWN OF QUEEN ANNE SEWER SYSTEM CAPITAL IMPROVEMENT PROJECTS

PROJECT DESCRIPTION	PROPOSED FISCAL YEAR	COMMENTS
N/A	N/A	N/A



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Town of Queen Anne Sewer Service	No public sewer service in the town of Queen Anne. **DRAFT**			
Map 19	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 59	



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Town of Queen Anne Septic Systems	Approximately 42 septic systems within town limits. No public sewer service in the town of Queen Anne. **DRAFT**			
Map 20	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 60	

TALBOT COUNTY REGION I – SANITARY DISTRICT (UNIONVILLE, TUNIS MILLS, COPPERVILLE) SEWER SYSTEM

The Region I – Unionville, Tunis Mills and Copperville (UTMC) Sewer Service Area was expanded by the following Resolutions:

1. 7/13/2010 - Resolution 172 – Tax Map 34, Parcel 301 (Carroll's Market along Unionville Road)
2. 3/26/2013 - Resolution 202, as amended – Tax Map 33, Parcel 144, Lot 17 (8349 Aveley Farm Road)
3. 11/15/2016 - Resolution 235 – Extension of sewer into Rest Circle, Teal Point lots along Unionville Road, North Bend Area, Doncaster Area, Aveley Farms community, Arcadia Shores community and lots between Arcadia Shores and the Oak Creek Bridge along Maryland Route 33.
4. 1/8/2019 - Resolution 268, as amended – Tax Map 33, Parcel 139, Lots 1, 1A, 1B, 1C, 2A, 2B, 2C, 3A and 3B (Milesview Village Condominiums)
5. 5/26/2020 - Resolution 283 – Added three (3) lots to Resolution 235 (McMiles, LLC)
6. 11/10/2020 - Resolution 293 – Tax Map 24, Parcel 69, 70 and 71 (Ferry Bridge Road)

The following Resolutions amended the capital improvement projects for Region I UTMC:

1. 6/11/2019 - Resolution 272 – Capital Project: Major Pump Station Improvements in Region I
2. 11/10/2020 - Resolution 294 – Capital Project: Royal Oak Pump Station and pump station allocation
3. 4/16/2022 - Resolution 316 – Capital Project: Adding pressure sensors and float valves for emergency notification to help reduce sanitary sewer overflows
4. 4/26/2022 - Resolution 320 – Capital project: Replace all the grinder pumps

The following Resolutions are associated with funding/debt sewer:

1. 2/14/2006 - Resolution 129 – Debt service for Regions I and II
2. 11/10/2020 – Resolution 294 – Talbot County capital project Resolution 235

The following Resolution is associated with Policy:

1. 10/26/2010 - Resolution 175 – Policy on allowing connections to the force main between the Unionville Pump Station and the Royal Oak Pump Station No. 1

As presented in the 2002 Report of the Review, sewer was extended to the villages of Unionville, Tunis Mills and Copperville that consisted of 168 individual grinder pumps for each residential structure in 1994. Due to a high water table, poorly draining soils and restrictive lot sizes affecting septic systems and a subsequent history of failures, the Talbot County Health Officer identified this area as a "Failing Septic Area". Talbot County completed a Step I Facility Plan recommending a solution to the failing septic systems problems within the villages of Unionville, Tunis Mills and

Copperville. The three villages are separated by expanses of undeveloped agricultural property. Due to EPA's emphasis away from Regional Wastewater Facilities and Talbot County's desire not to encourage growth in areas not currently planned for high density development, the County explored the feasibility of constructing "innovative/alternative" treatment and disposal systems. The Facility Plan recommended, as the most cost-effective solution to the problems of this area, the use of County owned, operated, and maintained collection systems and sand mound treatment and disposal. A prototype mound system was installed and operated with unsatisfactory results. A redesigned mound system was developed but could not economically be constructed. A facility plan amendment was developed that identified a grinder pump collection system and a small treatment plant with a point discharge. The facility plan was amended again by eliminating the small treatment plant and pumping the sewer to the Region II Wastewater Treatment Facility. This system was completed in 1994.

Sewer Collection System: Individual Grinder Pumps – 168 grinder pumps

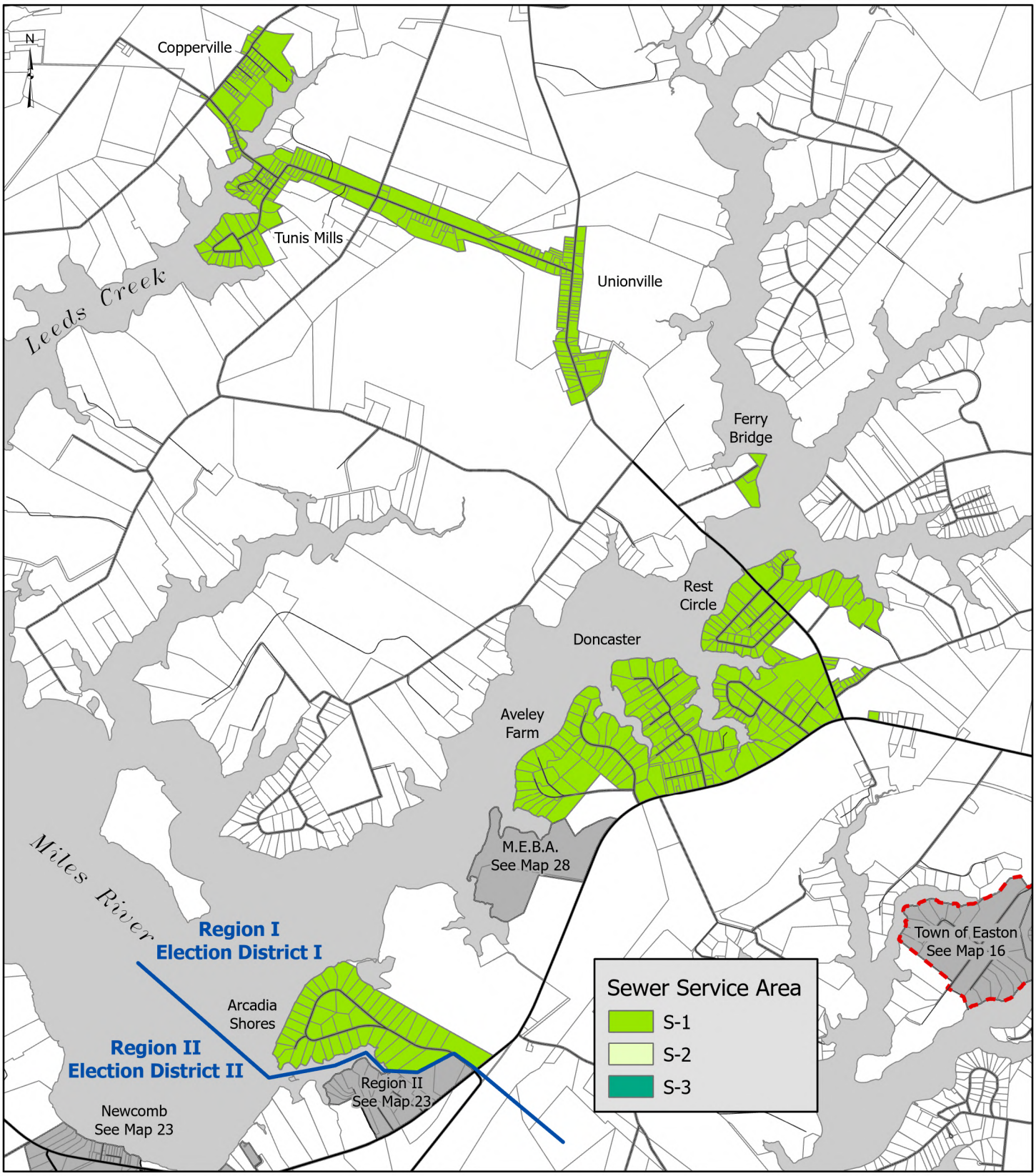
Small diameter force main – Three (3) miles +/-
Unionville (Region I) Pump Station – Two (2) pumps
Unionville force main (7" dia.) – 6.62 miles

Treatment: Region II Wastewater Treatment Plant

TABLE 22. TALBOT COUNTY REGION I SANITARY DISTRICT (UNIONVILLE, TUNIS MILLS, COPPERVILLE) CAPITAL IMPROVEMENT PROJECTS

PROJECT DESCRIPTION	PROPOSED FISCAL YEAR	COMMENTS
Resolution 294	FY2022	Replace Royal Oak Pump Station No. 1 - $1.6 million; Construction to start in 2023
Resolution 316 – Add Pressure Sensors and high-level floats in valve vaults to reduce sanitary sewer overflows	FY2023-2030	Seeking funding in the form of low-interest loans and grant funding
Resolution 320 – Replace existing E-one grinder pumps with E-one Extreme Pumps	FY 2023-2030	E-one no longer supports the older 200/2000 series pumps. Seeking funding in the form of low-interest loans and grant funding
New Capital Project – Replace Unionville Pump Station in Unionville and add needed SCADA and emergency generator and pumping by-pass systems	FY2025-2030	$750,000.00 project to help avoid any major pump station failures.

Resolution 235 allowed for the extension of sewer into the neighborhoods of North Bend, Doncaster, Arcadia Shores, Aveley Farms, Kemp Road, Unionville Road, Rolles Range, Blueberry Acres, and Royal Oak Road. The forcemains and valves to each property were installed in 2024, and the properties will be served with Septic Tank Effluent Pump (STEP) systems in 2025.



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Region I Sewer Service Area	DRAFT			
Map 21	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 63	

TALBOT COUNTY REGION II – SANITARY DISTRICT ALLOCATION PROGRAM

HISTORY

In the late 1990s and early 2000s, MDE raised concerns as to the amount of treatment capacity being allocated beyond the Maryland Department of Planning's (MDP) defined Priority Funding Areas. To address the concerns raised by MDE, an evaluation of all the areas served by the Region II Wastewater Treatment Plant in St. Michaels was completed to clarify the intent of the County in pursuing the expansion of the treatment capacity from 0.5 MGD to 1.0 MGD and established the Region II Sanitary District Allocation Program.

Prior to the adoption of the 2002 Report of the Review, MDE requested that the Talbot County Sanitary District provide the Region II Sanitary District Allocation Program so MDE could understand how much wastewater capacity was allocated to the Town of St. Michaels, the communities outside the Town of St. Michaels, and the created Sanitary Districts for the villages of Royal Oak, Newcomb and Bellevue and the villages of Unionville, Tunis Mills and Copperville. Table 23 shows the allocation of wastewater capacity as presented in the 2002 Report of the Review.

In the 1992 Update of the Talbot County Comprehensive Water and Sewer Plan (CWSP), the treatment capacity of the Region II Wastewater Treatment Plant was to be expanded from 0.5 million gallons per day (MGD) to 1.0 MGD to serve the thirty-year projected growth within the Priority Funding Areas by the calendar year 2004. In addition to increasing the hydraulic capacity of the plant, the treatment plant was to be upgraded to use Biological Nutrient Removal technologies.

In the late 1990s, George, Miles and Buhr completed the preliminary engineering report for designing a three (3) train wastewater treatment with each train being sized for 330,000 gallons per day (gpd) for a total design capacity of 990,000 gpd. As the design of a new wastewater treatment facility with enhanced nutrient removal (ENR) technologies was being completed, MDE raised concerns as to the sizing of a 1.0 MGD wastewater treatment plant. In addition to the concerns raised by MDE, the public raised concerns. Around 2005/2006, the County Council directed the Department of Public Works to design and construct a 660,000 gpd ENR wastewater treatment plant consisting of two (2) trains.

To estimate the wastewater capacity for the Region I – Unionville, Tunis Mills and Copperville Sewer Service Area, the recorded flows at the Unionville Pump Station were used. Dividing the number of equivalent dwelling units (EDUs) into the daily average flows, the flow per EDU was calculated to be 121 gpd/EDU that including a 20% safety factor. Using the same approach, the wastewater flows recorded at the Royal Oak Pump Station were divided by the number of users,

and the flow rate per EDU was calculated to be 126 gpd/EDU that also included a 20% safety factor.

Table 23. Region II Wastewater Treatment Plant Flows

Region or Subdivision	Estimated Existing Flow (gpd)	Estimated Future Sewer Flow (gpd)	Total Estimated Sewer Flow (gpd)
Town of St. Michaels and Rio Vista	228,000	316,000	544,000
Chester Park		2,500	2,500
Inn at Perry Cabin Expansion		8,000	8,000
Tunis Mills, Unionville & Copperville	33,600	11,000	44,600
Royal Oak, Newcomb & Bellevue	68,600	86,600	155,200
Bentley Hay Subdivision	29,800		29,800
Unincorporated areas within MDP's PFA		42,000	42,000
Flows from areas outside Priority Funding Areas (PFA)		15,000	15,000
Estimated Subtotals	360,000	481,100	841,100
Safety Factor – 10%			84,100
Revised Estimated Totals			925,200

The Region II Wastewater Treatment Plant was upgraded with ENR technologies with a design hydraulic capacity of 660,000 gpd with all construction being completed in March, 2008. Just after the construction ENR improvements, the Talbot County Sanitary District acquired the Martingham Wastewater Treatment System.

In 2009/2010, the Town of St. Michaels decided to limit growth within the town boundaries and two major proposed subdivisions that at one point consisted of 800 EDUs was reduced to only 17 EDUs. Based on a review of infill and vacant lots within the incorporated limits of the Town of St. Michaels, it was estimated that the Town needed approximately 10,000 gpd for new sewer connections.

On November 15, 2016, the County Council adopted Resolution 235 to extend sewer to approximately 354 EDUs between the Unionville Pump Station and the Royal Oak Pump Station along with residential lots between the Town of St. Michaels and the Community of Martingham. MDE approved Resolution 235 on April 13, 2017.

In the spring of 2017, the Martingham wastewater system was connected to the Region II – St. Michaels Wastewater system, and the Talbot County Sanitary District initiated the design of sewer collection systems improvements in the summer of 2017. The improvements for the Town of St. Michaels sewer collection system were completed under a grant and loan package through USDA Rural Development.

In 2018, efforts were underway to extend sewer to about 50 lots included in Resolution 235 that were in the Rest Circle area, along Deep Water Point Road and Yacht Club Road. On January 23, 2018, the County Council adopted Resolution 250 to extend sewer from the Region II Wastewater System to the lots along the route to the villages of Bozman and Neavitt and between the Town of St. Michaels and the village of Bozman. As outlined in Resolution 250, an estimated 610 EDUs would be connected to the Region II Wastewater Treatment Plant.

As part of the improvements of the sewer collection system improvements, an I&I analysis and capacity allocation report was completed on August 26, 2019. Calendar year 2018 was the wettest year on record at the Region II WWTP with 96 inches of rainfall being recorded. Table 24 shows the daily average wastewater flows for 2018, 2019, 2020, 2021 and 2022 along with the remaining capacity. The three (3) year average for 2020, 2021 and 2022 was calculated to be 356,456 gpd with 303,544 gpd of remaining capacity.

Based on the 2018 I&I analysis, the flow rate per EDU was determined to be 114 gpd/EDU consisting of 30 gpd/EDU of I&I and 84 gpd of wastewater. This flow rate of 114 gpd/EDU is associated with all the EDUs connected to the Region II Wastewater Treatment Plant.

Table 24 – Region II WWTP Daily Average Flows for each Calendar Year

YEAR	2018	2019	2020	2021	2022
Current Capacity	660,000 gpd	660,000 gpd	660,000 gpd	660,000 gpd	660,000 gpd
Report Daily Average Flow	431,025 gpd	354,363 gpd	406,000 gpd	345,203 gpd	317,666 gpd
Remaining Capacity	228,975 gpd	306,637 gpd	254,000 gpd	314,297 gpd	342,334 gpd

Table 25 – Region II WWTP Allocations

Sewer Service Area	Existing Flows[1, 3]	Future Flows[1, 3, 5, 6, 7, 8, 9, 10]	Reserved Capacity for I&I[1, 3, 11]	Total Flows[1, 3]
St. Michaels	109,560	18,320	77,605	205,485
Rio Vista	16,640	924	14,857	32,421
Bentley Hay [2]				0
Unionville, Tunis Mills, Copperville	19,304	6,364	8,490	34,158
Royal Oak, Newcomb, and Bellvue	38,736	6,532	14,700	59,968
Other County Areas [4]		22,764	8,130	30,894
Resolution 235 Lots	1,680	28,056	10,620	40,356
Martingham Community	29,072	2,820	9,810	41,702
Direct to WWTP	27,732	3,092	25,149	55,973
Bozman, Neavitt		54,012	19,290	73,302
Totals	242,724	142,884	188,651	574,259

Footnotes

1. Flow in gallons per day
2. Included in Direct to WWTP
3. Residential dry flows 84 gpd/residence. Commercial flow, 400 gpd/establishment
4. Includes Mt. Pleasant (113 lots), Pea Neck Rd. (61 residential lots), Martingham vicinity (47 lots), Royal Oak vicinity (14 lots), Goose Neck Rd. (36 lots), Total (271 lots)
5. St. Michaels Includes 80 undeveloped residential and 29 undeveloped commercial lots
6. Rio Vista includes 11 undeveloped residential lots
7. Rio Vista includes 71 undeveloped residential and 1 commercial lot
8. Royal Oak includes 73 undeveloped residential and 1 commercial lot
9. Martingham includes 5 undeveloped residential and 6 commercial lots
10. Direct to WWTP includes 13 undeveloped residential and 5 commercial lots
11. All flows based on December 2018 data. St. Michaels = average of storm flow for pump stations 1, 2, 3. Direct to WWTP also based on St. Michael's 1, 2, 3 average. All others based on data for each pump station.

TALBOT COUNTY REGION II – SANITARY DISTRICT (ST. MICHAELS) SEWER SYSTEM

The following Resolutions expanded the Region II – St. Michaels Sewer Service Area:

1. 9/14/2004 - Resolution 121 – Extended the Region II Wastewater System on a temporary basis to the Martingham Community
2. 3/27/2007 - Resolution 136 – Extended sewer to Tax Map 32, Parcel 7, 33 & 76 and to Parcel 109, Lots 1-12 and 14-22 (Hattons Garden)
3. 3/11/2014 - Resolution 210 – Extended sewer to the Martingham Community on a permanent basis
4. 11/15/2016 - Resolution 235 – Extension of sewer to communities along MD 33 south of St. Michaels like Arcadia Shores, Aveley Farm, Doncaster and Blueberry Acres and along MD 33 north of St. Michaels like Rolles Range Road, Yacht Club Road and Deep Water Point Road
5. 11/15/2016 - Resolution 236 – Extended sewer to Tax Map 32, Parcel 36 (Shannahan Well Company)
6. 1/23/2018 - Resolution 250 – Will extend sewer to small lots along the route to the villages of Bozman and Neavitt
7. 5/12/2020 - Resolution 282, as amended – Will extend sewer to Tax Map 23, Parcel 41, 24500 Rolles Range Road
8. 6/22/2021 - Resolution 305 – Will extend sewer to Tax Map 32, Parcel 164, Lot 1 (25154 St. Michaels Road)
9. 6/22/2021 - Resolution 306 – Extended sewer to Tax Map 32, Parcels 75 and 148 (1006 and 1004 S. Talbot Street, St. Michaels)
10. 9/28/2021 - Resolution 309 – Will extend sewer to Tax Map 32, Parcel 85 when sewer is extended to the villages of Bozman and Neavitt
11. 7/11/2023 – Resolution 343 – Extended sewer to Tax Map 23, Parcels 98, Lot 1 and Lot 60 (24679 Yacht Club Road)

The following Resolutions added the following capital improvement projects:

1. 5/12/2015 - Resolution 219 – To add a new screw press for the material handling facility for sludge drying (this was replaced with a new Belt Filter Press)
2. 6/11/2019 - Resolution 272 – Adding to the sewer collection system rehabilitation and replacement capital improvement project that also included a new Belt Filter Press for $550,000.00
3. 4/26/2022 - Resolution 319 – Part of wastewater treatment plant consolidation program to extend sewer to the Region V Wastewater Treatment Plant to provide ENR treatment and to extend sewer to small lots in and outside of villages between St. Michaels and the village of Tilghman

The following Resolutions added debt service for the Region II Wastewater Treatment Plant and the St. Michaels Pump Stations:

1. 2/14/2006 – Resolution 129 – Established a fund for permanent public improvements to the Region I and II Sewer Systems related to the indebtedness
2. 6/13/2006 – Resolution 132 – For the Talbot County Water Quality Bond in the amount of $2.5 million for the planning, engineering, and expenses for improvement to the wastewater facility

The following Resolution added or amended policies:

1. 1/8/2008 – Resolution 148 – Sewer allocation policy for new lots

Refer to Map 22 and Map 23, for the limits of this Sanitary District. The boundaries of Sanitary District No. 2 include the Town of St. Michaels, Rio Vista and Bentley Hay, and extend to include Newcomb, Cedar Grove, Royal Oak, Royal Acres and Bellevue to the Southeast.

The Wastewater Treatment Facility for Region II is owned by Talbot County. The plant is located on a 30-acre parcel of land. The treatment facility includes primary, secondary, and tertiary treatment and was upgraded with ENR technologies in 2008. Prior to discharge, the effluent is disinfected with ultra-violet lamps and post aerated. The sludge is aerobically digested and dried using a belt filter press and ultimately disposed at the Midshore Regional Landfill. The design capacity of the plant is 660,000 gpd with the wastewater treatment system designed to handle two (2) 10-year storms, back-to-back.

Point of Discharge – Miles River

Collection System – 8” – 12” diameter (Clay and PVC): Six (6) miles of gravity sewer

Pumping Stations:
No. 1 (Green Street) – One (1) – bypass bar screen manually cleaned – two (2) 500 gpm-FlowServe dry pit submersible pumps with 6” diameter discharge. The station has emergency power.
No. 2 (Mill Street) – Two (2) 500 gpm–FlowServe dry pit submersible pumps with 4” diameter discharge. The station has a manually cleaned bar screen and emergency generator for backup power.
No. 3 (Grace Street) – Two (2) 125 gpm Gorman Rupps centrifugal sewage pumps with 4” discharge and the Station has a manually cleaned bar screen.
No. 5 (Madison Avenue) – Two (2) 100 gpm Hydromatic self-priming pumps with 4” discharge. The station has a manual cleaned bucker screen which has been replaced.

Perry Cabin – nine (9) duplex 15 gpm Environment – One (1) Grinder Pump Station. Force main size is from 1 1/4" to 3”.

Treatment Plant:

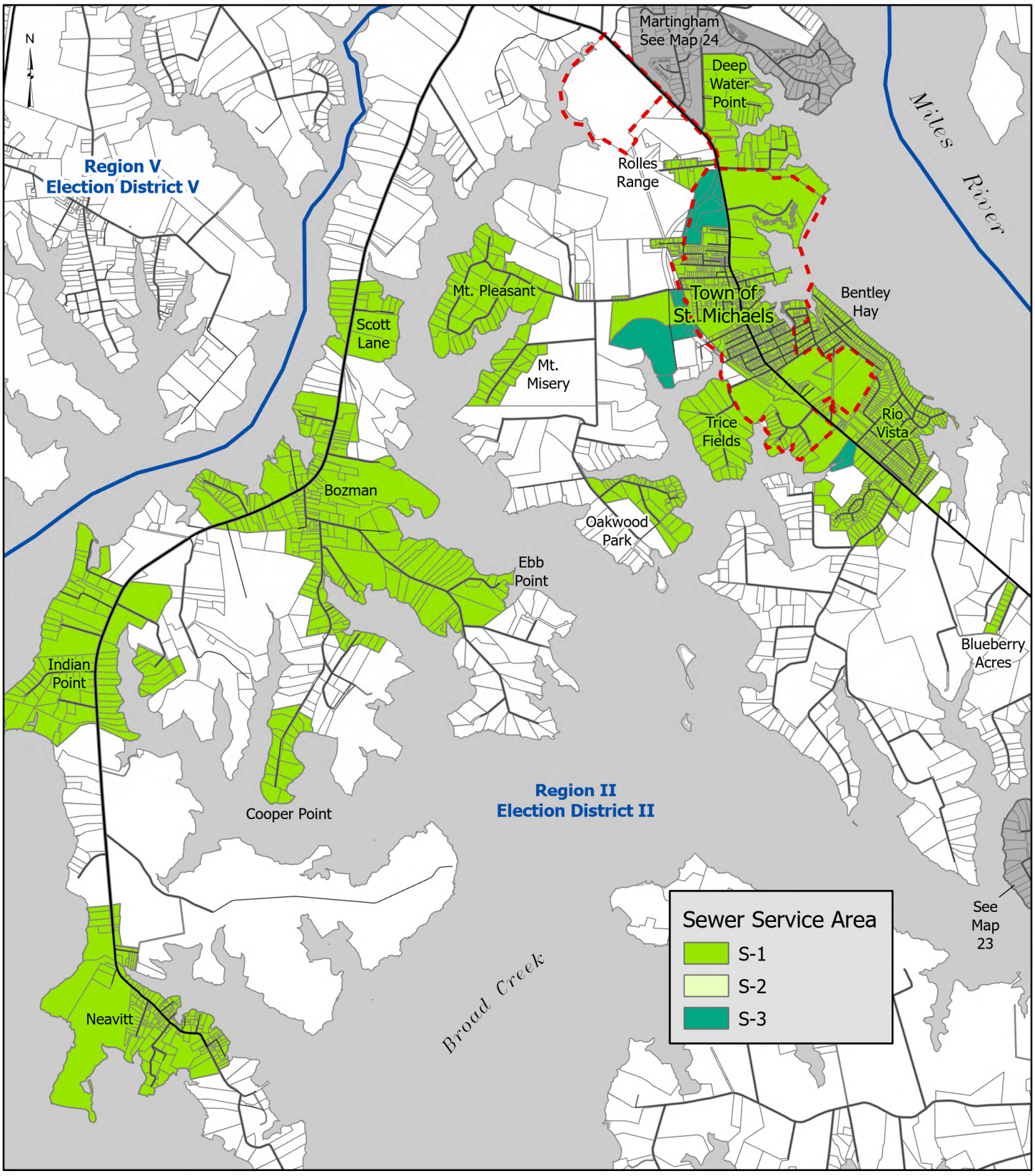
The wastewater treatment plant is equipped with a Parkson bar screen, influent pump station (4,830 gpm) with three (3) dry pit submersible Flygt pumps, In-line grit removal system and flow equalization basin, two (2) 4-stage Bardenpho oxidation ditches, two (2) 50 foot diameter final clarifiers, two (2) 30, diameter final clarifiers, six (6) Dynasand continuous backwash sand filters, and two (2) bank ultraviolet (UV) radiation lights for disinfection and post aeration. There is one (1) 25-foot diameter sludge thickener with one (1) meter BDP belt filter press, one (1) emergency holding pond for temporary storage of wastewater during maintenance of a unit process, and the lagoon is also used for wet weather flow equalization (capacity equals 1.64 million gallons or 2.45 days for design flow).

Capital improvements to the St. Michaels Wastewater Treatment Plant (WWTP) and sewer collection system are presented in Table 26. Working with the Talbot County Sanitary District (TCSD), a 5–10-year capital improvement plan was developed. Due to the overall cost of many of the capital improvements, the County and the TCSD seek grant funding, low-interest loans and loan forgiveness through the Maryland Water Quality Infrastructure Finance (MWQIF) Program. The MWQIF Program administers the State Revolving Funds. Federal Funding that can consist of low-interest loans and loan forgiveness, and grant funding through the Bay Restoration Fund (BRF) for Wastewater for WWTP operational grants and sewer extensions. In securing funding through the MWQIF Program, the capital project must be included in the Comprehensive Water and Sewer Plan (CWSP). MDE also administers grant funding through the BRF fund for individual properties or a small community on an as-needed basis. In addition to seeking grant funding and loans through programs administered by MDE, Talbot County and the TCSD seek grant funding and low-interest loans through Rural Development, EPA through Federally Funded earmarks, along with other federal and programs where a project would comply with the loan and grant rules. In seeking funding through other federal and state sources, the capital improvement project needs to be included in the CWSP.

Table 26 – Region II Treatment Plant Discharge Permit Requirements

Effluent Parameter	Effluent Limitations						Monitoring Requirements	
	Loading				Concentration		Monitoring Frequency	Sample Type
	Yearly Total	Yearly Average	Monthly Average	Weekly Average	Monthly Average	Weekly Average		
Flow	N/A	660,000 gpd	N/A	N/A	N/A	N/A	Continuous	Recorded
BOD_5	N/A	N/A	110 lbs/day	165 lbs/day	20 mg/l	30 mg/l	Weekly	8 hr. Comp
Suspended Solids (TSS)	60,302 lbs	N/A	55 lbs/day	83 lbs/day	10 mg/l	15 mg/l	Weekly	8 hr. Comp
Total Nitrogen (N)	8,040 lbs	N/A	Report	N/A	Report	N/A	Weekly	8 hr. Comp
Total Phosphorus	603 lbs	N/A	Report	N/A	Report	N/A	Weekly	8 hr. Comp
Effluent Parameter	**Minimum Value**				**Maximum Value**			
Fecal Coliform	14 MPN/100 ml monthly median value				N/A			
Total Residual Chlorine	Non-Detect				N/A			
pH	8.5				6.5			
Dissolved Oxygen (All Year)	N/A				5.0 mg/l anytime			
Dissolved Oxygen (2/2 - 5/31)	N/A				6.0 mg/l weekly average			

TABLE 27. TALBOT COUNTY REGION II SANITARY DISTRICT (ST. MICHAELS) CAPITAL IMPROVEMENT PROJECTS		
PROJECT DESCRIPTION	**PROPOSED FISCAL YEAR**	**COMMENTS**
Design and construction of a 0.66 MGD ENR WWTP	FY2002/2003	New ENR WWTP put into service in March 2008
Sewer Collection System Evaluation and Study	FY2002	Initiated work with RK&K and completed TV inspections of sewer lines in 2004
Outfall Pipe Inspections	FY2002	RK&K completed an inspection of the outfall pipe in 2004
Sewer Collection System Repairs	FY2003/2004/2005	Miscellaneous sewer collection improvements were made with funding was available through MDE
Pump Station No. 1 and No. 2 Upgrade	FY2004	Both Pump Stations were upgraded with a new force main connecting the two pump stations to the Region II Wastewater Treatment Plant. Project completed in 2005
Watershed Analysis and Study	FY2005	Working with MDE, watershed implementation plans were developed with WWTP Goals for Region II to maintain a discharge or less than 2,000 pounds per year of Total Nitrogen and less than 200 pounds for Total Phosphorus in 2010
Sewer Collection System inspections and sewer collection system rehabilitation and replacement	FY2018-2023	Talbot County secured funding through USDA Rural Development of about $10.0 million to complete road improvements in the Town of St. Michaels, sewer collection system improvements along with the replacement of sewer lines to reduce inflow and infiltration.
Completed analysis of flow rates per equivalent dwelling units in the Region II Wastewater Systems	FY2019	The analysis found the flow per EDU was 114 gallons per day with 84 gallons being associated with wastewater and 30 gallons being associated with inflow and infiltration. The amount of I&I in 2018, the wettest year for the Region II WWTP, equates to the 30 gallons/EDU for I&I.
Resolution 235 Sewer Extension – new force main infrastructure and new connections	FY2023/2024	MDE issued permits in 2022 with bidding for construction in 2023. New connections to occur in 2025
Belt Filter Press – Sludge Material Handling System Upgrades	FY2022/2023	Replaced the 40+ year old belt filter press and belt conveyor with a new belt filter press and screw conveyor for $600,000.00
SCADA Upgrade for Resolution 250 and integrate into current SCADA system	FY2024-2028	$200,000.00. Use new sensors and high level float systems to monitor newly installed force mains
Garage/Storage Facility with solar panels	FY2024-2028	$150,000.00. – be charged against all Sanitary Districts
New tractor and sewer cleaning equipment	FY2024-2028	$100,000.00– be charged against all Sanitary Districts
New Tanker Truck for emergency pump outs	FY2025-2030	$250,000.00 – be charged against all Sanitary Districts



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Region II (St. Michaels) Sewer Service Area	DRAFT			
Map 22	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 73	

TALBOT COUNTY REGION II – SANITARY DISTRICT (ROYAL OAK, NEWCOMB, BELLEVUE) SEWER SYSTEM

The following Resolutions expanded the Royal Oak, Newcomb and Bellevue (RONB) Sewer Service Area:

1. 6/28/2011 – Resolution 185, as amended – Tax Map 41, Parcel 11, a property that provided an easement for the Royal Oak Pump Station No. 2 was provided the ability to connect to the Region II RONB Sewer Service Area
2. 3/26/2013 – Resolution 201 – Sewer Extension to 54 lots along Thorneton, Edge Creek and Chance Farm Roads
3. 11/15/2016 – Resolution 235 – This expanded the sewer service area to lots along Maryland Route 329
4. 4/26/2022 – Resolution 325 – Tax Map 41, Parcel 214 (Stockhausen)

The following Resolutions amended the capital improvement projects for the Region II RONB Sewer Service Area:

1. 2/14/2006 – Resolution 129 – Region I and II Debt Service
2. 11/10/2020 – Resolution 294 – Capital project for the Royal Oak Pump Station No. 1 and allocation of capacity for the pump station
3. 4/26/2022 – Resolution 316 – Capital project to add pressure sensors and high-level alarms in valve vaults to help reduce sanitary district overflows

The following Resolutions amended the policies for sewer service in the Royal Oak, Newcomb and Bellevue Sewer Service Area:

1. 1/8/2008 – Resolution 148, as amended – This Resolution established a connection policy of newly created lots to the sewer system.
2. 10/26/2010 – Resolution 175 – This Resolution outlined a connection policy for lots seeking sewer service along the force main extended from the Unionville Pump Station to the Royal Oak Pump Station No. 1.

An EPA Facility Plan was developed for Royal Oak and Newcomb, and the plan recommended a small diameter septic tank effluent pump (STEP) system for pretreating and conveying the wastewater to a pump station that will then convey the wastewater to the Region II Plant for treatment. During the design phase, the Bellevue Village was incorporated into the STEP system thus creating the Region II – Sanitary District Service Area of Royal Oak, Newcomb, Bellevue. Construction of the septic tank effluent pump system was completed in May 1993. A sewer system plan has been provided for this sewer service area in Map 23. A copy of the service policy is in Appendix 3 of the 1992 Plan.

Sewer Collection System:

Individual STEP (Septic Tank Effluent Pump) Systems – 340

Pump Station 1 (MD 33 and MD 329, Newcomb) – Two (2) Fairbank Morse Pumps; 50 hp
PS – 1 Force Main – 1.8 miles
PS – 1 Low Pressure Small Diameter Main – 0.8 miles

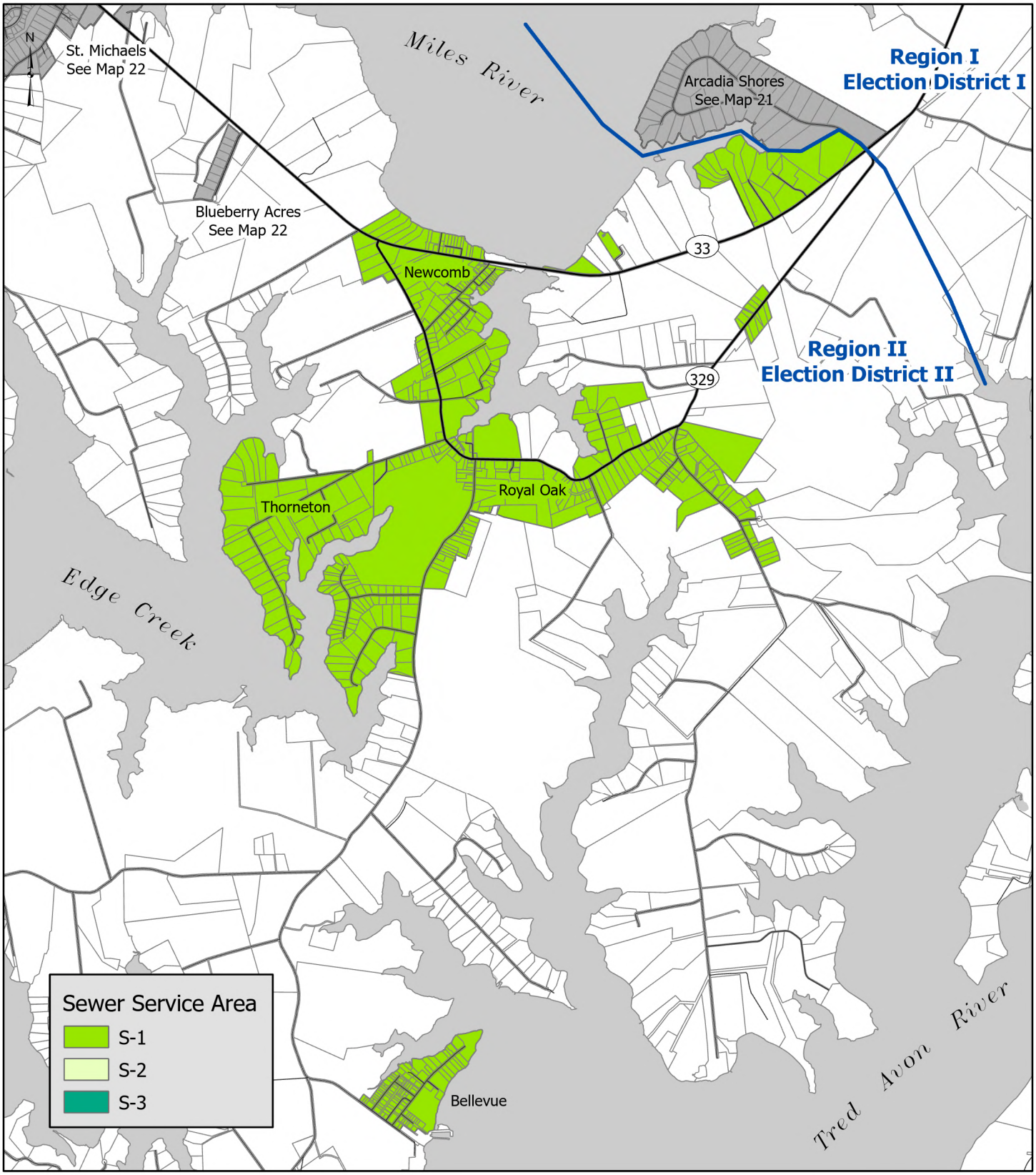
Pump Station 2 (MD 329 and Bellevue Road, Royal Oak) – Two (2) Myers Pumps; 5 hp
PS – 2 Force Main – 1.4 miles
PS – 2 Low Pressure Small Diameter Main – 1.9 miles

Pump Station 3 (Bellevue Road) – Two (2) Myers Pumps; 5 hp
PS – 3 Force Main – 2.7 miles
PS – 3 Low Pressure Small Diameter Main – 3.5 miles

Treatment: Region II Wastewater Treatment Plant

TABLE 28. TALBOT COUNTY REGION II SANITARY DISTRICT (ROYAL OAK, NEWCOMB, BELLEVUE) CAPITAL IMPROVEMENT PROJECTS

PROJECT DESCRIPTION	PROPOSED FISCAL YEAR	COMMENTS
Database Development	FY2002 FY2015–2023	This is currently under development within Smart Site Plan
Integration of Pump Station Locations within GIS	FY2003 FY2015–2023	This is currently under development within Smart Site Plan
Procure 2 additional STEP pumps for standby	FY2003 FY2004 FY2005	Maintain supply of pumps. Pump purchases were made
Bellevue Generator Upgrade	FY2004	Not completed
Resolution 235 – Replacement of Royal Oak Pump Station No. 1	FY2023	$1.6 million with construction bids received in November 2022
Resolution 235 – Sewer Extension to lots along Royal Oak Road (MD Route 329)	FY2023-2024	Construction bids to be received in 2023. Estimated infrastructure costs are $2.0 million to extend sewer to the property line.
Resolution 316 - Add pressure sensors and high-level alarms in valve vaults to help reduce sanitary district overflows	FY2023-2028	Currently seeking funding sources. Total project is $800,000.00 with this sewer service area being about $400,000.00.
Emergency generator and/or Emergency by-pass pump system for Bellevue Pump Station	FY2024-2029	$100,000.00
New Pumper Truck for emergency septic tank pump outs	FY2024-2029	$250,000.00 to be split with all County Sanitary Districts. Need to request funding
Continue to purchase replacement STEP pumps within each fiscal year	FY2024-	



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Region II Royal Oak, Newcomb, & Bellevue Sewer Service Area	DRAFT			
Map 23	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 76	

REGION II SANITARY DISTRICT (MARTINGHAM SEWER SYSTEM)

The Martingham Sewer Service Area was modified by the following Resolutions:

1. 10/26/2004 – Resolution 121 – Provided a temporary extension of sewer service from the Region II Wastewater System to allow the Martingham Wastewater Treatment plant to comply with the spray irrigation discharge permit
2. 3/11/2014 – Resolution 210 - Provided permanent allocation of wastewater capacity with the Talbot County Region II Wastewater Treatment system to the Martingham Sewer Service Area with 40,500 gallons of wastewater capacity being allocated to the Martingham Community

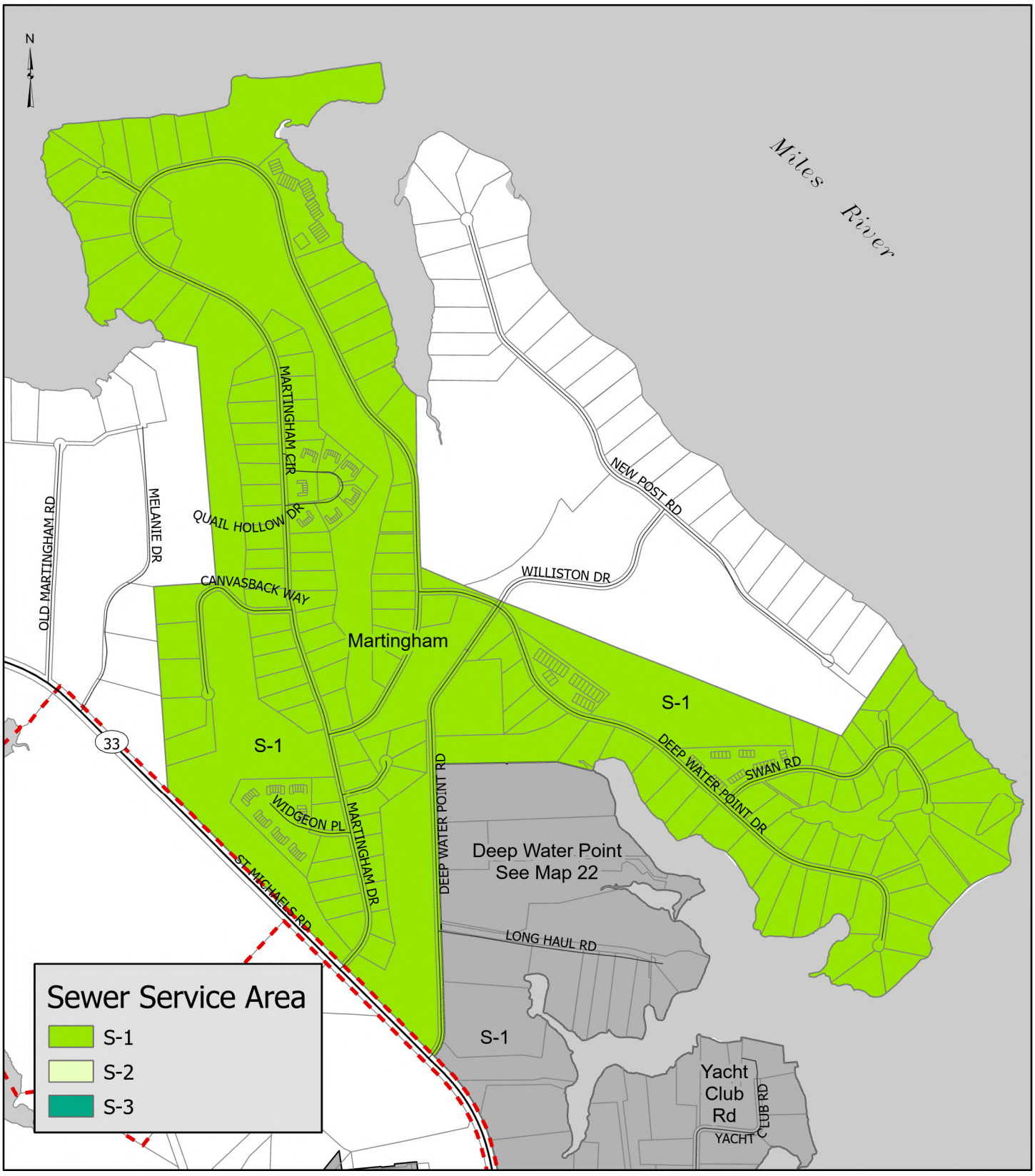
The capital improvement projects for the Martingham Sewer Service Area were added by the following Resolutions:

1. 4/26/2022 – Resolution 316 – Vacuum Sensors for reducing sanitary sewer overflows
2. 4/26/2022 – Resolution 317 – Replacing the emergency generator that serves the wastewater collection system and the Water treatment system and distribution pumps

Refer to Map 24 for the Sewer System Plan for existing and planned sewer service areas in the Martingham Community. This community is served by one of the first vacuum collection systems to be installed in the country and was installed back in the early 1970s. In accordance with Resolution 210, permanent wastewater capacity was allocated to the Martingham Wastewater System from the Region II (St. Michaels) Wastewater Treatment Plant (Region II WWTP) in the amount of 42,800 gpd. In 2008, the ownership of Martingham Wastewater Treatment Plant and Vacuum Collection System was transferred from the Martingham Utility Cooperative to Talbot County.

In 2017, a new sewage pumping station was installed that conveys all the raw sewage from the Martingham Wastewater Vacuum System to the Region II WWTP. The pump station went into operation in 2018 and consists of duplex Gorman Rupp pumps rated at 130 gallons per minute with a four (4) inch diameter force main extending from the Martingham Water and Wastewater Building on Martingham Circle to Deep Water Point Road before connecting to a sewage manhole located at the entrance of the Perry Cabin Condominiums. In 2020, the vacuum pumps were replaced with two (2) Busch R5 vacuum pumps. Region II Sanitary District installed variable frequency drives (VFD) with a telemetry system to monitor the vacuum system remotely in 2022.

TABLE 29. MARTINGHAM SEWER SYSTEM CAPITAL IMPROVEMENT PROJECTS		
PROJECT DESCRIPTION	**PROPOSED FISCAL YEAR**	**COMMENTS**
Resolution 316 – Vacuum Sensors	FY2024	Vacuum sensors to be added to individual vacuum pits to detect and report of vacuum leaks in the vacuum collection system
Resolution 317 – Emergency Generator	FY2024	Installation of a new 225-250 KW Emergency Generator with electrical upgrades to serve the Water and Wastewater systems
Installation of isolation valves to reduce the number of houses per section within the vacuum collection system	FY2025	The existing vacuum system has only 3 sections with over 100 houses per section. When the vacuum is lost, an inspection of over 100 vacuum pits is required



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Region II Martingham Sewer Service Area	DRAFT			
Map 24	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 79	

TALBOT COUNTY REGION V – SANITARY DISTRICT (TILGHMAN VILLAGE) ALLOCATION PROGRAM

The Region V Wastewater Treatment Plant (WWTP), located on Tilghman Island, has a design capacity of 150,000 gallons per day (gpd). The wastewater treatment plant was designed in 1982 and construction was completed in November 1987. The original area to be served by the wastewater treatment plant consisted of the current sewer service area established in 1987 and the community Camper's Circle. Included in the original design sewer service area, but not connected or added to the sewer service area to the Region V Wastewater Treatment, were lots in the Paw Paw Cove area, Tilghman Island Beach and the parcels along Harris Creek along Rude Avenue.

In 2004/2005, sewer was extended to the community of Tilghman Island Beach. From 2004/2005 to present, individual lots were added to the sewer service area along Black Walnut Point Road and on Leeward Lane in Tilghman Island.

Calendar year 2018 was the wettest year on record for the Region V WWTP. Table 30 lists the daily average flows from the Region V WWTP for the past five (5) years.

Table 30 – Region V WWTP Daily Average Flows for each Calendar Year

YEAR	2018	2019	2020	2021	2022
Current Capacity	150,000 gpd	150,000 gpd	150,000 gpd	150,000 gpd	150,000 gpd
Report Daily Average Flow	119,992 gpd	85,510 gpd	117,000 gpd	85,675 gpd	82,513 gpd
Remaining Capacity	30,008 gpd	64,490 gpd	33,000 gpd	64,325 gpd	67,481 gpd

As presented in Table 30, the daily average flows from the Region V WWTP were high due to inflow and infiltration (I&I) that consist of extraneous flows associated with rain, groundwater and tidal flooding. In 2018, the daily average flow was 119,992 gpd, and in 2020, the daily average flow was 117,000 gpd. The flow in 2018 and 2020 had heavy rainfalls, thus impacting the daily average wastewater flows. Using the past two (2) years of flow data for 2022 and 2021, the wastewater flows averaged 84,094 gpd. The three (3) year average for the daily average flows from 2022, 2021 and 2020 was 95,063 gpd.

Assuming that there is no inflow and infiltration associated with the flows in 2021 and 2022, the estimated inflow and infiltration into the Region V WWTP would be 32,906 gpd using daily average flow for 2017, or 35,898 gpd using the daily average flows for 2018. In estimating the amount of inflow and infiltration entering the Region V WWTP, the daily average flows for 2021 and 2022 were subtracted from the 2018 daily average flows.

The estimated flows and allocations for the Region V Wastewater Treatment Plant are presented in Table 31.

Table 31. Region V Wastewater Treatment Plant Allocations

AREAS	PROJECTED NUMBER OF EQUIVALENT DWELLING UNITS	ESTIMATED SEWER FLOW (gpd)
Current Lots Served	581	84,094
Infill Lots	60	7,000
Avalon Phases 4 and 5	Added to infill lots	
Paw Paw Cove (unprogrammed)	Added to infill lots	
Rude Avenue (unprogrammed)	Added to infill lots	
Inflow and Infiltration		35,898
Remaining WWTP Capacity		23,008
Future Sewer Extension Bar Neck and Fairbank	Up to 146 – STEP Tanks	18,250
REMAINING CAPACITY		4,758

TALBOT COUNTY REGION V – SANITARY DISTRICT (TILGHMAN VILLAGE) SEWER SYSTEM

The following Resolutions expanded the Region V – Tilghman Village Sewer Service Area:

1. 6/24/2008 – Resolution 154 – Extended Sewer to Tax Map 38, Parcel 21, Lot 4 (Watermans Museum)
2. 3/24/2009 – Resolution 162 – Extended Sewer to Tax Map 44, Parcel 35, Lot 11
3. 7/28/2009 – Resolution 164 – Extended Sewer to Tax Map 44, Parcel 36, Lot 1
4. 3/27/2012 – Resolution 193 – Extended Sewer to Tax Map 44, Parcel 35, Lot 10 (5560 Leeward Lane, Tilghman)
5. 10/23/2018 – Resolution 265 – Extended Sewer to Tax Map 44, Parcel 35, Lot 4 (Leeward Lane)
6. 6/22/2021 – Resolution 307 – Extended Sewer to Tax Map 44, Parcel 35, Lot 9 (5570 Leeward Lane)
7. 5/9/2023 – Resolution 339 – Extension of Sewer to the villages of Bar Neck and Fairbank

The following Resolutions added the following capital improvement projects:

1. 5/12/2015 – Resolution 220 – Upgrade the Region V (Tilghman) Wastewater Treatment Plant with Enhanced Nutrient Removal Technology.
2. 6/11/2019 – Resolution 272 – Add or modify Talbot County capital projects – Tilghman Island wastewater treatment plant
3. 4/26/2022 – Resolution 318 – Sewer Extension to Bar Neck and Fairbank
4. 4/26/2022 – Resolution 319 – Eliminate septic systems in the villages of Bar Neck and Fairbank by extending sewer service from the Region V (Tilghman) wastewater system. ($2.19 million)
5. 4/26/2022 – Resolution 321 – Sewer System Evaluation, Rehabilitation and Replacement ($1.5 million)
6. 10/10/2023 – Resolution 346 – Repair and/or replace sewers on Tilghman Island to mitigate for Inflow and Infiltration

Prior to 1985 the Tilghman-Avalon-Fairbanks areas had a history of overflowing and failing septic tanks that discharged directly into the surrounding water. Pollution of these areas led to a restriction on shellfish harvesting surrounding the island and created a detriment to the public health in the Tilghman-Avalon Area. The design of a sewer collection system and treatment plant was undertaken and began operating by 1985. All waters around Tilghman Village are now open for shellfish harvesting except for Knapps Narrows to the northwest of Tilghman, a zone at the wastewater treatment plant outfall to the west of Tilghman, and Dogwood Harbor to the east, as a result of the treatment plant. The plant has a design capacity of 150,000 gpd with no room for future expansion. Approximately sixty percent of the capacity is currently being utilized. A Sewer System Plan has been provided for this sewer service area in Map 25.

Fairbanks/Bar Neck failing septic problems need to be addressed. The proposed solution is to repair existing systems or provide new innovative on-site systems. However, additional studies will be completed by the Department of Public Works to evaluate the use of STEP systems and conveyance of the wastewater generated in this area to the wastewater treatment plant. This study should be completed by 2023-2024.

Point of Discharge – Chesapeake Bay
Collection System – 8" and 12" PVC gravity sewers: 5.5 miles
Force Main: 0.50 miles of 2" – 3" diameter force mains

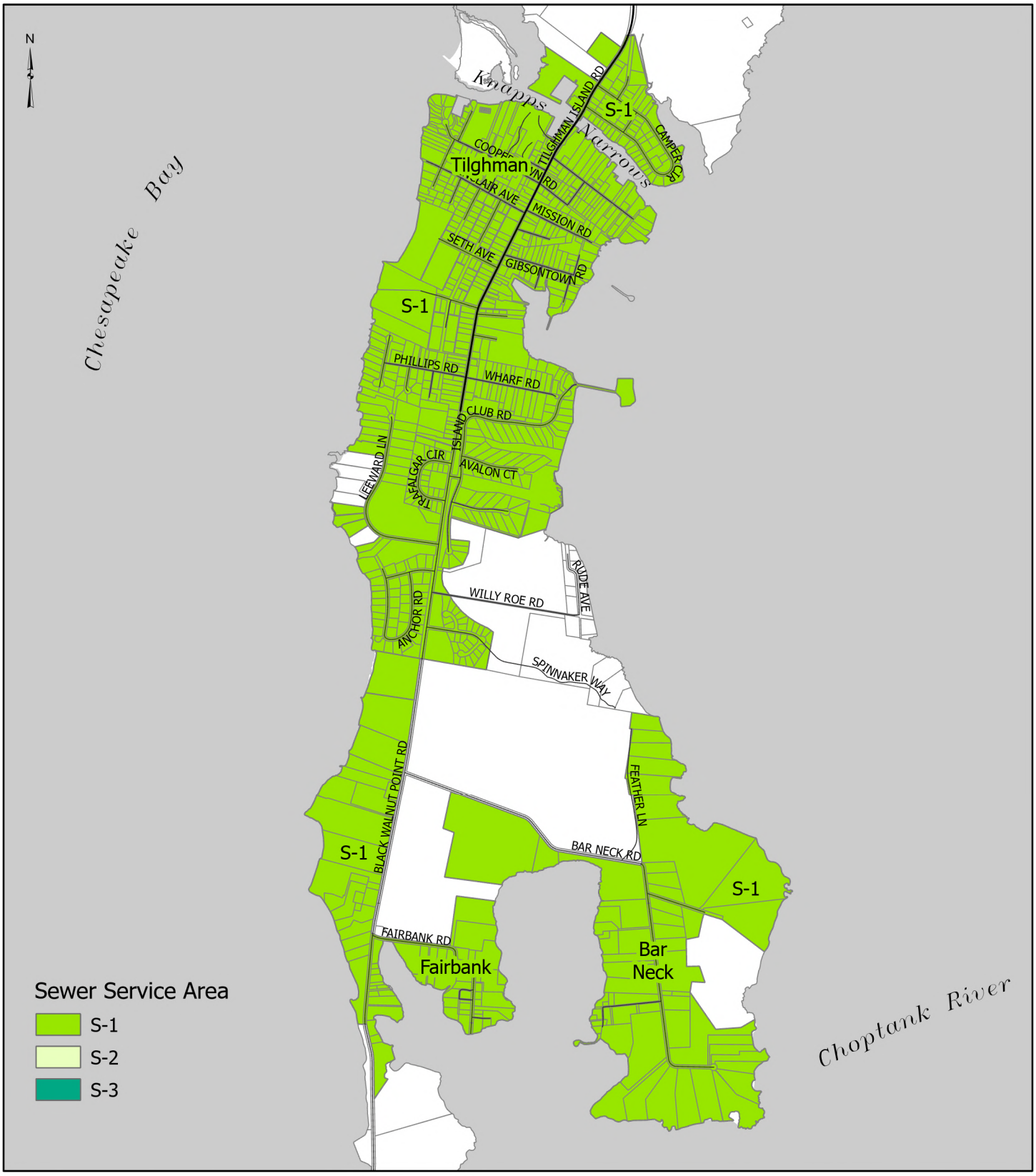
Pump Stations:
East (Chicken Point Road) – two (2) 34 gpm grinder pumps with 3" force main.
West (Coopertown Road Offset) – two (2) 37 gpm grinder pumps with 3" force main and emergency power.
North (Summit Street) – two (2) 50 gpm grinder pumps with 3" force main and emergency power.
South (Avalon Court) – two (2) 40 gpm pumps with 2" force main

Simplex Station – There are 37 simplex grinder pump stations with 1 1/4" force main, each serving a single building. Two of these are located on Foster Avenue, one is located west of Route 33, one is located north of Coopertown Road, and 33 are located on Landing Lane, Windward Drive, and Anchor Road. Each of these serves a single building.

E-One Grinder Station – There are 29 E-One Grinder pump stations with 1 ¼'' force main, each serving a single building. 19 are located on Leeward Lane and 10 are located on Trafalgar Circle.

Treatment Plant:
The plant consists of a basket screen and comminutor, raw sewage pumps (two at 400 gpm each), two-cell surface aerated lagoon, Cl_2 Gas disinfection, SO_2 Gas dechlorination, and post aeration.

TABLE 32. TALBOT COUNTY REGION V SANITARY DISTRICT (TILGHMAN VILLAGE) CAPITAL IMPROVEMENT PROJECTS		
PROJECT DESCRIPTION	**PROPOSED FISCAL YEAR**	**COMMENTS**
Sewer Collection System Evaluation and Study	FY2023-2025	
Sewer Extension to Bar Neck and Fairbank	FY2023-2025	$4.2million- PER under review by Rural Development
Pump Stations Upgrade North, South, East, West	FY2024-2025	$2.4 million
Conduct field testing of treatment enhancement to improve nutrient reduction	FY2025-2030	Improve treatment and increase hydraulic capacity
Prepare request to MDE for routing flow from Region V to Region II WWTP for ENR	FY2025-2030	$60.0 million
Complete Sewer System Expansion Study	FY2025-2030	
Outfall Pipe Inspection	FY2028	
Lagoon Dredging	FY2030-2035	$2.0 million



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Region V Tilghman Sewer Service Area	DRAFT			
Map 25	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 85	

TALBOT COUNTY REGION III – FERRY POINT WASTEWATER SYSTEM

The following Resolution created a capital project to design and construct a new wastewater treatment plant to serve commercial and residential lots in the Ferry Point Area along U.S. Route 50 at the southern end of Talbot County:

1. 6/11/2019 – Resolution 272 – Identified a capital project to design and construct a new community-based wastewater treatment and sewer collection system for the Ferry Point Area. The capital project was estimated to cost $1.5 million for design and construction with the funding being grant and low-interest loans.

The following Resolution created the Ferry Point Wastewater Area:

1. 6/22/2021 – Resolution 300 – This Resolution outlined a new sewer service area for the commercial lots as immediate priority status and the residential lots in the Ferry Point Subdivision to be programmed for future sewer service in 3-5 years.

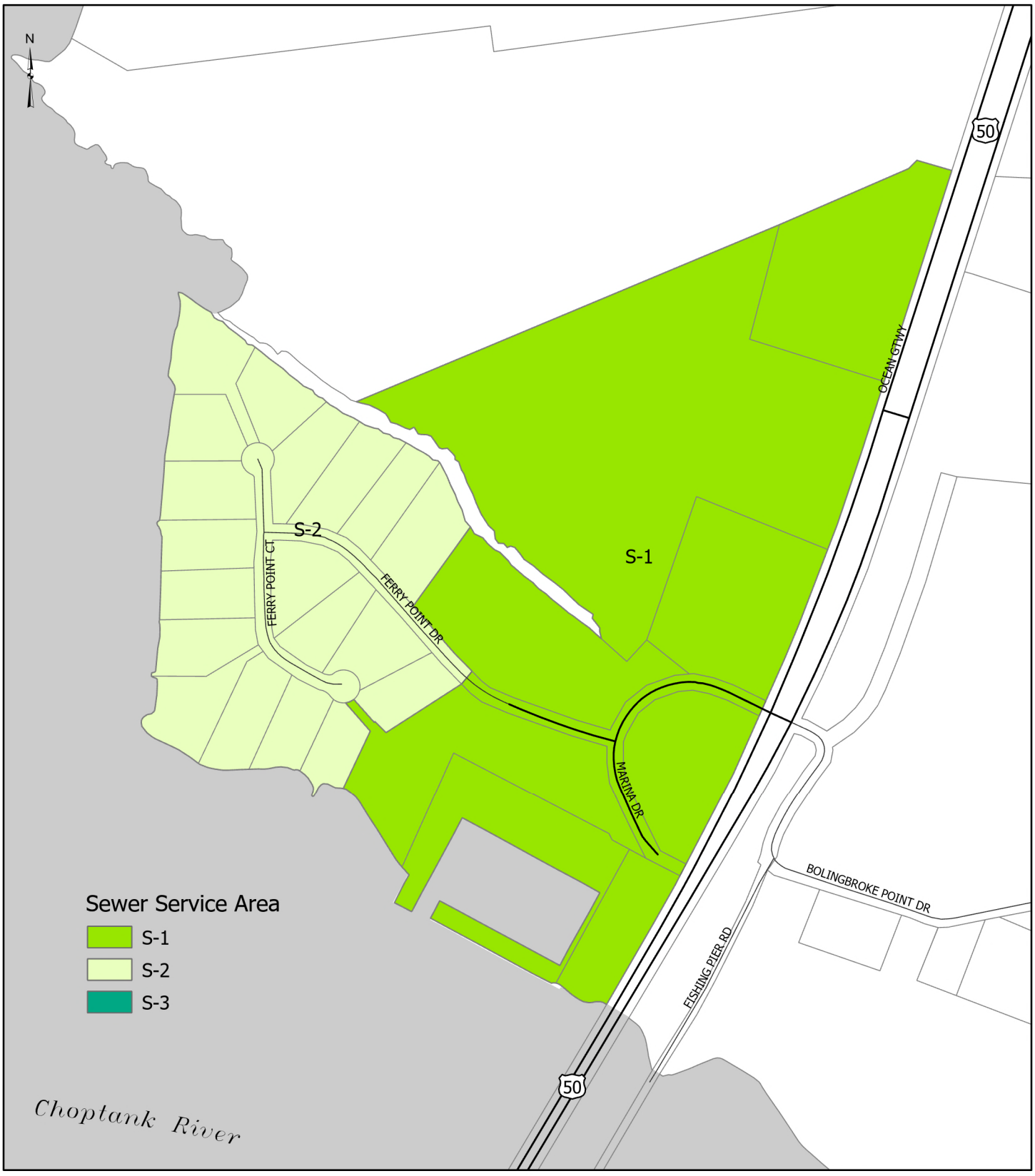
The proposed Ferry Point Wastewater System will serve up to five (5) commercial properties with three (3) of the commercial properties being improved. The three (3) improved commercial properties consist of a marina, Composite Yachts, and a motel. In addition to the commercial lots there are 19 residential properties with 14 of the lots improved and five (5) lots unimproved.

As presented in Resolution 300, the commercial properties were classified as immediate priority status for sewer service. Talbot County is actively designing a new Enhanced Nutrient Removal (ENR) Membrane Bio-Reactor (MBR) Wastewater Treatment Plant (WWTP) to serve the commercial and residential lots. After the WWTP has been constructed, a grinder pump system will convey wastewater from the lots to the new WWTP.

To provide the residential lots with an accurate cost to secure sewer service, the WWTP and initial sewer collection system will be constructed to serve the commercial properties with sewer being extended the residential properties in the future. As part of the overall design effort, the County is working with the Maryland Department of the Environment (MDE) in determining the best treated effluent disposal option. After securing preliminary approval from MDE, the County anticipates a draft permit will be prepared and advertised for comments by the public prior to finalizing the discharge permit.

The proposed capital improvement project for the Ferry Point Area is presented in Table 33.

TABLE 33. TALBOT COUNTY REGION III – FERRY POINT SANITARY DISTRICT CAPITAL IMPROVEMENT PROJECTS		
PROJECT DESCRIPTION	**PROPOSED FISCAL YEAR**	**COMMENTS**
Preliminary Engineering Report	2017	BayLand Consultants and Designers
Engineering/WWTP Permitting	2024	Rauch, Inc.
Discharge Permit	2024	Draft needs to be issued before final permit
ENR MBR WWTP and low pressure sewer system using grinder pumps	2025	Estimated cost of $1.5 million



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Region III Ferry Point Sewer Service Area	DRAFT			
Map 26	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 88	

REGION IV – PRESERVE AT WYE MILLS SANITARY DISTRICT

The following Resolutions modified the Region IV – Preserve at Wye Mills Sewer Service Area:

1. 6/22/2021 – Resolution 301 – Added a capital project for improvements to the Preserve at Wye Mills wastewater treatment plant
2. 4/26/2022 – Resolution 326 – Added a resolution to authorize Talbot County's acquisition of the wastewater treatment plant serving the Preserve at Wye Mills

The Preserve at Wye Mills Development was created using the transfer of development rights from various agricultural properties with sixty-seven (67) lots being created on the Dolvin Farm. As efforts were underway in working with the County Council in 2000/2001, the developer and his agents pursued the creation of a shared sanitary facility under §152 – Shared Sanitary Facilities of the Talbot County Code. Under §152, there are provisions for the construction, operation, access, ownership, jurisdiction, financial assurances, enforcement, violations and penalties for shared sanitary facilities.

The discharge permit for the wastewater treatment plant serving sixty-seven (67) lots within the Preserve at Wye Mills Development was issued February 1, 2003 with the facility initiating operations in 2005/2006. As of December, 2022, 54 residential structures have been constructed with wastewater grinder pumps that convey the water and organics to the Rotating Biological Contact (RBC) treatment unit with a clarifier, denitrifying filter and UV disinfection. After the wastewater has been treated and disinfected, the effluent is conveyed to a spray irrigation-holding pond. This effluent is sprayed onto crops when allowed by the operating permit, usually when there is no rainfall or high winds.

Wastewater from the houses is pumped to the Pre-Aerated Treatment Tank No. 1 that flows by gravity to Pre-Aerated Treatment Tank No. 2. It then flows by gravity to the Flow Equalization Tank (FE Tank). In the FE Tank, the wastewater is then modulated through the RBC treatment unit and subsequent treatment processes; clarification, denitrification and filtration and final UV disinfection.

The Maryland Department of the Environment (MDE) issued discharge permit 02-DP-3406 with a flow of 20,100 gallons per day. The discharge permit establishes a total nitrogen concentration limit of 10 mg/l.

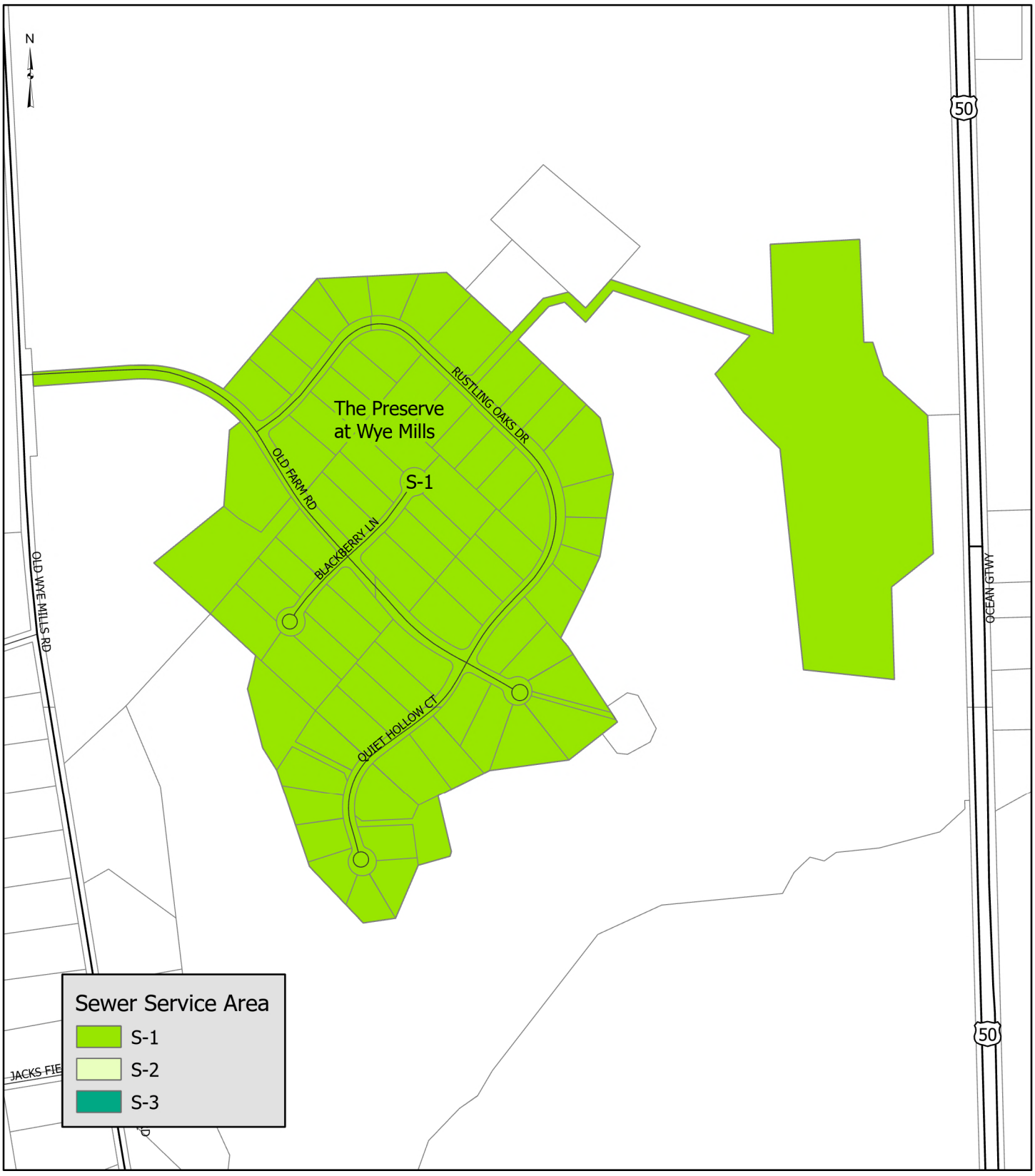
Operational challenges beginning in 2005/2006 were identified to be caused by lack of maintenance, poor operations, and overall antiquated RBC technology. These challenges created non-compliance events related to the effluent parameters set in discharge permit 02-DP-3406. Based on these past issues related to compliance with the State discharge permit, the Property Owner's Association (POA) for the Preserve at Wye Mills used the financial resources collected since 2003, along with special assessments, in attempts to restore the permitted operation of the wastewater treatment plant. In 2021, the POA spent nearly $100,000.00 to restore the permitted operation of the wastewater treatment with the goal of complying with the State discharge permit.

The operational and maintenance efforts yielded the conclusion that a new upgraded plant was needed to replace the current RBC plant in order to consistently and sustainably maintain compliance with the discharge permit effluent limits. In 2022, Talbot County assumed operation and maintenance of the WWTP at The Preserve at Wye Mills. This step was the first in the goal of County acquisition of the treatment plant. Resolution 326 authorized and directed County acquisition of the plant through a transfer agreement stipulating that ownership be transferred to Talbot County at no cost to the County. This control of operations, maintenance, and legal ownership of the WWTP was undertaken to facilitate discharge permit effluent compliance and to secure funding for the upgrade and replacement of the WWTP with a modern MBR system as stipulated in Resolution 301 and shown in the capital improvements table of this section. Funding for the proposed project is anticipated through the Bay Restoration Fund (BRF) program. The plant is currently under a Consent Agreement between Talbot County and MDE governing interim operations prior to the completion of the plant upgrade.

The proposed capital improvement projects for the Region IV Preserve at Wye Mills Wastewater Treatment Plant are presented in Table 34.

TABLE 34. REGION IV – PRESERVE AT WYE MILLS SANITARY DISTRICT

PROJECT DESCRIPTION	PROPOSED FISCAL YEAR	COMMENTS
Replace RBC Wastewater System with MBR Wastewater System	FY2023	Improve wastewater treatment from 10 mg/l or greater to 3.0 mg/l or less and address other operational issues.



Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Region IV Preserve at Wye Mills Sewer Service Area	DRAFT			
Map 27	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 91	

CALHOON M.E.B.A. ENGINEERING SCHOOL SEWER SYSTEM

Refer to Map 28, Calhoon M.E.B.A. Engineering School Campus' Sewer System Plan for existing and planned sewer service areas. Calhoon M.E.B.A. currently spray irrigates lagoon treated wastewater as necessary. The school recently converted from a single spray gun to smaller, evenly spaced spray heads. If the marine industry should improve in the future, the student population could increase. There are no current indicators that this will happen.

Treatment Plant:

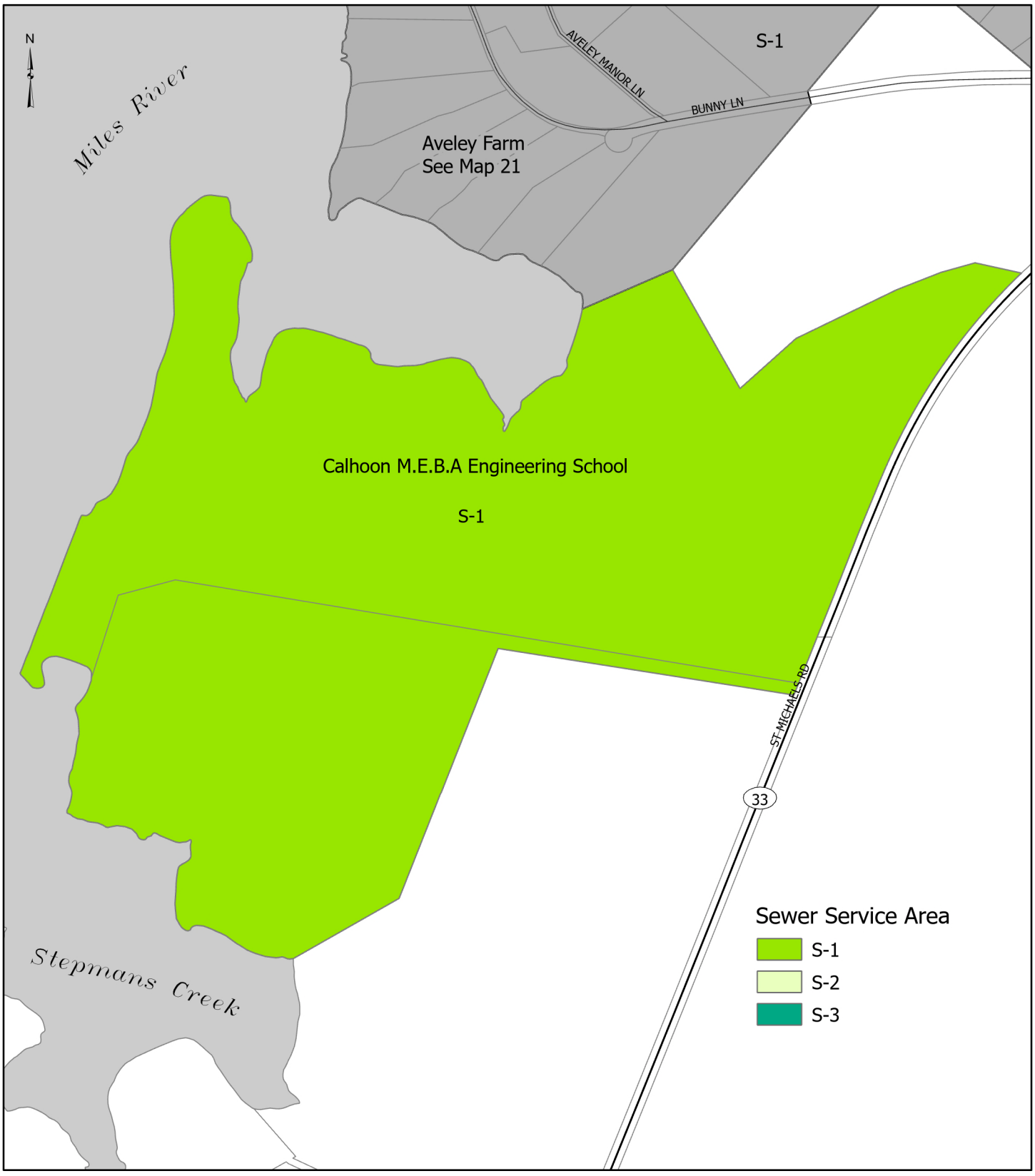
Three (3) cell stabilization lagoon with Rock Filter and Chlorination emptying into holding pond for spray irrigation.

Disposal - Spray Irrigation on approximately 15 acres.

Disinfection – Effluent is chlorinated.

TABLE 35. CALHOON M.E.B.A. ENGINEERING SCHOOL SEWER SYSTEM CAPITAL IMPROVEMENT PROJECTS

PROJECT DESCRIPTION	PROPOSED FISCAL YEAR	COMMENTS
N/A	N/A	N/A



Title/Project: Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Calhoon M.E.B.A Engineering School Sewer Service	Notes: DRAFT			THE GREAT SEAL OF TALBOT COUNTY · MARYLAND ·
Map 28	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 93	

TALBOT COUNTY BIO-SOLIDS (SEPTAGE) FACILITY

The following Resolutions expanded or improved the Talbot County Bio-Solids Facility:

1. 7/10/2007 – Resolution 141 – Added the septage receiving, treatment, and disposal, septage management plan
2. 3/26/2013 – Resolution 204 – Added a capital project to upgrade the Bio-solids facility to add receiving and treatment capacity for brown grease

Septage/Grease

Based on recent Census data, there are approximately 9,000 dwelling units in the unincorporated areas of Talbot County. Approximately 1,000 of these dwelling units are served by wastewater collection systems. Assuming that each of the remaining 8,000 dwelling units has a septic tank, the tanks are pumped every 2-3 years, and the tank pump-out volume is 2,000 gallons of septage per pump out, Talbot County could generate approximately 20,000 gallons per day (GPD) of septage. This correlates well with the local Waste Haulers Association report that they pump an average of approximately 21,000 GPD. All septage is currently being lime stabilized and land applied at an MDE approved site or transported to a WWTP.

In the past, Talbot County designated a private sector facility, Waste Water Recycling (WWR), as the receiving, treatment and disposal location for septage/grease generated within its borders. Caroline County also utilized WWR as their designated septage/grease receiver. This option ended when the company that owned and operated the site closed its business in November 2005.

As a result of the closure of WWR, both Talbot and Caroline counties entered into a partnership to study alternatives. Beginning in 2006, seven (7) alternatives were identified and reviewed to determine the optimum septage/grease management solution. The alternatives included:

- Lease the WWR site and continue operation jointly for Caroline and Talbot counties
- Purchase the WWR site and continue operation jointly for Caroline and Talbot counties
- Arrange a long-term use agreement of an existing receiving and treatment facility within or outside of the counties
- Purchase the WWR site and modify it to treat leachate from the Midshore Regional Solid Waste Management Facility(s) as well as continue the septage/grease disposal operation jointly for Caroline and Talbot counties
- Construct a facility to treat septage/grease/leachate at or contiguous to the Midshore Regional Solid Waste Facility (Midshore I) at its present location in Easton
- Construct a facility to treat septage/grease/leachate at the planned Midshore II Regional Solid Waste Facility at its planned location in Caroline County

- Construct a facility to treat septage/grease/leachate at some location in the Midshore region to service Caroline/Talbot/Queen Anne's/Kent counties

In 2008, Talbot County purchased the Wastewater Recycling facility and renamed the facility as the Talbot County Bio-Solids Facility. The facility is permitted and designed to receive, treat, and dispose of bio-solids, specifically septage and grease wastes. It is located on a 209.5-acre parcel of land of which 52 acres are utilized for spray irrigation of the treated septage. In 2017, the County began operating the Talbot County Bio-Solids Utilization Facility (TCBUF) and assessed a rate per gallon of treatment that covers the operation and maintenance of the facility, debt, and the repair and replacement of equipment. Septage received at the TCBUF is lime stabilized and spray irrigated onto a nutrient uptake crop. In 2017, the Bio-Solids Utilization Facility was upgraded with new tankage and equipment. The upgraded facility incorporated a lined lagoon with two (2) cells having 2.0 million gallons of capacity in order to be able to restrict spray irrigation during the winter months. The Facility is regulated under MDE's Sewage Sludge Utilization (SSU) permit and nutrient management plan. This facility provides an environmentally sound disposal option. It is estimated that approximately 5,000 gallons per day of grease is generated, mainly from commercial and institutional entities. Grease is currently processed at the Bio-Solids Utilization Facility which was upgraded in 2017 to treat and dispose of brown grease.

The design values of the TCBUF are:

Design Stabilization Capacity (annual basis) — 6,000,000 gallons/year*
Design Stabilization Capacity (per week basis) — 115,385 gallons/week*
*Based on operating average 8 hours/day for 5.5 days/week.

TABLE 36. TALBOT COUNTY BIO-SOLIDS FACILITY CAPITAL IMPROVEMENT PROJECTS

PROJECT DESCRIPTION	PROPOSED FISCAL YEAR	COMMENTS
Resolution 204 - Project to add receiving and treatment capacity for brown grease	2017	Completed

TALBOT COUNTY SHARED SANITARY FACILITIES

In 1991, the Talbot County Council passed Bill No. 443, Shared Sanitary Facilities Ordinance, based on the Talbot County Council's findings that it is necessary for the existing and future health, safety, and welfare of the general public that shared sanitary facilities be permitted to be constructed and operated under private ownership and under the regulatory supervision of the Talbot County Department of Public Works. The provisions of the Shared Sanitary Facilities Ordinance apply throughout Talbot County, including areas of sanitary facilities owned by Talbot County, but shall not apply within the corporate limits of any municipality located in Talbot County, or as specifically prohibited by the policy or regulation of the approving authority, the Talbot County Health Department. The provisions of the Shared Sanitary Facilities Ordinance shall not apply to a shared sanitary facility owned by political subdivisions or governmental bodies or agencies; nor to the extension, expansion, or continuance thereof under provisions of separate agreement as authorized by the Controlling Authority, the Talbot County Department of Public Works.

Establishing a shared sanitary facility in Talbot County requires the Developer or owner(s) of a property desiring to construct or create a shared sanitary facility, first file a written petition with the Controlling Authority requesting amendment of the Talbot County Comprehensive Water and Sewer Plan for priority service classification to establish a shared sanitary facility. The Plan amendment shall be processed in accordance with the applicable procedures outlined within this Plan and regulations pertaining to planning water supply and sewer systems. The contents of the petitioners shall provide, at their own expense all mapping, plans, data tabulations, hydro-geological evaluations, schedules, audits, cost estimates, and other documentation relating to the sewer service area delineation, service capacity, growth and expansion considerations for installation of the proposed facility.

The approved shared sanitary facilities shall be referenced according to the election district in which the shared sanitary facility is located. The approved shared sanitary facilities have been designated as S-1. No shared sanitary facilities have been approved for private water systems thus creating W-1 service designations. The following table, Table 37, lists the election district and the approved shared sanitary facility subdivision name, and the tax map and parcel reference at the time the resolution was submitted and approved by the Talbot County Council.

TABLE 37. Shared Sanitary Facilities in Talbot County

1st ELECTION DISTRICT - Easton					
SUBDIVISION NAME	**RESOLUTION NO. AND DATE**	**TAX MAP**	**PARCEL NO.**	**NUMBER OF LOTS**	**PROPOSED FLOW**
No Shared Sanitary Facility					
2nd ELECTION DISTRICT - St. Michaels					
SUBDIVISION NAME	**RESOLUTION NO. AND DATE**	**TAX MAP**	**PARCEL NO.**	**NUMBER OF LOTS**	**PROPOSED FLOW**
No Shared Sanitary Facility					
3rd ELECTION DISTRICT - Trappe					
SUBDIVISION NAME	**RESOLUTION NO. AND DATE**	**TAX MAP**	**PARCEL NO.**	**NUMBER OF LOTS**	**PROPOSED FLOW**
Northside Woods		054	141	3	750 gpd
4th ELECTION DISTRICT - Chapel					
SUBDIVISION NAME	**RESOLUTION NO. AND DATE**	**TAX MAP**	**PARCEL NO.**	**NUMBER OF LOTS**	**PROPOSED FLOW**
No Shared Sanitary Facility					
5th ELECTION DISTRICT – Bay Hundred					
SUBDIVISION NAME	**RESOLUTION NO. AND DATE**	**TAX MAP**	**PARCEL NO.**	**NUMBER OF LOTS**	**PROPOSED FLOW**
No Shared Sanitary Facility					

Title/Project:	Notes:			
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Island Creek Road Shared Sanitary Facility	DRAFT			
Map 29	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 98	

SEPTIC TIER MAPS

After the adoption of the 2002 Report of the Review, the State of Maryland passed a law and amendments required counties to develop Septic Tier Maps to be in compliance with the Sustainable Growth and Agricultural Preservation Act of 2012 (SB 236). The Talbot County Council adopted septic tier designations for land in Talbot County in December of 2012. This system was designed to improve water quality and to encourage smart growth through the limitation of major growth on individual on-site septic systems. The following information was presented in the 2016 Comprehensive Plan for the Septic Tier Maps.

The Act and the attendant guidance document described four basic Tiers of land use categories, created to identify where major and minor residential subdivisions may be located in a jurisdiction and what type of sewer system will serve them. State Tier descriptions and other information about the Act can be found on the Maryland Department of Planning website at:

https://planning.maryland.gov/Pages/OurWork/envr-planning/SB236Implementation.aspx

In the process of Tier designation, local jurisdictions were encouraged to discuss variations from the four basic Tiers in order to accommodate local plans. Talbot County created subsets of Tiers II and III to better conform to land use policies and sewer service plans. The County's tier system is described below with the land use implications for each tier. The County's original designations and maps were accepted by the Maryland Department of Planning in February, 2013.

This Plan presents slightly revised Tier definitions and a correspondingly revised map (Map 5). Per State law, the Tier map was incorporated as part of the Talbot County Comprehensive Plan. The Tier definitions adopted by the County Council are:

1. Tier I — Existing Sewered and Mapped Growth Areas: This tier consists of properties presently served by an existing municipal sewer system for the purpose of growth and development. Private systems in areas not planned for growth and areas served by public sewer primarily for environmental health, safety and water quality improvement are not identified as Tier I.
2. Tier II — Mapped Growth Areas Planned for Sewer: This Tier has been subdivided into sub-tiers A, B and C, for consistency with County and municipal growth as outlined in the respective comprehensive plans. Tier II-C areas are not planned for sewer in the near term in County Water and Sewer Plans. As described in Section II. A. (beginning on page 2-4), the County has delineated Designated Growth Areas and Future Growth Areas. Designated growth, generally within existing PFAs, is situated in Tier II-A. Other areas identified for future growth but not currently in a PFA are included in either Tier II -B or II-C, depending on the horizon for annexation and development.
3. Tier III – Mapped Water Quality Strategy Areas with Limited Septic System Capacity:
    a. Tier III-A — Rural Communities Not Planned for Sewer: This sub-tier identifies areas that:
        i. Are not planned for public sewer systems in the County Comprehensive Plan or Comprehensive Water and Sewer Plan,

ii. Are located in rural villages or other existing rural subdivisions,
iii. Are not dominated by agricultural or forest land, and
iv. Are planned for infill and limited development only.

b. 2-23 Effective August 6, 2016 Land Use Plan Tier III-B — Water Quality Strategy Areas This sub-tier identifies rural villages and existing developed subdivisions designated as water quality strategy areas that:
   i. Have or may have public sewer systems to address water quality and,
   ii. Are planned for infill, redevelopment and limited new development only. These areas may have sewer service in order to improve water quality and efficiently manage sewer capacity.

4. Tier III-C —Areas of Limited Sewer Service: This sub-tier identifies existing developed subdivisions in environmentally sensitive areas currently served by septic systems that:
   i. Where feasibly and reasonably practical, may be served by public sewer from the Region II or Region V Wastewater Treatment Plant, and
   ii. Where new development is limited to infill and redevelopment on existing lots within developed subdivisions.
5. Tier IV — Mapped Resource Protection Areas: This tier covers over 113,000 acres, which exceeds 80 percent of the land area in Talbot County and more than 88 percent of the nonmunicipal land area. This land is designated for limited development in the County Comprehensive Plan and Zoning Ordinance and has been identified for preservation under applicable State programs and regulations.

Other Land Use Amendments

Since the adoption of the 2002 Report of the Review, the 2005 Comprehensive Plan was adopted and then amended twice to comply with State mandates, and once to create a new land use category. The amendments are as follows:

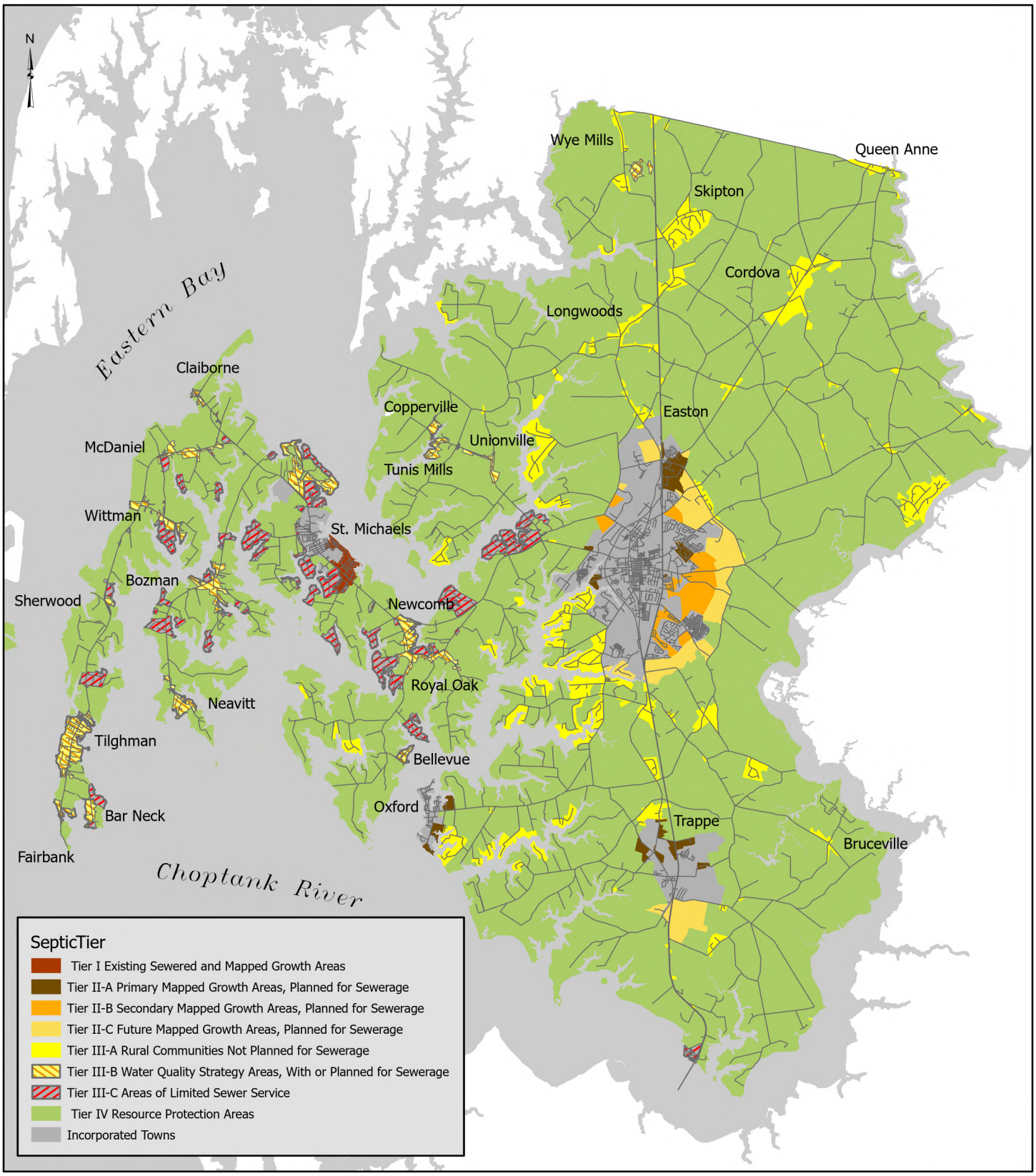
1. An amendment to adopt a Priority Preservation Area Plan was adopted in March, 2010. The plan is incorporated into the Agriculture chapter of this Plan.
2. A Water Resources Element was adopted in April of 2010. The amendment has been updated where new information is available and incorporated into the Natural Resources chapter of this Plan.
3. In December of 2008, a Resolution was adopted to amend the County land use map and Easton growth area map to incorporate a regional healthcare facility into a new growth area.

Development of the 2024 Report of the Review

In developing the 2024 Report of the Review of the Talbot County Comprehensive Water and Sewer Plan, the 2002 Report of the Review was used as the basis for the Report. Since the adoption of the 2002 Report of the Review under Resolution 100, the County Council adopted Resolutions numbered 101 to 348. A listing of the Resolutions modifying the 2002 Report of the Review are listed in Chapter Three - Amendment Procedures.

The focus of the 2024 Report of the Review of the Talbot County Comprehensive Water and Sewer Plan is to compile all the adopted Resolutions that modified the 2002 Report of the Review in text and in maps. In developing the 2024 Report of the Review, the focus of the Report is to report just the updates and limit any forward planning with the exception of capital improvements. From time to time, Resolutions amending the 2002 Report of the Review capital improvements for various permittees, establish a forward-looking strategy primarily to assist the permittees in securing grants and loans administered by the Maryland Department of the Environment or other federal agents providing grants and loans for water and wastewater systems.

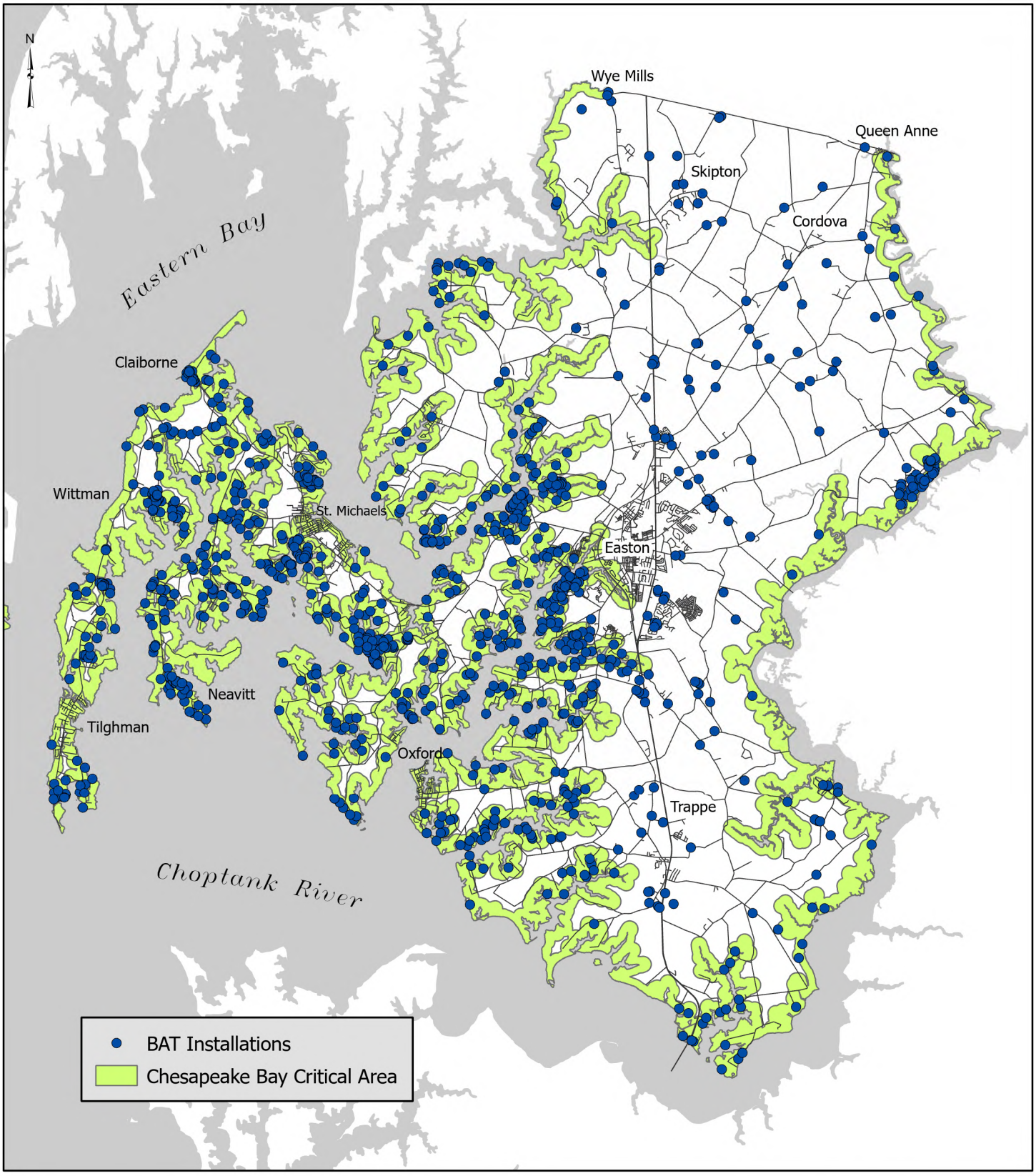
In the development of the 2024 Report of the Review, Talbot County engaged with permittees of water and/or wastewater systems to update the infrastructure descriptions and service area maps. Throughout the development of this Report, review meetings were conducted with the Public Works Advisory Board, the Planning Commission through joint meetings with the Public Works Advisory Board and a series of work sessions with the Talbot County Council. In the final drafting of this Report, numerous public meetings were conducted with draft documents being posted on the Talbot County website. After the adoption of the 2024 Report of the Review, Talbot County will initiate efforts to update the Comprehensive Water and Sewer Plan to be consistent with the currently adopted Comprehensive Plan.



Title/Project:	Notes:		
Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Septic Tiers (2016)	DRAFT		
Map 30	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 102

BEST AVAILABLE TECHNOLOGY FOR NITROGEN REMOVAL

To help achieve Maryland's nutrient loading goals for the Chesapeake Bay and Coastal Bays and to protect the groundwater of the State, the Maryland Department of the Environment provides financial assistance in the form of grants to implement regulations for on-site sewage disposal systems that utilize Best Available Technology (BAT). The Bay Restoration Fund (BRF) was created to provide financing for Chesapeake Bay cleanup efforts. A portion of the funds was designated to provide homeowners with grant financing for septic system upgrades. An upgrade is the addition of Best Available Technology or "BAT", for nitrogen removal. Bay Restoration Funds may also be used in association with the costs of connecting a dwelling or business to a public sewer system. Talbot County has put significant focus on facilitating this program and upgrading septic systems within the county to reduce the overall nutrient loading within the county.



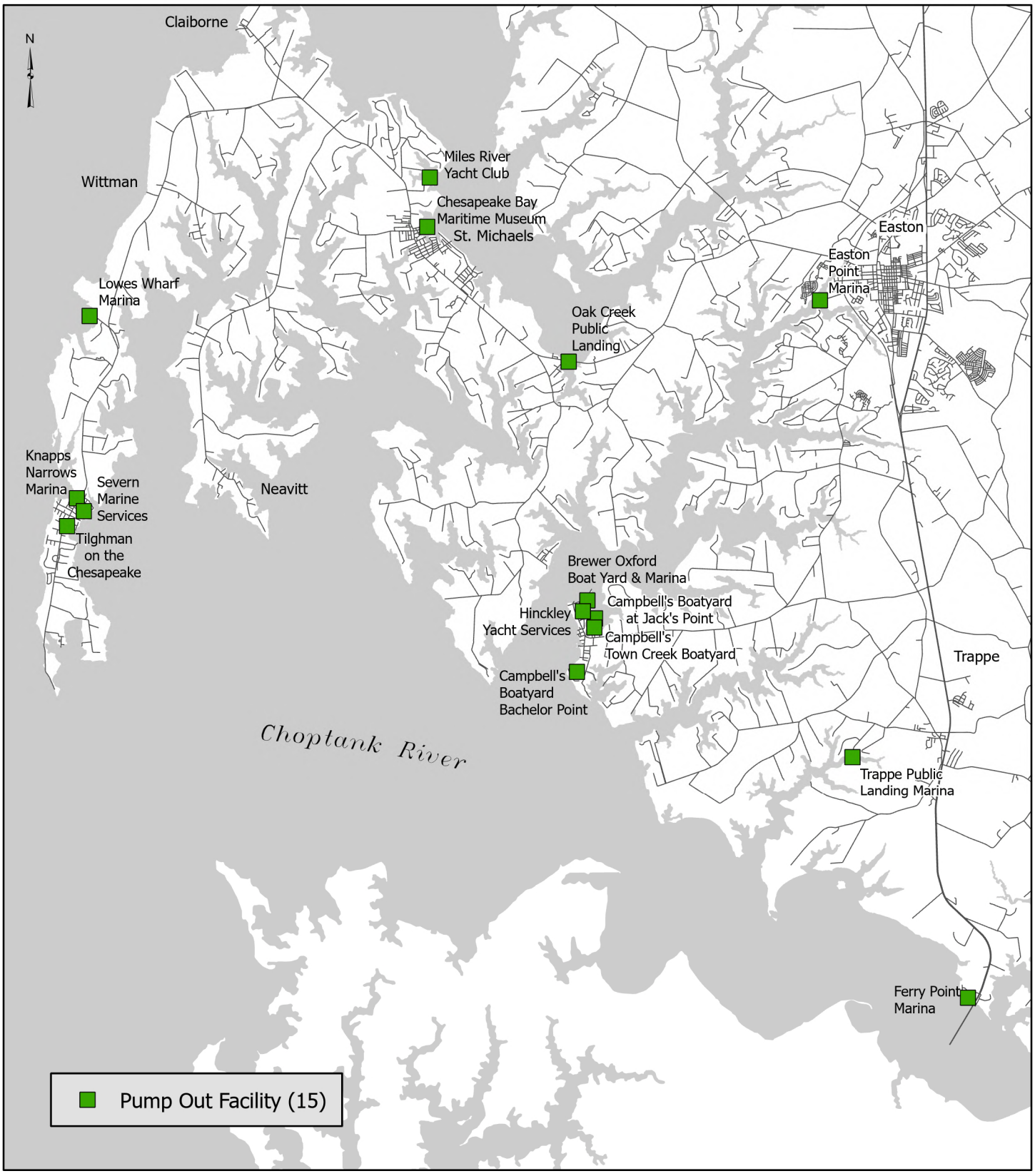
Title/Project: Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Best Available Technology for Nitrogen Removal	Notes: Total Projects = 1,130 Projects in Critical Area = 894 BRF Funded = 881 Last Revised 12/1/2022			DRAFT
Map 31	Scale: Not to Scale	Date: 11/4/2024	Page: Chapter Two 104	

MARINAS

Marinas around the County provide pump-out and connection services to boaters. The marinas which provide these services are shown in Table 38 and Map 32. For expansion guidelines, refer to Figure 28 of the 1992 Update. The Department of the Environment has developed guidelines to assist applicants when preparing plans for marina expansion or construction. These guidelines allow 401 water quality certification (WQC) staff members to evaluate the impact of marinas on water quality. A copy of the Marina Assessment Guidelines is provided in Appendix 14 of the 1992 Update of the Comprehensive Water and Sewer Plan.

TABLE 38. Marinas in Talbot County

MARINA NAME	NUMBER OF SLIPS	PUMPOUT FACILITY	PUBLIC SEWER
Easton			
Easton Point Marina	24	No	No
Oxford			
Campbell's Boatyards – Bachelor Point	80	Yes	Yes
Jacks Point	56	Yes	Yes
Town Creek	42	Yes	Yes
Cutts and Case	38	No	Yes
Dimillo's	66	Yes	Yes
Safe Harbor	110	Yes	Yes
Tred Avon Yacht Club	6	No	Yes
St. Michaels			
Chesapeake Bay Maritime Museum	55	Yes	Yes
Higgins Yacht Yard	30	No	Yes
Miles River Yacht Club	68	Yes	Yes
St. Michaels Harbour Inn and Marina	52	Yes	Yes
St. Michaels Marina	55	Yes	Yes
Tilghman			
Knapps Narrows Marina	130	Yes	Yes
Lowes Wharf Marina	22	Yes	No
Tilghman Island Marina	41	Yes	Yes
Tilghman on Chesapeake	55	Yes	Yes
Trappe			
Ferry Point Marina	112	Yes	No



Title/Project: Talbot County Comprehensive Water and Sewer Plan Report of the Review 2024 Pump Out Facilities for Recreational Boating	Notes: **DRAFT**		
Map 32	Scale: Not to Scale	Date: 1/8/2025	Page: Chapter Two 106

CHAPTER THREE AMENDMENT PROCEDURE

I. PROCEDURES

All applications shall be received by Talbot County at least sixty (60) calendar days prior to the date of introduction to avoid deferment to the next amendment period. Applications shall include completion of the Request for Amendment schedules and forms, included herein, a cover letter or email forwarding the request, and any available information adding or clarifying information pertinent to the project. Applications for amendment of the priority classification of water and sewer service and planning areas, for extension or installation of water and/or sewer utilities, shall be submitted to the Controlling Authority of the publicly owned treatment works for processing prior to being received for introduction by resolution of the County Council on the first convening legislative day of December, March, June, or September. Comprehensive Water and Sewer Plan Amendments initiated by the County may be introduced by resolution of the County Council on any legislative day.

In the unincorporated areas of Talbot County, all applications for amendment of the priority classifications of water and/or sewer service and planning areas, for extension or installation of water and/or sewer utilities, shall be submitted to the Controlling Authority, the Talbot County Department of Public Works, for processing. All applications for amendment priority classification of sewer service and planning areas, for extension or installation of sanitary sewer utilities within the incorporated limits of the Town of St. Michaels shall also be submitted to the Controlling Authority, the Department of Public Works, for processing.

In the incorporated municipalities of Easton, Oxford, and Trappe, applications for amendment of the priority classifications of water and sewer service and planning areas, for extension or installation of water and sewer utilities, shall be submitted to the Controlling Authority, either the Town Office or the Department of Public Works for the incorporated Town, for processing. In the incorporated municipality of St. Michaels, applications for amendment of the priority classifications of water service and planning areas, for extension and installation of water utilities, shall be submitted to the Controlling Authority, the Town of St. Michaels, for processing. The Towns shall submit to the Talbot County Department of Public Works applications, or letters of approval/support for amendment of the priority classifications of water and/or sewer service and planning areas, for extension or installation of water and/or sewer utilities at least sixty (60) calendar days prior to the date of introduction, to avoid deferment to the next amendment period.

The available remaining capacity of a wastewater treatment facility is equal to the permitted flow as defined on the State Discharge Permit for the facility less the most recent two (2) year average of reported flow rates. When the available remaining capacity is equal to or less than five (5) percent of the permitted flow, the controlling authority must certify that the wastewater treatment system has enough capacity to serve the area being reclassified as part of the amendment application to immediate priority status for sewer (S-1). As part of the certification, the controlling authority shall provide a summary of wastewater flows previously allocated to existing lots and/or subdivisions within the sewer service areas and proposed subdivisions having immediate priority status for sewer service.

II. REVIEW PROCESS

Amendment applications will be reviewed by the local Planning and Zoning, Public Works, Health Department, and the Maryland Department of the Environment, for compatibility with use and planning policies and facility permit restrictions in effect. Sanitary construction permits and public works agreements for facility extension and/or installations will not be issued or executed without an enacted Comprehensive Water and Sewer Plan amendment process for the requested scope of new service.

III. DENIAL OF AN APPLICATION

Following the denial of an application either in whole or in part, no application for that property shall be accepted for filing within two (2) years from the date of the decision. After the two (2) year period, the applicant may choose to submit an application consistent with the procedures of the Comprehensive Water and Sewer Plan in effect at the time of reapplication.

IV. AMENDMENT SCHEDULE

A schedule of effective amendments to the Comprehensive Water and Sewer Plan is maintained herein. All changes shall be forwarded to the Maryland Department of the Environment for updating of their copies of the Talbot County Comprehensive Water and Sewer Plan.

V. APPLICATION AND FORMS

1. Request for an Amendment to the Talbot County Comprehensive Water and Sewer Plan for Change of Priority Status
2. Project Description - Unit Schedule

IV. SCHEDULE OF AMENDMENTS 1985-August 2024

RESOLUTION	DESCRIPTION	DATE ENACTED
42	Extend 1983 CWSP	11/12/85
45	NPDES Inventory	10/14/86
46	Trappe W/S Extension	4/21/87
47	Oxford W/S Extension	5/12/87
48	Easton W/S Extension	8/4/87
49	Extend 1983 CWSP	12/22/87
52	Easton W/S Extension	4/12/88
53	Tilghman Island Sewer Service Extension	6/14/90
54	Easton W/S Extension	10/11/88
55	Easton W/S Extension	1/10/89
58	Easton W/S Extension	7/11/89
59	Tilghman Island Sewer Service Extension	9/26/89
61	Easton W/S Extension	8/6/91
67	CWSP 1992 Update	6/1/93
68	Septage Management Plan	1/11/94
71	Easton Water/Sewer Extension - Easton Technology Center - Matthewstown Run Phases III & IV Unionville/Tunis Mills/Copperville Sewer Extension - Wright's Rest	1/27/98
72	St. Michaels Sewer Extension - Chester Park	8/25/98
77	Re-application for amendments to the plan shall be prohibited for a period of two (2) years following a denial of a proposed amendment	12/21/99
79	Northside Woods – Trappe – Shared Sanitary Facility	3/7/00
82	Unionville/Tunis Mills/Copperville Sewer Extension - Peiken Sewer connection – failing septic system	8/22/00
86	- Include Nutrient Removal at the Region II Wastewater Treatment Plant as a Priority Project	2/13/01
90	St. Michaels Sewer Extension - Bryan's Hunt Subdivision – 41 sewer connections	8/14/01

RESOLUTION	DESCRIPTION	DATE ENACTED
100	A resolution to adopt the 2002 Report of the Review	6/25/02
101	Easton Water/Sewer Extension Cookes Hope	7/9/02
104	Easton Water/Sewer Extension - Swann Haven - Hoffman Ratcliff Manor	6/24/03
109	Easton Water/Sewer Extension - Cookes Hope - Trippes Creek Cheston Limited Partnership	12/23/03
110	Easton Water/Sewer Extension Hoffman	12/23/2003
111	Easton Water/Sewer Extension Easton Village	12/23/2003
121	Regin II Water/Sewer Extension Martingham Utilities	09/14/2004
122	Revised Region II Allocation program	09/28/2004
125	Revise Amendment Procedures	04/12/2005
129	Region I and Sewage improvements	02/14/2006
131	Easton Water/Sewer Extension	03/28/2006
132	Talbot County Water Quality Bond	06/13/2006
135	Easton Water/Sewer Extension Clifton Industrial Park	12/12/2006
136	Town of St. Michaels Water System Extension and Region II Sewer Extension	03/27/2007
137	Easton Water/Sewer Extension Londonderry	04/17/2007
141	Revise Septage Management Plan	07/10/2007
142	Oxford Water/Sewer Extension	07/10/2007
148	St. Michaels Wastewater Allocation Policy	02/26/2008

RESOLUTION	DESCRIPTION	DATE ENACTED
154	St. Michaels Sewer Extension Tilghman Waterman's Museum	06/24/2008
158	Easton Water/Sewer Extension Regional Health Care Facility	12/23/2008
159	Update Primary Growth Areas Amend Talbot County Comp Plan Regional Medical Facilities	12/23/2008
162	Tilghman Island Sewer Service Extension	03/24/2009
164	Tilghman Island Sewer Service Extension	07/28/2009
165	Easton Water/Sewer Extension	06/23/2009
172	St. Michaels Sewer Extension Carroll's Market, Rt. 33	07/12/2010
175	Sewer Service Connection Between Tunis Mills and The Royal Oak Pump Station	10/26/2010
176	Added Chapter 14 to the TCCP	12/14/2010
184	Easton Water/Sewer Extension	06/28/2011
185	St. Michaels Sewer Extension Royal Oak	06/28/2011
193	Tilghman Island Sewer Service Extension	03/27/2012
198	New Easton Sewer System Capital Improvement Project	09/25/2012
199	New Oxford Sewer System Capital Improvement Project	09/25/2012
201	St. Michaels Sewer Extension - Thorneton Road - Chance Farm Road - Edge Creek Road Royal Oak	03/26/2013
202	Easton Water/Sewer Extension	03/26/2013
203	Easton new capital project Easton Airport	03/26/2013
204	New Easton Sewer System Capital Improvement Project Bio-Solids Facility, Klondike Road, Easton	03/26/2013
210	St. Michaels provides permanent allocation of Martingham's wastewater	03/11/2014
216	Easton Water/Sewer Extension The Properties	10/14/2014
219	St. Michaels Sewer Screw Press Upgrade	05/12/2015

RESOLUTION	DESCRIPTION	DATE ENACTED
220	Tilghman Sewer Service Upgraded with Enhanced Nutrient Removal Technology	05/12/2015
228	Oxford Water/Sewer Extension Bachelors Point Road	07/26/2016
229	Easton Water/Sewer Extension The Properties	07/26/2016
235	Tier III-C Water and Sewer Extension	11/15/2016
236	St. Michaels Sewer Extension 25145 St. Michael Road	11/15/2016
246	Easton Water/Sewer Extension The Properties	08/08/2017
250	Creation of Sewer Service Area Eligible Properties	01/23/2018
259	Trappe Water/Sewer Extension	05/22/2018
265	Tilghman Island Water/Sewer Service Extension Leeward Lane	10/23/2018
268	Easton Water/Sewer Extension Milesview Village Condominium	01/08/2019
272	Add or Modify Talbot County Capital Projects - Bozman and Neavitt Sewer Extension. - Ferry Point Marina Area - Tilghman Island Wastewater Treatment Plant - Region I Pump Station Improvements Region II Pump Station Improvements	06/11/2019
273	Easton Capital Projects Windmill	06/11/2019
281	Trappe Water/Sewer Extension Lakeside Project	06/11/2019
282	St. Michaels Water/Sewer Extension 24500 Rolles Range Road	05/12/2020
283	Amendment to Resolution 235 – Three (3) Lot Addition	5/26/2020
293	Water/Sewer Extension Ferry Bridge Road	11/10/2020
294	Talbot County Capital Project Resolution 235	11/10/2020
295	Capital Project Upgrade Bio-Solids Facility, Klondike Road	11/10/2020

RESOLUTION	DESCRIPTION	DATE ENACTED
300	Trappe Water/Sewer Extension Ferry Point	06/22/2021
301	Capital Project to Improve The Preserve at Wye Mills Wastewater Treatment Plant	06/22/2021
304	Revise Chapter 3 of The Comprehensive Water and Sewer Plan	06/22/2021
305	St. Michaels Water/Sewer Extension	06/22/2021
306	St. Michaels Water/Sewer Extension	06/22/2021
307	Tilghman Island Water/Sewer Service Extension	06/22/2021
309	St. Michaels Water/Sewer Extension	09/28/2021
315	Capital Project to Replace the Town of Easton's Glebe Water Treatment Plant	04/26/2022
316	Adding or modifying the Talbot County Capital Projects 2023 and 2024	04/26/2022
317	Capital Project for Martingham emergency Generator	04/26/2022
318	Capital Project to Extend Region V Sewer System to The Villages of Bar Neck and Fairbank	04/26/2022
319	Capital Project for Region V Enhanced Nutrient Removal Upgrades and Sewer Extension	04/26/2022
320	Capital Project for Region I Grinder Pumps	04/26/2022
321	Capital Project For Region V Sewer Collection System Improvements	04/26/2022
325	St. Michaels Water/Sewer Extension Stockhausen	04/26/2022
326	Talbot County's Acquisition of The Preserve at Wye Mills Wastewater Treatment Plant	04/26/2022
328	A Resolution to amend the Talbot County CWSP to revise Chapter Three- Amendment Procedures	06/14/2022
330	New capital project for the construction of a new south well for the Town of Easton	07/12/2022
331	Remapping two parcels of real property located at 29659 Matthewstown Road	8/23/2022
335	Oxford Water and Sewer to Reclassify Tax Map 53, Parcel 77 from W-2/S-2 to W-1/S-1	10/11/2022

RESOLUTION	DESCRIPTION	DATE ENACTED
336	Oxford Water System – Capital Project for Water System Improvements	10/11/2022
338	Trappe – Consistency with Discharge Permit as modified by MDE	4/9/2024
339	Region V – Sewer Extension to the villages of Bar Neck and Fairbank	5/9/2023
343	Region II Sewer Extension to Tax Map 23, Parcel 98, Lot 1 and Lot 60 (24781 Yacht Club Road)	
345	Easton Sewer Capital Project for sewer replacement and/or rehabilitation for mitigation of Inflow and Infiltration	10/10/2023
346	Region V Sewer Capital Project for sewer replacement and/or rehabilitation for mitigation of Inflow and Infiltration	10/10/2023
347	Trappe Water and Sewer to provide the Equivalent Dwelling Units for all Phases of the Lakeside Development	5/14/2024
348	Trappe Water and Sewer to Clarify and Confirm the Water and Sewer Classifications of certain Parcels Incorrectly shown in Exhibits A and B to Resolution 281, as amended	5/14/2024

V. APPLICATION AND FORMS

REQUEST FOR AN AMENDMENT TO THE TALBOT COUNTY COMPREHENSIVE WATER AND SEWER PLAN FOR CHANGE OF PRIORITY STATUS

APPLICATION FEE $750.00

SEND TO: Talbot County Department of Public Works, 215 Bay Street, Suite 6, Easton, Maryland 21601: Telephone: 410-770-8170

PROPERTY OWNER:	LAST	FIRST	
MAILING ADDRESS:			
TELEPHONE NUMBER:			
APPLICANT (If other than Owner):	LAST	FIRST	
MAILING ADDRESS:			
TELEPHONE NUMBER:			

PROPERTY INFORMATION

PROJECT NAME:			
PROJECT LOCATION:			
NATURE OF PROJECT:			
ZONING:	ACREAGE:		ELECTION DISTRICT:
TAX MAP:	PARCEL:		LOT:
REQUEST CHANGE FROM:	W- N/A		W- N/A
REQUEST CHANGE FROM:	S- Unprogrammed		TO: S- S-1
NAME OF SEWERAGE SYSTEM TO SERVE PROJECT:			
NAME OF WATER SYSTEM TO SERVE PROJECT:			

PROCEDURAL REQUIREMENTS

Applications for amendment of the priority classifications of water and/or sewer service and planning areas, for extension or installation of water and/or sewer utilities, shall be received for the introduction by Resolution of the County Council on the first legislative day of December, March, June and September. Applications must be received at least sixty (60) calendar days prior to the date of introduction, to avoid deferment to the next amendment period.

Sanitary construction permits and public works agreements for facility extensions and/or installations will not be issued or extended without an enacted Comprehensive Water and Sewer Plan Resolution for the requested scope of new services.

DOCUMENTS TO BE COMPLETED AND SUBMITTED WITH THIS REQUEST
(THIS LIST OF DOCUMENTS SHALL INLCUDE BUT NOT BE LIMITED TO THE FOLLOWING)

☐	Cover letter or email requesting amendment	☐	Capital Project list, if necessary
☐	Completion of Project Description	☐	Environmental impact analysis and/or studies, if available
☐	Completed Additions Proposed to Table No.	☐	Hydrogeological evaluations, if available
☐	Completed Additions Proposed to Table No.	☐	Completed engineering plans and data tabulations, if available
☐	Site Plan	☐	Service area delineation

FOR DEPARTMENT USE ONLY

DEPARTMENT OF PUBLIC WORKS APPROVAL:	DATE:
RESOLUTION NUMBER OR FILE:	
DATE RECEIVED:	DATE ENACTED:

SSS

PROJECT DESCRIPTION

Type and Number of Housing/Building Units to be Served:

Estimated Population or Population Equivalent:

Total Projected Sewage Flow:_____ (gpd)

Total Projected Water Flow:_____ (gpd)

Attach the Following:

1. A 2000-feet to one inch map showing the outline of the property to be served or provide aerial photograph from Talbot County GIS System.
2. A letter of certification of authorization for extension of utilities from the Controlling Authority that owns the water and/or sewer facilities and a statement that capacity is available.

_____ _____

Applicant's Signature Date

APPENDICES

APPENDIX 3.1.2 – EASTON WASTEWATER SERVICE TARIFF 1/22/2022

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The Easton Utilities Commission - Wastewater Sheet 1

Municipal Wastewater System of Easton, Maryland

The Easton Utilities Commission

WASTEWATER SERVICE TARIFF

LATEST REVISION

January 18, 2022

Issued:	January 18, 2022	Signed:	Hugh E. Grunden
Effective:	February 1, 2022	Title:	President & CEO

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Wastewater Service Tariff

This Wastewater Service Tariff sets forth Regulations and Rates under which wastewater service will be supplied to its Customers by the Easton Utilities Commission, in three parts as follows:

I. GENERAL

II. TERMS AND CONDITIONS

III. RATES & CHARGES

Issued:	January 18, 2022	Signed:	Hugh E. Grunden
Effective:	February 1, 2022	Title:	President & CEO

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The Easton Utilities Commission - Wastewater Sheet 4

PART I. GENERAL

1. Definitions

"Applicant" – Any person, corporation or other entity that: (i) desires to receive from the Commission wastewater or any other service provided for in this Tariff, (ii) complies completely with all Commission requirements for obtaining wastewater or any other service provided for in this Tariff, (iii) has filed and is awaiting Commission approval of its application for service, or (iv) is not yet actually receiving from the Commission any service provided for in this Tariff. An Applicant shall become a Customer for purposes of this Tariff only after the Applicant actually starts receiving the applicable service(s) from the Commission under this Tariff.

"Commission" - The Easton Utilities Commission of Easton, Maryland.

"**Customer"** – Any adult person, partnership, association, corporation, or other entity: (i) in whose name an account is listed, (ii) who occupies or is the ratepayer for a premises, building, structure, etc. and (iii) who is primarily responsible for payment of bills. Multiple premises or sites under the same name are considered multiple Customers.

"Equivalent Dwelling Unit (EDU)" – a unit of measurement of system capacity assuming water consumed is equal to 250 gallons per day.

"Tariff" – This document, The Easton Utilities Commission Wastewater Service Tariff, comprises the rules and regulations of service and the service classifications under which wastewater shall be received from and treated on behalf of its Customers by the Commission. The Tariff is part of every contract for service.

2. Filing and Posting

A copy of the Tariff is filed with the Clerk of the Town of Easton and copies are available for inspection in the Commission's Customer Service Center and online at www.eastonutilities.com.

3. Application to Contracts

The Tariff is a part of every contract for service. The benefits and obligations of the contract inure to and are binding upon the successors, personal representatives, and assigns of the parties thereto for the full term of the contract. The contract shall not be assigned by the Customer without prior written consent of the Commission. Whether or not a written contract is executed, the applicant, by accepting wastewater service, is bound by the applicable rate schedule and these Terms and Conditions as they may be amended from time to time.

4. Revision

This Tariff may be changed or revised from time to time in accordance with the provisions of the Charter of the Town of Easton. All Contracts are subject to such changes or revisions.

5. Interpretation

The interpretation of the Tariff as to its intent and applicabilities will be made by the President and/or CEO, subject to the approval of the Commission.

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6. Reservations

The failure of the Commission to enforce any of the provisions of this Tariff shall not be deemed a waiver of its right to do so.

7. Commission's Disclaimer of Liability

The Commission shall be liable for loss, cost, damage, or expense to any person or property only if such loss, cost, damage, or expense is the direct result of gross negligence or willful misconduct of the Commission, its agents, servants, and employees; provided however, that the Commission shall not be responsible for any loss, cost, damage, or expense to any person or property, unless within ninety days of the act or injury, actual written notice of such act or injury and the circumstances under which it occurred is given to the Secretary of the Commission at its Office in Easton, Maryland.

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PART II. TERMS AND CONDITIONS

1. Application for Service

Written application for service shall be made through the Customer Service Center of the Commission and such application when approved and accepted by the Commission shall constitute a Contract between the Commission and the applicant. The application for service shall clearly outline the class and type of use to be made of the service.

2. Customer's Deposit to Guarantee Payment of Final Bills

The Commission may require a cash deposit from an Applicant or an existing Customer for each account until satisfactory credit is established to guarantee payment of final bills for service rendered. The Company reserves the right to hold either an aggregate deposit for all deposits for all accounts for a single Customer, or multiple deposits for separate accounts for a single Customer. Where the Company holds more than one deposit for separate accounts for the same Customer, the Company shall administer each deposit individually. Such deposit shall not be more in amount than two-twelfths (2/12) of the estimated annual applicable revenue or as may be reasonably required by the Company in cases involving a service for short periods. Service may be denied or terminated for failure to pay a deposit when requested. Deposits shall not be applied against current delinquent bills.

Required deposits may be deferred at the Customer's request to the first month's bill or may be paid in installments over three (3) consecutive monthly billing periods. Customers with a prior unpaid balance may be required to pay the full deposit prior to establishing new service.

Simple interest on deposits at a rate established annually and equal to the rate used for the calculation of deposits for electric service shall be applied annually as a credit to the Customer's account. The deposit shall cease to draw interest on the date it is returned, on the date service is terminated or on the date notice is sent to the Customer's last known address that the deposit is no longer required.

Deposits may be refunded after one (1) year for residential deposits and after four (4) years for non-residential deposits and after satisfactory credit has been established. Satisfactory credit for residential deposits is defined as payment of the last twelve (12) consecutive monthly bills without more than two past due bills and without an outstanding unpaid previous balance. Satisfactory credit for non-residential deposits is defined as payment of the twenty-four (24) consecutive monthly bills.

3. Single Point of Delivery

a) General:

In all future installations or re-installations of wastewater laterals the location of the laterals and the design of the wastewater system will be determined by the Commission.

Where more than one property is now supplied through one lateral pipe, any violation of the rules of the Commission by either or any of the Customers so served shall be deemed a

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violation as to all, and the Commission may take such action as could be taken against a single customer, except that such actions shall not be taken until the innocent consumer, who is not in violation of the Commission's rules, has been given a reasonable opportunity to attach their pipe to a separate wastewater lateral. Where one wastewater lateral has been used for two or more properties held in one ownership, and there be a division of such ownership, whether by sale or otherwise, each property will, thereafter, be required to have its own wastewater lateral, as part of the subdivision procedure, at the expense of the subdivider.

b) Multiple Units:

Structures having more than one residential or non-residential unit may have a separate lateral for each unit or a combined lateral for each structure or cluster of structures. The number and location of the laterals and the design of the wastewater service system is subject to the approval of the Commission. Rates and charges for service to multiple units will be as indicated in Part III.

4. Refusal or Discontinuance of Supply

Upon the Customer's failure to comply with any of the provisions of the Tariff, or to pay for service within fifteen (15) days after the date bill is mailed or presented, or if such Customer should discharge an effluent which would adversely affect the operation of the Wastewater System, the Commission may refuse or discontinue service without being liable to the Customer for any loss, cost, damage, or expense occasioned by such refusal or discontinuance.

5. Reconnection Expense

a) Should it be necessary on account of non-payment of bills or non-compliance with the rules and regulations of the Commission to disconnect the service of the Customer, a charge of thirty-five dollars ($35.00) payable in advance at the Commission's Customer Service Center during normal workday business hours, will be made for reconnecting the service where the disconnection is made at the meter location. If the Customer desires to be reconnected between the hours of 1600 and 2300, or on weekends or holidays, or requests connection after 1400 for same day, an additional charge of ten dollars ($10.00) will be made.

Where the Commission was unable to obtain access to the meter and the disconnection was made at other than the meter location, the Customer shall be liable for the entire expense of disconnection and reconnection payable in advance.

b) Where the Customer makes a payment to a Commission field representative at the Customer's premise to avoid discontinuance of service, the Customer is subject to a thirty-five dollar ($35.00) fee per occurrence.

6. Continuity of Supply

The Commission shall not be liable for any loss, damage or expense to any Customer occasioned or caused by the presence of a wastewater connection, or by any interruption of the Wastewater Service, if such failure or interruption shall be due to storm, flood, fire, strike or any

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cause beyond the control of the Commission, or any cause except willful default or neglect on its part.

7. Condition of Use

The Commission will undertake to furnish service to the Customer for use only for the Customer's own purposes and only on the premises occupied, through ownership or lease by the Customer, who shall be one individual, firm, corporation, or association. The service may not be extended by the Customer for resale to another or others. Charges for service shall be rendered in the name of the property owner.

8. Use for Less than One Year

The Customer shall pay all costs of connection and disconnection, and for main and service connection, if service is used less than one (1) year; or when temporary connections are made, even though for a longer period than one (1) year.

9. Customer's Installation

All piping and appurtenances upon the Customer's premises must comply with and be installed and maintained in accordance with the requirements of the Town of Easton Plumbing Code; the Plumbing Code of the State of Maryland; the Local Inspection Authorities, and the rules of the Commission. There shall be placed in the lateral, immediately before entering the walls of the building supplied, and at the property line, clean out connections so located as to clean the lateral from the building supplied to the wastewater main.

An auxiliary water meter to measure water that is diverted from the wastewater system (a "water only" meter) will be furnished and installed by the Commission at the request and expense of the Customer. If the water-only meter is connected on the customer side of an existing meter, a capital charge will not be required for the water-only meter. The meter shall be placed in a readily accessible location for reading and maintenance. The piping connecting the water system with any device the effluent of which is diverted to a drain other than the wastewater system shall be in plain sight to enable the Commission to determine if other connections are made and if a reduction in the wastewater service bill is appropriate.

10. Service Connection

Service connection will be made, and wastewater service will be furnished, upon approval by the Commission of the written application of the Customer.

All connections to its mains, and the installation of the wastewater lateral from the main to the property or right-of-way line will be made by the Commission or subject to its inspection and approval. The design of the wastewater system and the location of the lateral will be determined by the Commission.

11. Access to Customer's Premises

The Commission shall have free access to and right-of-way for the piping, and appurtenances on the Customer's premises, used for the service.

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Permission is given the Commission to enter the Customer's premises at all times, for the purpose of inspecting, reading meters and keeping in repair or removing any or all of its apparatus used in the wastewater service, and for said purpose the Customer authorizes the Commission to enter said premises. Where disconnection of the service is necessary for any reason and permission to enter the premises for the purpose of disconnecting is refused, the disconnection shall be made from the outside of the premises, and the Customer shall pay the Commission the costs in connection therewith, as a condition of resuming the service, in addition to the cost of reconnection. Should the Customer relocate, and desire service this disconnection charge shall first be paid by the Customer to the Commission.

12. Customer's Liability

The Customer shall be responsible for all charges for wastewater service (based upon water use) furnished under agreement until the end of the term thereof and for such further time as the Customer may continue to take service; except that where the Customer has the right to terminate the agreement by notice, which shall be in writing, the Customer shall remain liable for all charges for a period not to exceed ten days thereafter.

Where the water meter fails to register the total amount of water used, the Customer shall pay for such period an estimated amount based upon the average consumption in similar periods.

The Customer shall at once notify the Commission of any injury to, or of any cessation in registration of the water meter as soon as the Customer is aware of it.

The Customer shall be responsible for all expenses involved in removing obstructions in the lateral connection or wastewater lateral from the main to the building served or in replacing any pipe or fittings damaged by the Customer (or their agent).

All leaks or stoppages in or damaged wastewater laterals from the main to the property line, and in and upon the premises supplied, shall be promptly repaired at the Customer's expense. On failure to make such repairs with reasonable dispatch, the Commission may sever the connection and it will not be reconnected until all proper and necessary expenses incurred in disconnection and reconnection of the wastewater service are paid in full.

Repairs between the curb lines of the streets shall be made by the Commission or under its supervision and will be at the expense of the Customer, except in cases where there has been structural damage beyond the means of the Customer to prevent.

The Customer shall be responsible for the maintenance of, and any damage done to the wastewater lateral. The Customer shall, at all times, comply with State and local regulations in reference thereto and shall make any changes thereto required on account of a change in regulations.

No rebate or discount shall be allowed upon any bill by reason of property becoming vacant, unless the owner of said property shall give notice thereof to the Commission previous to the same becoming vacant.

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The Commission will not make adjustments to the Customer's bills when wastage of water occurs as a result of the Customer's negligence, or carelessness in maintaining any piping or fixtures upon their premises.

13. Method of Computing Wastewater Service Bills

If water is supplied from the Commission's water system, the number of gallons charged for in computing the wastewater bill shall be determined from the reading of the water meter supplying the Customer.

If water is supplied from other than the Commission's water system, the Commission shall install a meter at the appropriate metering point, at the total cost to the Customer.

When a water leak occurs underground and without the knowledge of the Customer the Commission will adjust the bill as follows: the Customer's average use will be deducted from the bill as computed from the meter readings and the adjustment shall be one-half of the difference between the average and computed bill. To receive this adjustment, the Customer may be required to furnish evidence to the Commission both of the leak and its repair.

14. Meters and Metering

Meters will be maintained by the Commission as far as ordinary wear and tear is concerned, but the Customer shall be responsible to the Commission for any damage, or loss of, any meter arising out of or caused by, the Customer's negligence or carelessness, or any person upon their premises under or by their consent or sufferance. No one other than an agent of the Commission or someone otherwise lawfully authorized so to do, may remove, inspect, or tamper with the Commission's meter, or other property of the Commission on the Customer's premises.

In case of a disputed account involving the accuracy of a meter, such meter shall be tested, upon the request of the Customer, in conformity with guidelines and procedures established by the Public Service Commission of Maryland or the American Water Works Association. In the event of the meter so tested is found to have an error in registration of 4 percent (4%) or more, the bills will be increased or decreased accordingly. If the date on which the error first developed or occurred can be established, the bills for service shall be recalculated from that time. If the time at which the error first developed or occurred cannot be established, it shall be assumed that the error existed for a period of one (1) year or a period equal to one-half of the time since the meter was last tested, whichever is less.

15. Returned Checks

Checks given in payment for wastewater service and all other services provided by the Commission, which are returned unpaid by the Customer's bank, will result in an additional charge of twenty-five dollars ($25.00) per check, per occurrence, which charge shall be levied against the Customer's account.

16. Late Payment Charge

All bills are due and payable when rendered and the late payment charge does not apply when

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the bills are paid within 15 days after date of rendition. If bills are not paid within fifteen days after rendition, a late payment charge of one and one-half percent (1-1/2%) of the unpaid balance shall be added to the next billing unless prohibited by law. The total late payment charge for any original balance shall not exceed five percent (5%).

17. Extensions and Additions to the Commission's Facilities

a) Wastewater System Extensions and Additions

The Commission will extend its wastewater system only within the corporate limits of the Town of Easton.

1. Rights-of-Way: The applicant or applicants requesting a wastewater system extension shall furnish, without expense to the Commission, satisfactory rights-of-way necessary for the construction, maintenance, and operation of the wastewater system extension, or shall agree to reimburse the Commission for expense incurred in the procurement of the necessary rights-of-way.
2. Survey and Map: The applicant or applicants will be required to furnish the Commission with a complete and final topographic map of the area being developed showing all roadways, alleys, lots, and locations of proposed buildings to be saved and the water requirements of each proposed building or structure. All surveys shall be carefully and accurately executed and shall be made with an accuracy of no less than one to five thousand.

   All final surveys, maps, and plans shall be made by a competent Civil Engineer or Land Surveyor registered by the Maryland Board of Registration for Professional Engineers and Land Surveyors. All maps shall be accurately drawn to scales suitable to the size of the tract but in no case shall the scale be more than fifty (50) feet to one (1) inch.
3. Design: The design, plans and specifications for all system extensions and additions will be prepared by or approved by the Commission prior to any construction. The design of a system extension within the applicant's subdivision or on the Customer's property may be done by the applicant or their agent when authorized or directed by the Commission. The design shall include all mains, fittings, manholes, laterals, pumping stations, force mains and such other appurtenances as may be required and will be located, where possible, in the public roadway rights-of-way in accordance with "Construction Details" available from the Commission. Prior to construction, any applicable permits must be obtained.
4. Construction: The extension of the system shall proceed in accordance with the approved plans and specifications for the project. The applicant will be fully responsible for the construction of the extension to their property or within their subdivision unless otherwise previously determined by the Commission. All construction shall be inspected and approved by the Commission.
5. Costs: All cost associated with the extension including preparation of maps, surveys, construction plans, review and approvals, construction, inspection, and testing shall be the responsibility of the applicant. If portions of the system extension are designed for future extension and service to other than the property or subdivision of the applicant, the

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Commission may construct this portion and share in its cost. The Commission will determine its share of the cost prior to authorizing construction. If the Commission is to construct the system extension or a portion thereof, the applicant shall be required to pay to the Commission an amount of money equal to the estimated cost of their share of the system extension or portion thereof. Said sum of money shall be paid to the Commission prior to the start of construction. If the cost of the project or the applicant's share thereof exceeds the estimated cost, the applicant will be required to pay the additional amount to the Commission prior to any connection to the extension. If the cost of the project or the applicant's share thereof is less than the amount paid, the Commission will refund this amount which shall not bear interest to the applicant.

6. Ownership: In consideration of the Commission maintaining the system, all mains, appurtenances, and facilities included in the system extension become the property of the Commission.

b) Service Installations

Where mains are available in the public thoroughfare opposite the Customer's premises, or extended thereto in accordance with the foregoing, the Commission will make service connections as described in Part II - Section No. 10.

c) Wastewater Treatment Facilities

The Commission will furnish all labor, material, equipment, supplies, and structures required for the treatment of wastewater.

18. Allocation of Capacity

a) Temporary health, environmental, or financial considerations may limit the Commission's ability to provide the service requested. To adhere to regulatory requirements and to prevent overloading of wastewater facilities, available capacity shall be allocated in accordance with the following:

1. The amount of available capacity shall be determined by the Commission by the following formula
2.

(Remaining Allocable Capacity)	=	(Gross Available Capacity)	-	(Allocated Capacity for New Customers)	-	(Allocated Capacity for Vacant Lots)

Where:

The Remaining Allocable Capacity is the available treatment capacity for new customer connections.

The Gross Available Capacity is the amount determined annually by the Maryland Department of the Environment (generally the design capacity of the treatment facility less the average daily flow computed over the preceding two calendar years).

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The Allocated Capacity for New Customers is the estimated demand for new customers added to the system during the preceding and current calendar year.

The Allocated Capacity for Vacant Lots is the potential demand for service for legal lots of record which may be connected to the system.

3. Prior to allocating wastewater capacity, all Town of Easton plat approval requirements must be satisfied up to the point of requiring the Talbot County Health Officer's signature.
4. The applicant shall request the allocation of wastewater treatment capacity required for the project. When the project is to be constructed on existing buildable lots, the allocation shall be made upon payment of applicable water and wastewater capital charges. When the project entails the creation of new lots, the wastewater allocation process shall begin upon issuance of a project specific approval letter by Easton Utilities to the Talbot County Health Officer who may then render an approval signature on the subdivision plat and subsequently return to the applicant for final approvals with the Town of Easton. Easton Utilities will reserve the capacity indicated in the allocation letter 45 calendar days, after which the allocation may be rescinded. Capital charges and all other applicable Town and/or Easton Utilities Commission charges, bonds, etc. shall be paid, and the final plat signed by the Town Engineer and forwarded to the Planning Commission Chairman for signature within the 45-calendar day period.
5. No more than 10% of the Remaining Allocable Capacity will be allocated to all phases of the approved development, subdivision, or project over a 12-month period.
6. The amount of capacity required and allocated will be determined by the Commission based upon its records and experience. If requested, the applicant will provide additional information to assist the Commission with this determination.

b) If an agency of the Federal or State Government imposes a moratorium on the connection of properties to the system, the Commission will, upon revocation of that moratorium, permit connections to the system in a manner consistent with the policy outlined in Section 17a.

19. Wastewater Contribution Permits

a) In accordance with local, State, and Federal regulations, wastewater contribution permits shall be issued to commercial and/or industrial customers determined by the Commission to have a significant impact on the wastewater system. This permit shall specify the conditions under which the Customer shall be allowed to discharge wastewater into the system.

b) The Commission shall provide additional services for customers with such permits including, but not limited to administrative matters, one annual compliance test, and inspections of the customer's facilities.

c) When additional costs are incurred due to the failure of the permittee to comply with the permit, the permittee shall bear all costs associated with the non-compliance.

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PART III. RATES & CHARGES

1. In-Town

Available for all classes of service within an area bounded by the Corporate Limits of Easton.

Capital Charges:

a) Residential properties within the January 1, 1966 Corporate Limits: no charge for the first dwelling unit, $4,700 per additional dwelling unit.

b) Residential properties beyond the January 1, 1966 Corporate Limits: $4,700 per dwelling unit.

c) Non-Residential Connections:

The greater of $4,700 or $4,700 per Equivalent Dwelling Unit as determined by the Water Use Standards (Appendix 1) divided by 250 gallons per day.

The appropriate capital charge or charges must be paid to obtain an allocation of available capacity. Capital charges must be paid in accordance with the following:

1. Residential Subdivisions:

   Capital charges for each lot to be served must be paid prior to the recording of the final subdivision plat among the Land Records of Talbot County.

2. Commercial or Industrial Subdivisions:

   The minimum capital charge for each lot to be served must be paid prior to the recording of the final subdivision plat among the land records of Talbot County. Additional capital charges for larger than a single EDU must be paid prior to the issuance of a building permit for any construction on the lot.

3. Individual Residential, Commercial, or Industrial Lots or Parcels:

   Capital charge for the lot or parcel to be served must be paid prior to the issuance of a building permit for any construction on the lot or parcel.

In no event will a water meter be installed and connected to the system extension prior to the payment of the appropriate capital charge.

Refunds Of Capital Charges

The Commission may, upon request and for good cause shown, refund all or a portion of a capital charge where it is demonstrated that the charge was inappropriate, unjust, or not in conformity with the terms of this Tariff and applicable law. The Commission shall not consider a request for a refund unless the payment was made under protest and accompanied by a written statement as to why the amount charged was inappropriate, unjust, or not in conformity with the terms of this Tariff and applicable law.

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Account Maintenance Charge:
Applicable to those properties for which wastewater treatment capacity has been allocated but not used.

$7.00 per month per EDU

Connection Charge:
Applicable to all Customers:

Services of any size - $25.00 per meter or per user served by a master meter

Customer Service Charge:
Effective, February 1, 2022

$14.85 per month per meter or per single family dwelling unit served by a master meter installation.

Rate per month:
Effective February 1, 2022

$0.4773 per 100 gallons

Term Of Contract:
Open order, that is, from month-to-month, except that when the service pipe is one (1) inch or larger, a contract for at least one year will be required.

2. Out-Of-Town
Applies only to existing connections in the area beyond the Corporate Limits of the Town of Easton.

Customer Service Charge:
Applicable to all installations:

Effective, February 1, 2022

$29.70 per month per meter or per single family dwelling unit served by a master meter installation.

Rate:
Effective February 1, 2022

$0.9545 per 100 gallons

Term Of Contract:
Open order, that is, from month-to-month.

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3. Temporary Service

Temporary service will be rendered only where the Commission has the necessary facilities available to render the service applied for without detriment to the service of other customers.

The rate for such service shall be $0.8433 per one hundred gallons for all water used plus a service charge of $30.00 per week of use.

The Customer shall pay in advance the estimated cost of connections and disconnections including the cost of any material provided to render the service required that cannot be returned to the Commission's stores in their original condition less ordinary wear and tear.

4. Liens

All sums of money due and owing to the Commission for wastewater service rates and charges shall be and constitute a lien on the real property to or in which wastewater service is supplied. (Reference Article VI Section 17 Easton Municipal Code)

5. Wastewater Contribution Permits

a) Permit Fees:

A permit fee of $250.00 will be billed and payable each quarter.

b) Surcharges:

Applicable when a permittee discharges wastewater with characteristics exceeding:

Constituent	Concentration
B.O.D.	250 mg/l
T.S.S.	300 mg/l
Oil & Grease	150 mg/l
Total Nitrogen	30 mg/l
Total Phosphorous	5 mg/l

The surcharge shall be calculated as follows:

1. The excess concentration (in mg/l) shall be determined from the quarterly average of self-monitoring reports submitted by the permittee, subject to verification by compliance monitoring.

2. The excess concentration shall be converted to lbs. by multiplying the excess (from 1.) by the million gallons of wastewater use (from the water meter readings) and by the conversion factor 8.34.

3. The surcharge shall be $0.23 per pound.

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APPENDIX 1

1. Water Use Standards

for Calculation of Capital Charges for Non-Residential Properties

These Standards may be supplemented or amended from time to time by the President and/or CEO, subject to the approval of the Commission.

DESCRIPTION OF FACILITY	Standard
Adult Day Care	15 gpd/person
Airports (Passenger)	5 gpd/person
Alzheimer Unit (see Homes for the Aged)	75 gpd/per person
Assisted Living	75 gpd/per person
Camps Day Camps (No meals Served)	15 gpd/person
Camps Day Camps (Meals Served)	25 gpd/person
Children Day Care	15 gpd/person
Church	4 gpd/pew
Commercial Auto Dealership	0.078 gpd/sq.ft.
Commercial Bakery	0.15 gpd/sq.ft.
Commercial Banks	0.04 gpd/sq.ft.
Commercial Barber Shops	0.2 gpd/sq.ft.
Commercial Beauty Salons	0.35 gpd/sq.ft.
Commercial Carry Out (no seating)	0.2 gpd/sq.ft.
Commercial Car Wash (no shampoo)	1000 gpd/bay
Commercial Dry Goods Stores	0.05 gpd/sq.ft.
Commercial Gas Station w/ Car Wash	1750 gpd
Commercial Laundromats	3.66 gpd/sq.ft.
Commercial Mixed or Uncertain	0.18 gpd/sq.ft.
Commercial Office Buildings	0.09 gpd.sq.ft.
Commercial Real Estate Inc.	0.09 gpd.sq.ft.
Commercial Service Station	0.18 gpd/sq.ft.
Commercial Supermarkets	0.2 gpd/sq.ft.
Commercial Warehouses	0.015 gpd/sq.ft.
Country Club Baths	300 gpd/bath
Country Club Lavatories	100 gpd/lavatory
Country Club Showers	500 gpd/shower
Country Club Toilets	150 gpd/toilet
Country Club Urinals	100 gpd/urinal
Fire House (per person/per shift)	60 gpd/person/shift
Funeral Homes	500 gpd
Homes for the Aged (per person)	75 gpd/person
Hospitals (per bed space)	350 gpd/bed

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Hotels/Motels	50 gpd/room
Library	0.10 gpd/sq. ft.
Marinas (per slip)	25 gpd/slip
Medical Office Buildings	0.31 gpd/sq. ft.
Mobile Home Parks (per space)	250 gpd/space
Nursery School	4 gpd/child
Nursing Homes	125 gpd/bed
Prison/Jail (per bed)	125 gpd/bed
Public Parks Faucets	15 gpd/faucet
Public Parks Flush Toilets	35 gpd/toilet
Public Parks Showers	100 gpd/shower
Public Parks Urinals	10 gpd/urinal
Restaurants, Conventional (per seats)	25 gpd/seat
Schools, Boarding	100 gpd/student
Schools, Colleges (per student)	15 gpd/student
Schools, Elementary School	6 gpd/student
Schools, Middle School	8 gpd/student
Schools, High School	20 gpd/student
Theater - Arena (per seat, no food)	5 gpd/seat
Theater - Dinner (per seat)	25 gpd/seat
Theaters Movie (add for food service)	1 gpd/seat

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APPENDIX 3.2.1 – REGION II WASTEWATER TREATMENT PLANT SEWER SERVICE ALLOCATION POLICY 2/26/2008

TALBOT COUNTY, MARYLAND

Region II Wastewater Treatment Plant
Sewer Service Allocation Policy

As Amended and Adopted: February 26, 2008
Resolution No 148

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Region II Wastewater Treatment Plant
Sewer Service Allocation Policy

Adopted: Date: February 26, 2008
Amendments: Date: February 26, 2008

SECTION 1. DEFINITIONS

The following definitions apply to this policy:

Allocate, allocated, or allocation -- the process by which sewer service is made available.

Annual Capacity – the Total Capacity subject to allocation in any calendar year.

Annual Daily Average Wastewater Flow ("ADAWF") -- the total daily wastewater flows recorded at the Talbot County Wastewater Treatment Plant serving Regions I & II for an entire calendar year, divided by the number of days in the calendar year.

Capacity – the capability to process wastewater expressed in terms of gallons per day ("gpd").

Committed Capacity – total outstanding commitments for future sewer service, including prepaid benefit charges and phased allocation.

CWSP -- the Talbot County Comprehensive Water & Sewer Plan.

Depleted Capacity -- the sum total of Expanded Capacity that has been allocated for each SSA.

DPW -- the Talbot County Department of Public Works

Expanded Capacity - capacity available for allocation in each Sewer Service Area shown on Table 1.

Equivalent Dwelling Unit or "EDU" – the amount of daily wastewater flow that is attributable to an attached or detached single-family residence, calculated for planning and allocation purposes.

Inflow & Infiltration (I&I) Reserve -- capacity set aside to offset Inflow & Infiltration.

Inflow and infiltration or "I&I" -- groundwater, stormwater, or other extraneous (non-wastewater) flows into the Wastewater Treatment Plant collection system.

Lot -- a part of a subdivision or a parcel of land legally permitted for use as a building site or for building purposes.

Lot of Record -- a lot appearing on a subdivision plat recorded among the plat records of Talbot County on or before the effective date of this policy, or an existing lot or parcel created or recognized prior to the effective date of this policy under all applicable subdivision laws, ordinances, or regulations.

PWAB – the Talbot County Public Works Advisory Board.

Recaptured I&I – actual, verified, and stabilized reduction in I&I as determined in accordance with this policy.

Record Plat -- a completed drawing which contains all pertinent information required by State, federal, and local laws, ordinances, and regulations and meeting all formal recordation requirements.

Sewer Service Area or "SSA" – a sub-area of the Talbot County Sanitary District established for planning and allocation purposes.

Subdivision -- the division of a single tract, tracts, or other parcels of land, or a part of it, into two or more lots, for the purpose, whether immediate or future, of sale or of building development.

Total Capacity -- the total of Existing Flows and Expanded Capacity.

Wastewater Treatment Plant, "Plant", or "WWTP" -- the sewerage treatment facility expanded to accommodate up to 660,000 GPD, scheduled for completion in late 2007 or early 2008, owned by Talbot County and serving Sewer Service Areas in Region I and II, and that possesses a National Pollutant Discharge Elimination System and/or State discharge permit.

SECTION 2. GENERAL

A. Applicability.

This policy applies within each Sewer Service Area to determine the number of future connections per year through allocation of wastewater capacity from the Plant to each Sewer Service Area.

B. Sewer Service Areas.

Capacity shall be calculated separately for each Sewer Service Area. The WWTP presently receives wastewater flow from the following Sewer Service Areas:

Region I – Unionville, Tunis Mills and Copperville;
Region II – Royal Oak, Newcomb and Bellevue;
Region II – Rio Vista, Bentley Hay and Back Creek; and
Region II – St. Michaels.

C. Map classification and other requirements.

This policy does not affect CWSP map classifications or the processes by which those classifications are changed. Conformity with CWSP map classification and all other requirements, as amended from time to time, is a pre-requisite to sewer allocation.

SECTION 3. PURPOSE

This policy is intended to establish a balanced, coordinated planning process to allocate capacity and maintain an adequate reserve of capacity for future growth, and to reduce pollution and enhance the water quality of the Chesapeake Bay and its tributaries. The policy promotes public health, safety, and welfare through a process that will:

1. Ensure sufficient revenue is available to make timely payments on bond indebtedness;

2. Reserve capacity generated from Recaptured I&I to enable the County to implement strategies to comply with TMDL (total maximum daily load) requirements to substantially reduce harmful phosphorus and nitrogen loading and enhance the water quality of the Chesapeake Bay and its tributaries;

3. Comply with the Maryland Department of the Environment Guidance Document issued for "Wastewater Capacity Management Plans" (2006);

4. Provide sewer service that will reasonably accommodate growth throughout the term of the indebtedness incurred to upgrade and expand the WWTP, and conserve capacity for future growth at sustainable rates throughout that period;

5. Ensure that property owners paying a benefit charge have Committed Capacity reserved to accommodate allocation of sewer service;

6. Provide capacity for development where sewerage treatment infrastructure is available, and minimize development that might otherwise take place in more rural areas;

7. Provide adequate public facilities for public services necessary to maintain a desirable quality of life for County residents;

8. Provide sewer service in a timely and sequential fashion, linked to development, that encourages a reasonable balance and mix of uses;

9. Provide a reasonable and equitable procedure for obtaining sewer allocation consistent with the goals, objectives, and policies of the Comprehensive Plan, CWSP, and the Chesapeake and Atlantic Coastal Bays Critical Area laws, regulations, policies, and requirements; and,

10. Provide a reasonable and equitable procedure for obtaining sewer allocation in coordination with subdivision, site plan, and building permit approval.

This policy is intended to assure staged growth of mixed uses and efficient use of available public sanitary sewer, to assure that capacity remains available for development occurring throughout the term of the bond indebtedness incurred to upgrade and enhance the WWTP, to enhance the water quality of the Chesapeake Bay and its tributaries by utilizing Recaptured I&I as part of the strategy to comply with TMDL requirements, to avoid surges in effluent loads into the waters of the Chesapeake Bay and its tributaries, and to avoid surges in demand placing unnecessary stresses on the WWTP.

SECTION 4. CALCULATIONS

The design capacity of the WWTP is 660,000 gpd. The estimated wastewater flow used in this allocation policy is based on a ratio of wastewater generation equal to 80% of water consumption.

A. Gravity systems.

The estimated wastewater flow for gravity systems is 250 gpd per EDU, calculated as follows:

Daily water consumption:	100 gpd per person
Number people per EDU:	2.3 people/EDU
Daily Water Consumption per EDU:	230 gpd/EDU
(80% of water consumption = wastewater flow)	
80% x 230 gpd = 184 gpd/EDU	
Wastewater flow:	184 gpd/EDU
Plus: Reserve for I&I flows:	66 gpd/EDU
Total daily wastewater flow:	250 gpd/EDU

B. Low-pressure systems.

A low pressure system is any non-gravity collection system. The estimated wastewater flow for low pressure systems is 185 gpd per EDU, calculated as follows:

Daily water consumption:	100 gpd per person
Number people per EDU:	2.3 people/EDU
Daily Water Consumption per EDU:	230 gpd/EDU
(80% of water consumption = wastewater flow)	
80% x 230 gpd = 184 gpd/EDU	
Total daily wastewater flow:	185gpd/EDU

For low pressure sewer systems extraneous flows (I&I) are negligible, consequently there are no I&I flows reserved in this calculation.

C. Commercial, industrial, and institutional flows.

Commercial, industrial, and institutional flows shall be determined by DPW on a case-by-case basis utilizing the Maryland Department of Environment flow projections for water and wastewater systems converted to EDUs.

D. Alteration of flow.

With the consent of the County Council, the County Engineer may adjust the rate of gpd/EDU for a combination of gravity and low-pressure sewer systems whenever, in the County Engineer's judgment, the adjusted rate will better achieve the purposes of this policy. Any adjustment in the rate of gpd/EDU for a combination of gravity and low pressure sewer systems shall be between the rates established for gravity and low-pressure systems.

E. Formula.

The Annual Capacity for each Sewer Service Area shall be re-calculated annually under the following formula.

$$\frac{A - B - C}{D} = \text{Annual Capacity}$$

Where:

A = Expanded Capacity

B = Depleted Capacity

C = Committed Capacity

D = 2028 minus (current year); this equals the number of years remaining on bond indebtedness incurred to upgrade and expand the WWTP

F. Capacity by Sewer Service Area

Table 1 lists Capacity by Sewer Service Area, Existing Flows, Expanded Capacity, and Total Capacity for Each Sewer Service Area as approved in the CWSP:

TABLE 1. CAPACITY BY SEWER SERVICE AREA			
SEWER SERVICE AREA	EXISTING FLOWS	EXPANDED CAPACITY	TOTAL CAPACITY
Region II St. Michaels	133,950	109,700	243,650
Region II Rio Vista/ Bentley Hay	95,850	18,400	114,250
Region I Unionville, Tunis Mills, Copperville	21,100	5,900	27,000
Region II Royal Oak, Newcomb, Bellevue	47,100	58,000	105,100
Inflow and Infiltration Reserve	170,000	0	170,000
Totals	468,000	192,000	660,000

G. Administrative Updates

The County Engineer shall have authority to re-calculate the figures shown in Table 1 "Capacity by Sewer Service Area" from time to time as required by this policy, law, or regulation, consistent with the discharge monitoring reports submitted to MDE and best available flow data, as determined by the County Engineer. The County Engineer shall annually calculate, update and maintain totals for Annual Capacity, Depleted Capacity, and Committed Capacity, for each Sewer Service Area. The County Engineer shall update I&I Reserve annually in accordance with Section 7 of this Policy.

SECTION 5. ALLOCATION PROCEDURE

A. General.

DPW shall prescribe the form and information required for all applications. The owner and applicant shall provide any additional information requested by DPW. The owner and applicant shall certify under penalties of perjury that the application and all accompanying information, plats, and site plans are complete and accurate. Applications shall be reviewed in the order in which they are received, but approved as they are determined eligible for allocation.

B. Lots of Record and existing uses.

The following applications shall receive approval from DPW for sewer service provided all wastewater capital charges and other fees are paid, the application is in compliance with all applicable laws, ordinances, and regulations, and all other required permits and approvals have been obtained:

(1) Lots of Record paying benefit charges for sewer service for the subject property.

(2) Unimproved Lots of Record for allocation of one (1) EDU or less.

(3) Expansions of non-residential uses existing on the effective date of this policy resulting in a single flow increase of 225 gpd or less.

(4) Existing Lots of Record to connect existing (failing and non-failing) septic systems for the purpose of enhancing the water quality of the Chesapeake Bay and its tributaries.

Approvals under Section 5 B. are not subject to allocation limits established by Annual Capacity calculations. Capacity allocated under this Section shall be added into Depleted Capacity when calculating ensuing years' Annual Capacity.

C. Maximum allocation.

To prevent Annual Capacity from being depleted by a single project, no more than fifty percent (50%) of the unallocated Annual Capacity for any Sewer Service Area may be allocated to any single project, as determined by the County Engineer, during any calendar year. Unallocated Annual Capacity, if any, remaining at the end of a calendar year shall be available for allocation in the ensuing calendar year in addition to the Annual Capacity calculated under Section 4. E. Unfilled requests for allocation, if any, shall be placed on a waiting list and filled in order from the list.

D. New uses and lots.

The following procedures apply to all applications for new subdivisions, commercial, industrial, institutional, or other development:

(1) Pre-application meeting. Applicants shall schedule a pre-application meeting with DPW to discuss the proposed allocation of wastewater capacity.

(2) Application. The applicant shall submit an application to DPW, including a concept plan, phasing and utility plans, and the eligibility review fee.

(3) Eligibility Review. DPW shall review the application to determine eligibility for allocation. This review shall include completeness, compliance with the CWSP, including map classification criteria, and all applicable State, federal, and local laws, ordinances, and regulations. DPW shall advise the applicant in writing whether the proposed project is eligible for allocation, including any anticipated limitations, conditions, phasing, fees, and other requirements for final approval. Applications found to be ineligible for allocation shall receive no further review by County staff.

(4) Effect. A finding of eligibility is preliminary only and is not an assurance that capacity will be allocated, or that additional, supplemental, or different conditions or fees may not be imposed. It is not binding on DPW, other County departments or agencies, nor any State or federal department or agency. It is intended only to eliminate review of projects that are not eligible for allocation, and creates no vested or enforceable right to sewer service.

(5) Allocation. Before receiving allocation an applicant shall apply for and obtain all other zoning, subdivision, site plan, and other reviews, approvals, and permits required for recordation of a subdivision plat, final site plan approval, or issuance of a building permit. Where sewer service is required, allocation is a condition precedent to

recordation of a subdivision plat, obtaining final site plan approval, or issuance of a building permit.

(a) New lots. When the connection is for newly created subdivision lots, a Record Plat shall be prepared, reviewed and deemed approvable under applicable subdivision regulations. The County Engineer shall review the proposal to determine if it meets all applicable CWSP requirements, and if so the County Engineer shall issue a project specific approval letter to the Talbot County Health Officer, who may then sign the plat with a plat note to the effect that use of the community sewerage system is in conformance with the County CWSP. The Health Officer shall return the plat to the County Engineer for final approval. The plat shall not be recorded without a plat note signed by the County Engineer certifying that the WWTP will be available to serve all lots in the subdivision. The plat note shall include allocation of capacity, expressed in EDU, for each lot and shall include a maximum EDU for the entire subdivision.

(b) New uses. When the connection is for new commercial, industrial, or other non-residential uses, a site plan shall be prepared, reviewed and deemed approvable under applicable site plan regulations. The County Engineer shall review the proposal to determine if it meets all applicable CWSP requirements. The site plan shall include the total gpd/EDUs allocated to the uses and shall state the basis and method of calculation of total gpd/EDUs allocated to each. The site plan shall not be approved without the County Engineer's written certification that the WWTP will be available to serve the proposed uses.

(c) Modifications. Recordation of a revision plat or site plan approval in accordance with this policy and the applicable provisions of any municipal or County codes, rules, or regulations shall be required for changes to previously allocated gpd/EDU's defined on a recorded subdivision plat or approved site plan.

(6) The County Engineer shall not sign any plat or site plan to certify that the WWTP will be available to serve proposed lots or uses until:

(a) The applicant has paid all wastewater capital charges and other fees;

(b) The applicant has entered into a Public Works Agreement ("PWA") with DPW to design, engineer, construct, and fund for all infrastructure required for the connection, and to convey to the County all easements or other interests required by the County. The PWA shall include such additional or supplemental terms, conditions, limitations, and contingencies required by the County Engineer.

SECTION 6. PHASING

A. Purpose.

Finite capacity within each Sewer Service Area limits the ability to commit capacity to multi-year projects and reserve capacity to allocate to other applicants in future years. Developers of multi-year projects may request a predictable and fixed advance commitment of sewer capacity for future phases in order to make long-term commitments to underwrite capital

costs for infrastructure for a period not to exceed 10 years. Reservation and allocation of treatment capacity without payment of associated capital and operating charges, and denial of that capacity to other qualified applicants ready to pay those charges, undermines the County's ability to adequately fund its bond indebtedness. This policy attempts to balance these competing interests to permit a phased, multi-year commitment to provide future capacity to a developer proposing a phased development project.

B. Procedure.

Phasing may be used to allocate capacity to a portion of a multi-year development project that has received or is eligible to receive final approval under applicable site plan or subdivision regulations. Applicants may request allocation of sewer capacity for future years provided the following requirements are met:

(1) The area is or is anticipated to become eligible for sewer service under applicable CWSP mapping classification and criteria. The requisite map classification must be either in existence or, before the date the capacity is to be utilized, the Applicant must apply for and obtain an amendment to the CWSP to re-map the area to make it eligible for sewer service.

(2) Phased allocation of capacity is conditioned upon the required map amendments being adopted by the County Council. DPW's agreement for a phased allocation is wholly independent of the CWSP map amendment process, and of itself does not guarantee or represent that any required or proposed map amendments will be adopted.

(3) Committed Capacity shall be limited to the maximum amount required to serve areas currently eligible for sewer service. Committed Capacity shall not be allocated to areas that are not currently eligible for sewer service until requisite map amendments have been adopted.

(4) Committed Capacity for future phases shall not be awarded at a rate greater than 50% of the total Annual Capacity for the Sewer Service Area. The County Engineer may reduce that maximum rate based upon existing or anticipated competing demands for service in the Sewer Service Area.

(5) The Sewer Service Area will have future Annual Capacity available for each ensuing phase of the project under the formula in Section 4 E.

(6) The applicant enters into a PWA setting forth phasing requirements and timetables, payment terms, and such additional or supplemental terms, conditions, limitations, and contingencies required by the County Engineer. These terms shall be in addition to those required by Section 5 D. (5) (b).

(7) The applicant shall have paid all prior wastewater capital charges and other fees associated with prior allocations. Wastewater capital charges and all other fees for each ensuing phase of the project are due in full on January 1 of each ensuing year for which the applicant receives phased allocation.

(8) The County and DPW reserve the right to limit the reservation and allocation of EDU's in order to maintain and ensure the integrity of the WWTP and compliance with State and federal laws and regulations, and the allocation and reservation shall be expressly subject to compliance with all such laws and regulations and the existence of capacity and facilities to serve the property for which the application is made.

C. Limitations.

Capacity allocated to a phased development project shall not be awarded unless the following conditions exist for the calendar year in which capacity has been allocated:

(1) The allocation complies with all provisions of the CWSP and this policy at the time of the allocation.

(2) The allocation complies with all then applicable State and federal statutes, rules, and regulations, and is consistent with all permit requirements, limitations, or restrictions.

SECTION 7. RECAPTURED INFLOW & INFILTRATION

A. General.

The County is improving the WWTP wastewater collection system to reduce I&I. Additional capacity that becomes available for allocation in accordance with this Section shall be used exclusively to implement strategies to comply with impending TMDL limits that will enhance the water quality of the Chesapeake Bay and its tributaries. The amount of Recaptured I&I available for allocation shall be determined in accordance with this Section.

B. Procedure.

Changes in I&I shall be determined based on actual, verified, stabilized changes in I&I flows as monitored and measured using technological practices determined by the County Engineer after the upgraded and enhanced WWTP becomes operational. The County Engineer shall use the following procedure to determine the amount of I&I, Recaptured I&I, and I&I Reserve:

(1) The PWAB and County Engineer shall consider:

(a) Annual Daily Average Wastewater Flows (ADAWF) recorded for the entire WWTP for a minimum of 5 years after the upgraded and expanded WWTP becomes operational; and,

(b) Collection system improvements, flow trends, number and severity of storm events, annual and monthly average precipitation, and other relevant data as determined by the PWAB or County Engineer.

(2) The PWAB shall make advisory findings and a recommendation to the County Engineer concerning the amount of change in I&I, if any, the amount of Recaptured

I&I, if any, and the amount of change in I&I Reserve, if any, as part of the annual re-calculation of I&I Reserve under Section 4. G.

(3) The County Engineer shall consider the PWAB findings and recommendation as part of an annual determination of the amount of change in I&I, if any, the amount of Recaptured I&I, if any, and the amount of change in I&I Reserve, if any.

C. Administrative authority.

The County Engineer shall have administrative authority, consistent with the requirements of this policy, to re-calculate and adjust the amount of I&I Reserve set forth in Table 1 provided that, at a minimum:

(1) There shall be a sufficient I&I Reserve at all times to prevent backup or discharge of untreated effluent, violation of any permit, or any increased risk of harm to public health, safety, or welfare;

(2) The amount of I&I Reserve may be reduced by not more than ½ (one-half) of the total amount of Recaptured I&I as determined by the County Engineer under this Section 7.

SECTION 8. WASTEWATER CAPACITY BY SEWER SERVICE AREA

The Annual Capacity for 2008 for each of the following sewer service areas is calculated using the formula in Section 4. E. as follows:

A. Region I – Unionville, Tunis Mills and Copperville

A. = 5, 900 gpd
B. = 0
C. = 0
D. = 20

$$\frac{5,900}{20} = 295 \text{ gpd Annual Capacity}$$

B. Region II – Royal Oak, Newcomb and Bellevue

A. = 58,000 gpd
B. = 0
C. = 0
D. = 20

$$\frac{58,000}{20} = 2,900 \text{ gpd Annual Capacity}$$

C. Region II – Rio Vista, Bentley Hay and Back Creek

A. = 18,400 gpd
B. = 0
C. = 0
D = 20

$$\frac{18,400}{20} = 920 \text{ gpd Annual Capacity}$$

D. Region II – St. Michaels

A. = 109,700 gpd
B. = 0
C = 7,250
D. = 20

$$\frac{109,700 - 7,250}{20} = 5,122 \text{ gpd Annual Capacity}$$

E. Effective Date

This policy becomes effective upon adoption and applies to all capacity allocated and all connections approved after the expanded and upgraded WWTP becomes operational. Existing sewer service allocation policies remain in effect until the Plant becomes operational, after which they no longer apply. Pending applications that have not received approval to connect as of the date the expanded and upgraded WWTP becomes operational shall be processed under the new policy.

F. Severability clause.

The provisions of this policy are severable. If any provision of this policy or the application thereof to any person or circumstance is held invalid for any reason by a court of competent jurisdiction, the invalidity does not affect any other provision or application of this policy which can be given effect without the invalid provision or application.

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APPENDIX 13 – TALBOT COUNTY NPDES INVENTORY

Facility Name	Address	City	County	State Num.	NPDES Num.	Status	Type	Expiration Date
1837 Oysters, LLC	8311 Diamond Back Cove Road	Easton	Talbot	24DP3891	MD0068047	Issued	Industrial Individual	7/31/2029
Andrew and Erin Riggin	11843 Billys Point Lane	Easton	Talbot	17PE0034	MDG870034	Issued	General Permit	3/31/2025
Aphena Pharma Solutions	7978 Industrial Park Rd	Easton	Talbot	20SW0056	MDR000056	Issued	General Permit	1/31/2028
Attison L Barnes	Hopewell Rd, Parcel 197, Lot 2	Easton	Talbot	17PE0361	MDG870361	Issued	General Permit	3/31/2025
Bradley & Lisa Bebee	22020 Benders Lane	Sherwood	Talbot	17PE0399	MDG870399	Issued	General Permit	3/31/2025
Calhoon MEBA Engineering School	27050 Saint Michaels Rd	Easton	Talbot	17PE0453	MDG870453	Issued	General Permit	3/31/2025
Carmine Cianchetta	33047 Lovedays Ln	Easton	Talbot	17PE0127	MDG870127	Issued	General Permit	3/31/2025
Celeste Industries Corporation	8007 Industrial Park Rd	Easton	Talbot	20SW2412	MDR002412	Issued	General Permit	1/31/2028
Christopher Sargent	23505 Pine Point Rd	Bozman	Talbot	17PE0402	MDG870402	Issued	General Permit	3/31/2025
Daniel Bowen	9600 Tilghman Island Road	McDaniel	Talbot	17PE0373	MDG870373	Issued	General Permit	3/31/2025

Facility Name	Address	City	County	State Num.	NPDES Num.	Status	Type	Expiration Date
Easton Club East	29600 Lyons Drive	Easton	Talbot	17PE05 29	MDG87 0529	Issued	General Permit	3/31/2025
Easton Timber and Mat, LLC	11561 Longwoods Rd.	Easton	Talbot	20SW0447	MDR00 0447	Issued	General Permit	1/31/2028
Easton Utilities - N. Washington Street	219 N. Washington Street	Easton	Talbot	20DP05 02	MD002 2772	Issued	Industrial Individual	6/30/2027
Easton Utilities Water Supply System	Easton and Vicinity	Easton	Talbot	17HT95 54	MDG67 9554	Issued	General Permit	7/31/2025
Easton WWTP	30770 N Dover Rd	Easton	Talbot	20SW0556	MDR00 0556	Issued	General Permit	1/31/2028
Easton WWTP	30770 N Dover Rd	Easton	Talbot	22DP05 79	MD002 0273	Issued	Municipal (Surface)	6/30/2029
Easton/Newnam Field Airport	29137 Newnam Rd, Unit 1	Easton	Talbot	20SW0515	MDR00 0515	Issued	General Permit	1/31/2028
Ewing Motors, Inc	11766 Cordova Rd	Cordova	Talbot	20SW1289	MDR00 1289	Issued	General Permit	1/31/2028
Ferry Cove Project LLC - Oyster Nursery	Lowe's Wharf Rd	Sherwood	Talbot	20DP38 65A	MD007 2168	Issued	Industrial Individual	8/31/2025
Hambleton Cove Home Owners Assoc./	9790 MARTINGHAM CIRCLE	Saint Michaels	Talbot	17PE01 25	MDG87 0125	Issued	General Permit	3/31/2025

Facility Name	Address	City	County	State Num.	NPDES Num.	Status	Type	Expiration Date
Henry Grieb	21584 Punch Point Rd	Sherwood	Talbot	17PE02206	MDG870206	Issued	General Permit	3/31/2025
Higgins Yacht Yard	203 Carpenter St	Saint Michaels	Talbot	16NE9381	MDG999381	Issued	General Permit	1/5/2025
James and Susan O'Brien	26411 Presquile Dr	Easton	Talbot	17PE0231	MDG870231	Issued	General Permit	3/31/2025
John Ell	8190 Beechley Rd	Wittman	Talbot	17PE0521	MDG870521	Issued	General Permit	3/31/2025
Knapp's Narrows Marina	6176 Tilghman Island Rd	Tilghman	Talbot	17SI6615	MDG766615	Issued	General Permit	11/30/2027
KOPI LLC	6613 Hopkins Neck Rd	Easton	Talbot	17PE0060	MDG870060	Issued	General Permit	3/31/2025
Lakelands at Easton	Lakelands at Easton	Easton	Talbot	17PE0329	MDG870329	Issued	General Permit	3/31/2025
Little York Farm-James Gannon III	28151 Almshouse Rd	Oxford	Talbot	17PE0216	MDG870216	Issued	General Permit	3/31/2025
Little York Farm-James Gannon III	28151 Almshouse Rd	Oxford	Talbot	17PE0217	MDG870217	Issued	General Permit	3/31/2025
Little York Farm-James Gannon III	28151 Almshouse Rd	Oxford	Talbot	17PE0218	MDG870218	Issued	General Permit	3/31/2025
Little York Farm-James Gannon III	28151 Almshouse Rd	Oxford	Talbot	17PE0219	MDG870219	Issued	General Permit	3/31/2025

Facility Name	Address	City	County	State Num.	NPDES Num.	Status	Type	Expiration Date
LKQ Heavy Truck - 1821A	29368 Matthewson Rd	Easton	Talbot	20SW1037	MDR001037	Issued	General Permit	1/31/2028
Long Point Preserve LLC	5252 Long Point Farm Road	Oxford	Talbot	17PE01122	MDG870122	Issued	General Permit	3/31/2025
Mark Miller Royal Oak	25494 Irishman Bend Road	Royal Oak	Talbot	17PE03774	MDG870374	Issued	General Permit	3/31/2025
Martingham Utilities WWTP & WTP	24490 Deep Water Point Drive	Saint Michaels	Talbot	17HT5020	MDG675020	Issued	General Permit	7/31/2025
Md State Hwy Admin/ Easton Shop	8265 Ocean Gateway	Easton	Talbot	20SW1318	MDR001318	Issued	General Permit	1/31/2028
Michael and Lisa Opsahl	10241 Kintore Drive	Easton	Talbot	17PE0049	MDG870049	Issued	General Permit	3/31/2025
Michael Ference	7768 Ratcliffe Manor Rd	Easton	Talbot	17PE0037	MDG870037	Issued	General Permit	3/31/2025
Midshore I Regional Solid Waste Facility	7341 Barkers Landing Rd	Easton	Talbot	20SW0765	MDR000765	Issued	General Permit	1/31/2028
Monica Ajmani	7460 Cabin Cove Rd	Sherwood	Talbot	17PE0401	MDG870401	Issued	General Permit	3/31/2025
Mountaire Farms of Delaware, Inc - Trappe Grain	4645 Ocean Gateway	Trappe	Talbot	20SW3660	MDR003660	Issued	General Permit	1/31/2028
Mullikin's Auto Body Inc	9277 Ocean Gateway	Easton	Talbot	21VW3498	MD3498U05	Issued	General Permit	9/30/2027

Facility Name	Address	City	County	State Num.	NPDES Num.	Status	Type	Expiration Date
National Ocean Service Oxford Laboratory	904 S Morris St	Oxford	Talbot	20DP3300	MD0071030	Issued	Industrial Individual	4/30/2028
Paris Foods Corporation	3965 Ocean Gateway	Trappe	Talbot	12NE3707	MDR003707	Issued	General Permit	11/16/2027
Patrice Miller	9677 Myrtle Grove Lane	Easton	Talbot	17PE0462	MDG870462	Issued	General Permit	3/31/2025
Pickering Creek Audubon Center	11450 Audubon Ln	Easton	Talbot	17PE0096	MDG870096	Issued	General Permit	3/31/2025
Rardin Farms-Scott Rardin	12810 Wye Landing Lane-Parcel 1, Lots 1-5	Easton	Talbot	17PE0016	MDG870016	Issued	General Permit	3/31/2025
Robert Higgins	5415 Morgans Point Drive	Oxford	Talbot	17PE0362	MDG870362	Issued	General Permit	3/31/2025
Satterfield, Jane S. And Weglein Mary	28311 ISLAND CREEK RD	Trappe	Talbot	17PE0143	MDG870143	Issued	General Permit	3/31/2025
Scrimgeour, Robert/ revetment	5307 Ferry Neck Road	Royal Oak	Talbot	17PE0376	MDG870376	Issued	General Permit	3/31/2025
Sea Watch International, Ltd	8978 Glebe Park Drive	Easton	Talbot	21SE14SA	MDG521400	Issued	General Permit	10/31/2027
Smith, David/pier	5141 Feather Lane	Tilghman	Talbot	17PE0366	MDG870366	Issued	General Permit	3/31/2025
Talbot Country Club	6142 Country Club Rd	Easton	Talbot	17PE0477	MDG870477	Issued	General Permit	3/31/2025

Facility Name	Address	City	County	State Num.	NPDES Num.	Status	Type	Expiration Date
Talbot County Region V WWTP	21345 Seth Ave	Tilghman	Talbot	17DP1981	MD0059463	Issued	Municipal (Surface)	12/31/2025
Tilghman Wharf	6129 Tilghman Island Road	Tilghman	Talbot	21SE09NS	MDG520900	Issued	General Permit	10/31/2027
Todd Chairs	1615 Chancellor Point Rd	Trappe	Talbot	17PE0137	MDG870137	Issued	General Permit	3/31/2025
Town of Oxford Water Supply System	Oxford & Vicinity	Oxford	Talbot	17HT5034	MDG675034	Issued	General Permit	7/31/2025
Town of Trappe Water Supply System	Trappe & Vicinity	Trappe	Talbot	17HT9654	MDG679654	Issued	General Permit	7/31/2025
Trappe East WWTP	Backtown Rd & Clementine Lane	Trappe	Talbot	19DP3460	MD3460U04	Issued	To Groundwater	10/26/2027
United Parcel Service Inc. - Easton	9333 Nixon Dr, Ste A	Easton	Talbot	20SW0849	MDR000849	Issued	General Permit	1/31/2028
Walter E. Thompson	12345 Mill Creek Lane	Wye Mills	Talbot	17PE0377	MDG870377	Issued	General Permit	3/31/2025
Warfield, Seth And Ruey	5995 CANTERBURY DR	Easton	Talbot	17PE0183	MDG870183	Issued	General Permit	3/31/2025
Windon Distilling Company	605 S Talbot St, Unit 6	Saint Michaels	Talbot	20NE3320	MDR003320	Issued	General Permit	10/31/2029

Facility Name	Address	City	County	State Num.	NPDES Num.	Status	Type	Expiration Date
Wittman Pier	8762 Howeth Rd	Wittman	Talbot	21SE08NS	MDG520800	Issued	General Permit	10/31/2027

Discharge permits listed may be accessed through MDE's Wastewater Permits Interactive Search Portal at - https://mes-mde.mde.state.md.us/WastewaterPermitPortal/