

EXECUTIVE SUMMARY

The 2022 - 2031 Ten-Year Comprehensive Water Supply and Sewerage Systems Plan (Water and Sewer Plan or 2022 Plan) provides updates to the 2018 plan based on the latest available data and information. It includes updated information on County policies and plans.

This 2022 Plan includes the adopted policies and plans contained in the prior Plan and in subsequent adopted Plan amendments, while removing outdated or no longer relevant material. The Department of Environmental Protection (DEP) has added updated information from several sources that reflect new information from both technical sources and related County plans. This information has been reorganized in the Plan's text, figures, and maps with the intention of making it easier to understand and follow. Technical information has been summarized and presented on both a watershed and planning area basis to allow interested parties the opportunity to focus on issues that are organized by geographic area.

The purpose of the Comprehensive Water Supply and Sewerage Systems Plan is to provide an overview of the planning policies, needs, issues and planned infrastructure related to community and individual water and sewerage systems. The plan considers public health, environmental protection, and land-use issues as they relate to water and sewerage systems in Montgomery County. It is intended to provide both background information and a planning basis for the evaluation of water supply and sewerage system needs in the county. It is also expected to allow a more thorough context for developing, analyzing, and evaluating the issues related to the review and implementation of the WSSC Water Capital Improvement Program (CIP), including the timing and funding of identified projects. It seeks to achieve this purpose by:

- ❖ Outlining planning principles and policies that relate to land-use planning, infrastructure development, public health, and environmental protection;
- ❖ Describing current conditions of the water supply and sewerage systems relative to condition, capacity, availability, and related issues;
- ❖ Identifying and prioritizing community needs for improved water supply and sewerage infrastructure;
- ❖ Identifying planning and infrastructure projects needed to address existing or projected needs.

To achieve this purpose, the Water and Sewer Plan is organized into four chapters and several appendices. These four chapters address the following major subject areas:

Chapter 1: OBJECTIVES AND POLICIES

This chapter includes an introduction to the Comprehensive Water Supply and Sewerage Systems Plan, identifying its purpose, legal context, and governance issues. It outlines the plan's goals and objectives for the orderly and cost-effective development of community water supply and sewerage systems and summarizes the Plan's structure and content. Chapter 1 describes the planning process used in Montgomery County to stage and implement water and sewer infrastructure improvements, including identification of policies and a review of the procedures for the adoption of amendments and/or modifications to the Plan. This chapter includes both general and special-condition policies that have been adopted by the County Council for the designation of community water and sewer service areas, which regulate water and sewerage system extensions, connections, and their staging.

The update of Chapter 1 continues a process of reorganization to assist those using the Plan. This particularly applies to those sections addressing governmental agency responsibilities, general

service policies, special and restricted service area policies, and water and sewerage systems policies and financing.

The preceding changes are largely structural to the Plan, moving sections together with a common theme to provide for clarity, better continuity, and less redundancy. Chapter 1 incorporates text amendments approved by the County since adoption of the prior Plan update. Chapter 1 also provides new information, policy directions, and recommendations, as follow (The numbering shown below corresponds to the subsections of the plan within the chapter):

II.: POLICIES FOR THE PROVISION OF WATER AND SEWERAGE SERVICE

II.D.: Water and Sewer Service Development Policies by Service Area Designation

The policy requirement that all new subdivisions in categories W-3 and S-3 must provide community water and sewer service has been modified for areas zoned for large-lot development (RE-1, RE-2, RE-2C, & RC). This modifies the policy that was revised in the 2018 Plan to require all subdivisions in planned service areas to use public systems. Experience showed that some exceptions in large lot areas (particularly Potomac) were justified.

II.G. Special Policies for Water and Sewer Service

II.G.3.: Community Service for Properties Abutting Community System Mains

II.G.3.a.: General Requirements

The text addresses a recent situation where an owner of a qualifying property wanted an extension that would bring a sewer main directly opposite his house. This extension would have also allowed another non-qualifying property to have sewer service approved under the abutting mains policy. The text revision proposes allowing limited main extensions, but only in cases where an environmental issue is raised by the needed service connection or house utility.

This section previously prevented an intervening property that would abut a new main extension from initiating the construction of all or part of the new main. Given the problems we have encountered with the financing of new mains, this requirement served to unduly limit flexibility for options to move new main construction forward. The policy is revised to now allow intervening owners to initiate new main construction.

II.G.3.d. Multiple Abutting Community Service Connections

This provision of the abutting mains policy is reworked to focus on providing multiple service connections for public service for only the number of properties that could clearly be approved for development by successful onsite systems testing. Previously, multiple abutting mains connections were based on an environmental benefit; however, this required only DEP's estimation that onsite service was feasible, not confirmation of successful testing.

II.G.4.: Community Service for Private Institutional Facilities

Added a statement about the consistency of the private institutional facilities (PIF) policy with the Federal Religious Institutions Land Use and Institutionalized Persons Act (RLUIPA).

II.G.4.b.: Further PIF Policy Considerations

Revised the issue of limitations specifically on PIF uses as this could be as interpreted as prejudiced against religious institutions.

Added a proposal to adopt environmental overlay zones that would limit imperviousness in additional watersheds.

II.G.4.c.: PIF Policy Category Change Application Requirements

Added an emphasis on consistency with established imperviousness limitations. Noted that the County Council's emphasis in considering concept development plans for PIF uses will be on issues addressing imperviousness and water and sewer main extensions.

III.: GENERAL POLICIES FOR WATER SUPPLY AND SEWERAGE SYSTEMS FACILITIES

III.A.4.: Environmental Considerations for Community Systems Construction

This section was updated to reflect DEP's current stream monitoring and water quality reporting procedures.

III.A.5.: Facility Planning

This and following sections were substantially revised to acknowledge changes to WSSC's facility planning process over recent years. The 2018 update include a mash-up of old and new processes. This new version is more focused strictly on WSSC's existing processes, including the Asset Management Program and Business Case review.

III.A.5.b.: Interagency Coordination

Added a recommendation to address and support further DEP and WSSC Water discussions regarding interagency coordination issues or the WSSC project development process.

III.B: Municipal Community Systems

Added a new introduction for municipal community systems to better fit into the structure of the chapter.

III.C.: Individual Systems

III.C.4.d.: Onsite Systems Management Program

Water and Sewer Plan Recommendation: Individual Onsite Systems Management

This recommendation has been updated to recognize where this program now stands.

DEP staff have supplemented onsite systems management programs research efforts by the Office of Legislative Oversight (OLO) with a report titled "Review of Conventional Onsite Treatment System Laws and Regulations" (March 2021). This report provides a more recent and broader inventory of onsite systems management programs in Maryland, neighboring states, and more distant jurisdictions.

III.C.5.: General Policies for Multiuse Water Supply and Sewerage Systems

III.C.5.c.: Policy Constraints on Multiuse Sewerage Systems Capacities

Exemptions from Design Capacity Restrictions

DEP has deleted one bullet ("Approved Systems – Existing multiuse sewerage systems and systems not yet built but which are approved and permitted by the Department of Permitting Services prior to February 14, 2006") as it is no longer valid. According to DPS, uninstalled "approved systems" permitted prior Feb. 14, 2006, are not allowed to proceed to construction without pursuing new permits. An unfulfilled permit is valid for only one (1) year from the date of issuance.

IV.: WATER AND SEWERAGE SYSTEMS FINANCING

IV.A.1.b.: Systems Development Charge

WSSC's work on revising the SDC program is not resolved as of the date of the staff draft of this Plan. This section may be updated if the process moves forward to conclusion before the Council approves this Plan update.

IV.A.2.b.: WSSC-Built Projects

Some details of the WSSC-Built Projects program have been removed from this update of the Plan as the program is largely irrelevant today.

IV.A.2.c.: Efforts to Address Underserved and Unserved Communities

Reworked this section, focusing more on the current work of the Unserved and Underserved Communities subgroup. The subgroup is investigating improved means of providing public service main extensions to neighborhoods planned for public service but that lack access to existing mains. The subgroup's report has been finalized, and along with a procedural and financial implementation plan, has been presented to elected officials in both Montgomery and Prince George's Counties. WSSC-Water has drafted State legislation for a flat fee charge for proposed partial financing.

V.: PROCEDURES FOR ADOPTING AND AMENDING THE WATER AND SEWER PLAN

This update removes the term "interim" from amendments to the Plan that occur between the triennial, comprehensive updates. They are simply amendments to the current Plan.

V.B.: Triennial Water and Sewer Plan Comprehensive Update

Revised information about the State's review of the Plan's comprehensive update for consistency with State law.

V.C.: Water and Sewer Plan Amendments

These sections were restructured for clearer organization.

V.C.1.: Property Owner-Initiated Category Change Requests

Some details concerning WSCCR applications have been removed. This information is available in DEP's application instructions packet, available on DEP's web site. However, the PIF application information was retained.

Removed some of the background information on the WSCCR application fee as it's been in place for 16 years, since 2005.

V.C.2.: County-Initiated Area-Wide Category Map Amendments

Added an expanded explanation of special community service areas (formerly public health problem areas).

V.D: Review and Consideration of Plan Amendments

Added text that expands the discussion of the primary reviewing agencies for service area category change requests and those agencies' responsibilities in the process.

V.E: Plan Amendment Actions

V.E.3: Deferred Amendments

Deferral Timing

Added a specified maximum deferral period of three (3) years for deferrals after which the County Executive will return the amendment to the Council and recommend its denial.

V.E.4.: Tabled Amendments

Added language that recommends that amendments be tabled for no more than one year without subsequent consideration. Tabling of amendments is strictly at the Council's discretion.

V.E.6.: Appeals

Removed language concerning why an applicant might seek an appeal.

Chapter 2: GENERAL BACKGROUND

Chapter 2 provides an overview of the natural and cultural environments in Montgomery County. This chapter identifies the environmental features and characteristics of the county that have a bearing on development patterns, natural resources and other factors related to the physical environment. DEP has used GIS-based graphics to depict information related to watersheds, stream classifications, topography, and other natural features, such as soils, geology and groundwater. This information provides the background for resource protection as it relates to water supply and sewerage system planning in Montgomery County.

This chapter also identifies the cultural environment that includes the planning issues related to demographics, land-use, and development. This information in coordination with the policies adopted in the county's General Plan and land-use master plans identifies the areas of the county that are subject to development in the future at densities that will require new or expanded water supply and/or sewerage systems.

Chapter 3: WATER SUPPLY SYSTEMS

This chapter contains information about the various aspects of the county's water supply systems, including water supply sources, treatment, and distribution systems. It identifies the regional nature of the supply sources and the agreements that exist to address issues of water demand and drought management. There is also a discussion of the role of groundwater for both individual water supply systems and for the Town of Poolesville. In addition, the Chapter's discussion of rural sanitation issues includes a table which summarizes known well water supply problem areas in the County. This information provides a basis for further investigations and actions to address these rural sanitation concerns.

I.B.: Water Supply Service Area - Sanitary Districts:

DEP has maintained the previous Plan structure addressing the three major community water supply systems in the county individually: WSSC, Rockville, and Poolesville. These systems are examined in detail with regard to their treatment, transmission and storage systems. In the geographically extensive WSSC system, graphics relate the various pressure zones to planning areas in the county. This information is provided to assist persons using this plan to understand the relationships between identified water supply projects to the identifiable geographic areas and potential impacts to those areas. These system descriptions also include a summary of the system improvements and growth-related projects.

II.F, III.E.5, and IV.F.: Projected Water Supply System Needs:

Information is provided on the projected needs of the major water supply systems in the County. The long-range planning is projected out up to 2040, with interim planning dates for facility requirements. Regional, Bi-County and County-wide systems needs are reviewed based on information obtained from various reports and projected population growth in these areas. This information is supported by the regional population projections ((MWCOG), local land-use plans (M-NCPPC), regional water supply projections (ICPRB) and Bi-County water supply needs (WSSC). The projects that are planned to address these identified needs are summarized in the text of this chapter and in the appendices to the Plan, which incorporates the project summary information of WSSC's most recent Capital Improvement Program (CIP).

In addition to this documentation of the county's community water systems, Chapter 3 also presents policy recommendations and directions related to water supply systems for future guidance. The Chapter's major recommendations are summarized as follows:

- ❖ II.C. through II.C.5.: Potential Use of Travilah Quarry for Additional Raw Water Storage: The Travilah Quarry, with the potential to be developed into a 7.8-billion-gallon emergency raw water storage facility, is located within miles of the Potomac Water Filtration Plant. This quarry has been evaluated by WSSC Water and its regional water supply partners for several years and this Plan, encourages actions be taken to ensure its future availability to the water supply needs of the County and possibly the region.
- ❖ II.E through II.E.6.: Continue Investing in Major Water Supply System Infrastructure: Most of the water supply needs are addressed by the WSSC. As such, the Montgomery County Council directs the focus of WSSC's efforts in directing the WSSC's annual budget and the associated six-year Capital Improvements Projects (CIP). These documents in addition to this Plan allow the County Council to direct the policies and investments needed to meet the future needs of the County. In recent years the emphasis has been on investing in major water supply system infrastructure with a commitment to large diameter water main evaluations, rehabilitation, and replacement efforts, particularly for Pre-Stressed Concrete Cylinder Pipes (PCCP). Emphasis has also been placed on the sustainability of the small diameter water distribution pipes, adopting programs for the 1 percent replacement of these pipes. This program was adopted to allow a replacement interval of 100 years for these distribution mains, consistent with their expected useful life.
- ❖ II.F.2.c.: Local and Regional Water Conservation Programs: In reference to local and regional water conservation programs, Chapter 3 urges the County's public agencies to lead by example with respect to water conservation measures. These conservation efforts are promoted by several mechanisms that require continued review and evaluation to be effective. Plumbing codes, water rates, and unaccounted water use are emphasized as key factors in ensuring efficient use of water resources for water supply needs.

Chapter 4: SEWERAGE SYSTEMS

Chapter 4 describes the planning basis for the sewerage systems in the County. It identifies the regional, Bi-County, and system relationships that are based on both political and geographic boundaries.

Sewerage Systems Service Area - Sanitary Districts:

The County's sewerage systems are defined according to the treatment plant service areas, sewer basins and planning areas located in the County. Similar to Chapter 3, updates to sewerage systems are structured individually based on the three major community sewerage systems in the County which include the WSSC, the City of Rockville, and the Town of Poolesville. The WSSC system provides the majority of the community sewer service in the County. Accordingly, much of this chapter is dedicated to defining the regional agreements and policies that pertain to the WSSC system and how they relate to the provision of sewer service and capital project planning to meet anticipated system needs. The Chapter describes key policies, planning procedures, and references the Inter-Municipal Agreement (IMA) of 2012 as a significant long-range plan addressing the regional wastewater treatment needs of the region.

I.A. Through I.C.: Washington Suburban Sanitary District, Blue Plains WWTP, and IMA of 2012:

Over eighty percent of the wastewater collected in the community sewerage systems in Montgomery County is conveyed to the Blue Plains Wastewater Treatment Plant (WWTP) in Washington D.C. Accordingly, the provisions of the IMA that govern the terms and conditions of shared use of this facility with the District of Columbia, Fairfax County and other regional entities is described in detail. Important issues to the County relate to peak and average flow limitations to the sewers that convey flows to Blue Plains WWTP, allocated treatment capacities to the user jurisdictions and the capital improvement projects planned for this facility. Related to Blue Plains and the terms of the IMA are issues that involve the use of the facilities and the management of the sewage treatment process by-product, known as biosolids. The IMA of 2012 addresses the long-term use of this facility by Montgomery County and the region. This agreement was adopted with a ninety nine-year effective date that ensures the viable regional arrangement far into the future. Important to this duration are the mechanisms in the plan to allow it to be amended to meet future planning and regulatory requirements.

Chapter 4 reviews the needs for the sewerage system on a sewershed basis provided by WSSC through their hydro-dynamic modeling of the sewerage system, identifying areas or parts of the sewerage systems requiring relief, either now or in the future. Chapter 4 also provides a brief discussion on rural sanitation issues and includes a table which summarizes known septic system problem areas in the County. This information provides a basis for further investigations and actions to address these rural sanitation issues.

Chapter 4 also presents policy and program recommendations and directions related to sewerage systems for future guidance. The Chapter's major recommendations are summarized as follows:

- ❖ **V.B.3.: To address concerns about potential sanitation problems from aging individual, On-Site systems in the County's neighborhoods:** Currently the County is developing a maintenance program for implementation to address the potential sanitation problems from aging and improperly maintained individual onsite systems in the County. Details relative to the implementation of this maintenance program are currently under evaluation and development. Some of the main objective of this maintenance program include:
 - Development of a comprehensive inventory of all the on-site systems in the County.
 - Providing public education and community outreach.
 - Implementation of a preventive maintenance program through regular system pump-outs

- ❖ **I.C.1.B.i: Blue Plains Service Area Projected Wastewater Treatment Needs:** WSSC Water use of IMA allocated flow capacity of 169.6 MGD at the Blue Plains Wastewater Treatment Plant has been reduced to 163.6 MGD due to diversion of nitrogen and phosphorus load allocations (loads associated with 6 MGD) at the WSSC Water's Seneca Water Resource Recovery Facility. WSSC Water should initiate a process to explore the possibilities of restoring the full WSSC Water's allocated capacity in the Blue Plains Wastewater Treatment Plant.

APPENDICES

Appendix A - Includes the Plan's glossary. Capital program projects, previously summarized in Appendix A, are included in the Plan by reference to available documentation online.

Appendix B - Inventories the County's multiuse systems (large-capacity, individual, onsite water and sewerage systems) and has been updated.

Appendix C - Includes information on exceptional water and sewer service policy areas. Sections updated in Appendix C include:

II.E: GLEN HILLS STUDY AREA

Service Recommendation & Comments:

Related to sewer service under the Potomac peripheral sewer service policy, added text about excluding properties at the periphery of the Rockville planned service area.

II.G: JONESVILLE AND JERUSALEM COMMUNITIES

Service Recommendation & Comments:

Added text that addresses recent WSSC Water flow monitoring from the Jonesville and Jerusalem sewerage system into the Poolesville WWTP. This monitoring shows that these flows repeatedly exceed the agreed upon 20,000 gallons per day capacity, particularly during wet weather events. WSSC Water is investigating possible inflow and infiltration issues in the sewerage system. This section warns that, pending the outcome of this investigation, the County and WSSC Water may need to institute more stringent sewer connection limitations in the service area to minimize excessive flows to the WWTP. Alternately, WSSC Water could see if the Town is open to negotiations for increasing the amount of flow into the WWTP.

II.M.: POTOMAC AREA RE-1 AND RE-2-ZONED PROPERTIES

Service Recommendation & Comments:

Added text that explains that the policy also needs to exclude properties adjacent to or confronting the planned sewer service envelope within the Rockville service area. Service available from the City has no bearing on county properties outside the City's planned service area. A similar restriction for the Town of Poolesville is not needed as no part of the Potomac Subregion Master Plan Area is adjacent to the town. Will modify the accompanying figure to match.

II.N. RIVERWOOD DRIVE

Service Recommendation & Comments:

Explained that this restricted sewer service area is substantially larger than is necessary. Many parts of the restricted service area already have community sewer service. The areas excluded from the original restricted sewer service area are those with existing or direct access to community sewer service. The accompanying figure has been modified to match.

Appendix D - Includes updated municipal, county, state, and regional agency contact information.

Appendix E - Provides an inventory of major public and institutional facilities in the county.

Appendix F - Provides a summary of included updates and changes to the 2022-2031 Plan relative to the approved 2018-2027 Plan.

ATTACHMENTS

Attachment 1:

Water & Sewer Service Area Category Maps)

Attachment 2:

County Council Resolution No. 19- 1423

Key Changes and Updates to the 2018 – 2027 Montgomery County Comprehensive Water Supply and Sewerage Systems Plan – (The Ten-Year Plan)