

2022-2031 COMPREHENSIVE WATER SUPPLY AND SEWERAGE SYSTEMS PLAN, EXECUTIVE DRAFT—PUBLIC HEARING

Description

Public Hearing and staff comments on the County Executive Draft updates to the 2018-2027 Comprehensive Water Supply and Sewerage Systems Plan.

COMPLETED: 6-30-2022

MCPB
Item No. 10
July 7, 2022

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LOCATION:

Countywide

MASTER PLANS

2022-2031 Comprehensive Water Supply and Sewerage Systems Plan, Executive Draft

PROPERTY SIZE

N/A

APPLICATION

N/A

ACCEPTANCE DATE:

N/A

REVIEW BASIS:

Title 9, Subtitle 5, Section 9-515 (d)(2), Maryland Annotated Code, Environment



Summary

- The County is required by State law to update its Water and Sewerage Plan at least every three years and submit its final draft for review and recommendation to the Maryland-National Capital Park and Planning Commission.
- The Planning Board’s recommendations will be transmitted to the County Council as part of its Public Hearing process on the Water and Sewer Plan Update.
- The Planning Staff recommends transmittal of staff comments and any additional comments and recommendations of the Planning Board.

SECTION I

SUMMARY

Description:

The State of Maryland requires that each jurisdiction in the State prepare a comprehensive update to its comprehensive water supply and sewerage systems plan every three years. DEP staff have prepared the 2022 triennial comprehensive update of the Water and Sewer Plan. The County Executive's Office has transmitted this document as the Executive draft of the 2022 Plan update to the County Council for consideration and action.

Planning Department staff reviewed an earlier inter-agency draft of the plan last year and have some additional edits and recommendations for the Planning Board to consider for transmittal to the County Council as part of its Water and Sewer Plan Update public hearing process.

Background and Process:

In Maryland, the planning and coordination for sanitary services are delegated from the state to each county government. Montgomery County addresses this responsibility through the ***Ten-Year Comprehensive Water Supply and Sewerage Systems Plan*** (Water and Sewer Plan), which ensures that existing and future water supply and wastewater disposal needs are coordinated in a manner that:

- Is timely and cost-effective
- Is well integrated with land use planning efforts
- Protects the health, safety, and welfare of residents, businesses, and institutions
- Protects the quality of the environmental resources of the county, the state, and the Chesapeake Bay region
- Helps to improve the quality of the environmental resources of the county, state, and region

The Maryland Department of the Environment (MDE) requires the County to prepare a comprehensive update of the Water and Sewer Plan every three years. Between comprehensive updates, the County approves amendments to the plan (such as service area categories, new or revised policies, and technical information) through procedures described in Chapter 1 of the plan. Under state law, the County Council is responsible for approving the plan and its amendments.

The County Executive, acting through the Department of Environmental Protection (DEP), prepares the plan's comprehensive updates and provides recommendations to the Council for action on proposed amendments.

DEP, with the assistance of other agencies, develops proposed amendments, typically those that involve policy issues or affect groups of properties. Property owners also propose amendments, usually those involving single properties or larger tracts intended for subdivision of new lots.

Service Planning Coordination with Land Use Planning

Coordination between the Water and Sewer Plan and local area master plans and sector plans is crucial to the development and water/sewer planning processes. Master and sector plans direct the character, pattern and density of development in the County's communities. The level of coordination between master plans and water/sewer service planning varies. A sector plan for downtown Bethesda, an area served exclusively by public systems, will address water and sewer service issues minimally. However, the approved master plan for Damascus, where the boundaries between areas recommended for service by public utilities as opposed to private water and sewer systems have changed, addresses the subject at greater length. For master plan areas, such as Damascus, DEP staff members are usually involved in the master plan development, review, and approval process from the early stages.

Purpose and Function of the Plan

The Water and Sewer Plan is a functional master plan for providing water and sewer services throughout Montgomery County. As such, it provides an important link between the County's land use and development planning and the actual construction of the water supply and sewerage systems needed to implement that planning effort.

The Water and Sewer Plan establishes policies that support the goals and objectives of the County's General Plan, as amended by local area and other master plans. These policies emphasize:

- The use of public water and sewerage systems along higher-density urban and suburban development areas, and
- The use of individual, on-site wells, and septic systems throughout lower-density suburban, rural, and agricultural areas.

The plan's policies are implemented in part by assigning water and sewer service area categories for all properties within the County. The service area categories:

- Designate whether properties are intended to be developed using (and are eligible for) public or private service, and
- Provide staging elements or a sequence for planning and providing public service.

The plan provides information on the County's existing water supply and sewerage systems from beginning to end. It includes everything from the point where raw water is drawn from a surface water body or groundwater supply, through delivery and use by the consumer, to the final treatment and disposal or reuse of wastewater effluent.

The plan provides projections for the future needs of water and sewerage systems, which result from land use planning studies, demographic projections, legal mandates, and policy requirements. It addresses these needs using a variety of approaches, such as:

- New, expanded, or replacement water and sewer facilities, such as transmission mains, pumping stations, storage tanks, or treatment plants,
- Expansion of existing water or sewerage systems, or the use of alternative systems, to address communities experiencing public health problems from failing wells or septic systems, and
- New or updated programs and service policies that address issues like changes in sanitary service technology, support for new development concepts and protection from undesired sanitary system expansion or on-site system use.

2022-2031 Draft Water and Sewer Plan Update

Over the course of time, the policies and information included in the Water and Sewer Plan require a comprehensive update. The County Executive has recommended the 2022-2031 update of the Water and Sewer Plan to the County Council. As part of this comprehensive update, all map changes and text amendments adopted since the previous update are also included.

SECTION II

OVERVIEW OF THE PLAN AND KEY 2022-2031 UPDATES

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

<https://www.montgomerycountymd.gov/water/Resources/Files/supply/2022%20DRAFT%20CHAPTER%201.pdf>

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.

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.c. 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.: Replacing the WSSC-Built Extension Program

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 is being finalized.

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.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

<https://www.montgomerycountymd.gov/water/Resources/Files/supply/2022%20DRAFT%20CHAPTER%202.pdf>

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

<https://www.montgomerycountymd.gov/water/Resources/Files/supply/2022%20DRAFT%20CHAPTER%203.pdf>

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 an estimated storage capacity of approximately 17 billion gallons of raw water storage, within several miles of the Potomac Water Filtration Plant. This quarry has evaluated by WSSC for several years and this Plan, along with the Potomac Subregion Master 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 SUPPLY SYSTEMS

<https://www.montgomerycountymd.gov/water/Resources/Files/supply/2022%20DRAFT%20CHAPTER%204.pdf>

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:

- ❖ I.B.2.: WSSC Flow Modeling Integration: The Plan urges WSSC to integrate its flow modeling systems with the MC:MAPS geographic information system, which can provide direct access to modeling information WSSC needs from the County.
- ❖ I.B.3.: Development of a Prioritized Listing of SSES Basins and a Financial Plan by WSSC (Section): WSSC has been addressing a comprehensive maintenance, operations and management system for the past ten years. These issues affect capital expenditures, sewer overflow conditions, and regional agreements. This Plan suggests that WSSC develop a prioritized list of SSES basins and a financial plan to address the needs these studies reveal.
- ❖ V.B.3.: To address concerns about potential sanitation problems from aging individual, On-Site systems in the County's neighborhoods (Section): 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

APPENDICES

Appendix A

<https://www.montgomerycountymd.gov/water/Resources/Files/supply/2022%20Draft%20Appendix%20A--%20Glossary.pdf>

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

<https://www.montgomerycountymd.gov/water/Resources/Files/supply/2022%20Draft%20Appendix%20B%20-%20Multiuse%20Systems.pdf>

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

Appendix C

<https://www.montgomerycountymd.gov/water/Resources/Files/supply/2022%20Draft%20Appendix%20C-%20Exceptional%20Service%20Areas.pdf>

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. In other areas, the technical limitations of extending sewer service across the cut for Sandy Landing Rd., 100 feet deep in some parts, makes such extensions impractical. The only areas that need to remain within the restricted sewer service area are Carrs Addition and Fox Meadow. The accompanying figure has been modified to match.

Appendix D

<https://www.montgomerycountymd.gov/water/Resources/Files/supply/2022%20Draft%20Appendix%20D%20-%20Agencies.pdf>

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

Appendix E

<https://www.montgomerycountymd.gov/water/Resources/Files/supply/2022%20Draft%20Appendix%20E%20-%20Major%20facilities%20and%20institutions.pdf>

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

Appendix F (See Attachment)

Appendix F provides a summary of included updates and changes to the 2022-2031 Plan relative to the approved 2018-2027 Plan. This summary covers much the same ground as the Executive Summary but also includes more technical updates such as revised flowrates and references to updated graphs, charts, and maps.

MAPS

Water Categories Map

https://www.montgomerycountymd.gov/water/Resources/Files/supply/CWSP_2021_Water_11x17.pdf

Sewer Categories Map

https://www.montgomerycountymd.gov/water/Resources/Files/supply/CWSP_2021_Sewer_11x17.pdf

SECTION III

KEY ISSUES EXPECTED TO BE DISCUSSED AT COUNTY COUNCIL AND T&E SESSIONS

Council Staff have advised us that the following topics are among those expected to be discussed at the upcoming County Council public hearing and T&E Subcommittee sessions on the Water and Sewer Plan Update. As part of their presentation on the Water and Sewer Plan Update at this Planning Board public hearing, DEP staff will touch on these issues. Some of these issues relate to certain properties that have come before the Planning Board that raised issues that DEP staff were directed by the County Council to cover in policy updates in the Water and Sewer Plan. There are some additional properties that involve issues that are also expected to be discussed at the County Council Water and Sewer Plan Update sessions that are not currently addressed in the draft update of the Plan.

1. Abutting Mains Policy
 - a. Multiple abutting service connections
2. Extensions outside the planned envelope to serve commercial properties
3. Creation of special service areas outside the planned envelope (big issue in the last update)
4. Travilah Quarry Language (update based on regional discussions/potential Federal aid request)
5. Private Institutional Facilities (PIF) Policy
 - a. RLUIPA language
 - b. Concept Plan language
 - c. Environmental Overlay Zones
 - d. Imperviousness restrictions and PIFs
6. Unserved/Underserved Properties Bi-County Infrastructure Workgroup Report recommendations which deal with various related issues including funding deficits and how to address them (Reference in Plan, add Subdistrict creation process)
7. Septic Ownership Requirements (re: CE legislation (40-21) at Council)
8. Glen Hills Issues
 - a. Potomac Peripheral Sewer Policy not applying to the City of Rockville properties
9. Poolesville WWTP Capacity Issues

SECTION IV

RECOMMENDATIONS

Planning Staff reviewed an inter-agency review draft of the Water and Sewer Plan Update last year and forwarded comments to DEP staff who incorporated them into the draft that went to the County Executive. As part of the current review Planning Staff has reviewed the draft updates to the plan that occurred through the Executive review process. Planning Staff recommends supporting the current draft of the Water and Sewer Plan Update with the following edits and recommendations, and any others that the Planning Board may approve for transmittal to the County Council:

Chapter 1: Objectives and Policies

Section II.G.3.a.: General Requirements, paragraph 4, last two sentences, add text in red for clarity and consistency with the foregoing discussion

Service connections from the extended main to other newly abutting **confronting** properties must be direct connections from the main. Non-abutting service connections **or additional sewer extensions** are not allowed in these cases.

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

Include language that indicates that concept plans are not regulatory in nature but provide an opportunity for various agencies to comment and provide feedback.

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

Include language in the discussion and recommendation that indicates the need to consider equity issues in the ongoing efforts to address unserved and underserved communities.

SECTION V

NEXT STEP

The Planning Board's recommendations will be transmitted to the County Council and incorporated as part of their Public Hearing on the Water and Sewer Plan Update on July 12, 2022. Final action will subsequently be taken by the full Council after the Public Hearing and subsequent T&E Committee sessions.

ATTACHMENT

Appendix F, 2022-2031 Comprehensive Water Supply and Sewerage Systems Plan, Executive Draft

Appendix F, 2022-2031 Comprehensive Water Supply and Sewerage Systems Plan, Executive Draft

Montgomery County Comprehensive Water Supply and Sewerage Systems Plan

Appendix F: Summary of Updates, Executive Draft 2021 - 2032 Plan

Listed below are an overall summary of changes and updates included in the draft 2021-2030 Ten-Year Plan relative to the adopted 2018-2027 Plan.

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. 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. 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:

- **Onsite System Exceptions (Section II.D.):**
 - The 2018 Plan removed requirements for dry system mains; and established that all subdivisions within service area categories 1 and 3 will use community service, rather than interim permit individual onsite systems. However, the policy now allows for consideration of exceptions that would allow for interim permit onsite systems in areas zoned for large lot development.

- **Updates to Special Policies for Water and Sewer Service (Section II.G.):**
 - For the Community Service for Abutting Mains Policy - Revised the policies for community service for properties abutting community service mains (II.G.3.):
 - Limited extensions of existing abutting mains may be considered in cases where an extension would allow for better placement of the service connection relative to the building receiving new service. This would also allow another property that abuts the new extension to qualify for community service under this policy (II.G.3.a). Properties that abut new main extensions are limited to one connection per property. That allowed connection cannot support subdivision or resubdivision of that newly abutted property.
 - The option for multiple service connections under this policy is revised to require onsite system testing to determine the number of connections that may be replaced by dwelling units using public systems service. (III.G.3.c.)
 - For the Community Service for Private Institutional Facilities (PIF) policy:
 - Added a statement about the relationship between the PIF policy and the Federal Religious Institutions Land Use and Institutionalized Persons act (RLUIPA).
 - Revised the “Additional Considerations” section to clarify the difference between policy changes that could be addressed via the Water and Sewer Plan (e.g., PIF limitations in other zones besides the AR Zone) and changes that would have to be addressed via other venues (e.g., watershed regulations). (II.G.4.b.)
 - Clarified that the Council’s consideration of concept plans for new PIF cases and PIF use revisions will be focused primarily on imperviousness and new main extension issues. (II.G.4.c and II.G.4.d.)
 - Added an emphasis on consistency with established imperviousness limitations. (II.G.4.c.)

- **Updates to WSSC Facility Planning Process (Section III.A.5.):**
 - Added text provided by WSSC to address new aspects of the facility planning process, including WSSC’s Asset Management and Business Case Evaluation Programs.
 - Added a recommendation for continuing coordination efforts between WSSC Water and the County concerning the facility planning process.

- **Updates to Individual Systems (Section III.C.):**
 - Updated the Onsite Systems Management Program discussion to explain where the program stands now and the proposed legislation for a septic tank pumping requirement. (III.C.4.d.)
 - Removed a condition from the Exceptions from Design Capacity Restrictions that addresses individual onsite systems with approved permits prior to February 14, 2006, as those permits would no longer be valid. (II.C.5.c.)

- **UPDATES TO WATER AND SEWERAGE SYSTEMS FINANCING (SECTION IV.):**
 - **REMOVED SOME INFORMATION FROM THE WSSC WATER-BUILT PROJECTS PROGRAM FROM THIS UPDATE OF THE PLAN AS THE PROGRAM IS LARGELY IRRELEVANT TODAY. (IV.A.2.B.)**
 - Updated the discussion concerning Efforts to Address Underserved and Unserved Communities to reflect the current status of the WSSC Water – Bi-county Work Group.

- **Updates to Plan Amendment Actions (Section V.E.):**
 - Specified that Deferred Amendments still pending after three years will be returned to the Council’s attention with a recommendation for denial from the County Executive. (V.E.3.)

Chapter 2: GENERAL BACKGROUND

Chapter 2 provides an overview of the natural and cultural environments in Montgomery County. Updated new information in this chapter include:

- Updates to the County’s latest ratings of stream conditions based on biological monitoring.
- Updates to the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System Permit Program (AKA the MS4 Permit Program).
- Updates to Population dynamics and forecasting. The latest forecasts (Round 9.1 Cooperative Forecasting) of population, households, and employment were developed and published by MWCOG through a cooperative process involving the Council of Governments, its member jurisdictions, the Baltimore region, the states and other planning agencies.

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. Updated new information in this chapter include:

- **Updates to Projected Water Supply Demand:** Based on analysis of the latest water production and consumption data, WSSC has also developed the following water demand per unit to be used for growth projections and planning water system improvements:
 - Single-Family Dwelling Unit (SFDU):-----177.0 gallons per day (gpd)
 - Employees:-----36.1 gpd
 - Multi-Family Dwelling Unit (MFDU):-----146.8 gpd

The above numbers have been developed using COG/M-NCPPC Round 8.1 population forecasts.

- **Updates to Projected Water Supply System Needs:** The following includes WSSC's major current and planned studies and facilities needed to meet the projected treatment capacity at each of its water treatment plants.
 - Potomac Solids Handling
 - Source Water Protection
 - Potomac Basin Corrosion Mitigation Project
 - Potomac Submerged Channel Raw Water Intake
 - Potomac Filter Air Scour Improvements
 - 2019 – 2020 AWIA Risk and Resiliency Assessment
 - Patuxent Water Treatment Plant Replacement and Expansion
 - Brighton Dam Maintenance
 - Germantown/Clarksburg Area Projects
 - Standpipe Replacement Projects
- **UPDATES TO TABLES, FIGURES, GRAPHICS, AND OTHER TECHNICAL DATA:** All the tables, figures, and graphics have been updated to reflect the latest data, information, and trends. These include:
 - Water Service Area Category Maps
 - Water Service Area maps
 - Planning areas and pressure zones
 - Water supply sources for each service area
 - Well problem areas
 - Inventory of existing impounded water supplies
 - Existing and projected water supply demands, trends, and planned capacities for each service area (WSSD, City of Rockville, and the Town of Poolesville)
 - Inventory of existing and approved Multi-Use Water Supply Systems
- **Updates to Programs and Policies:** Included in this updated Plan are revisions to a few program and policies mainly by WSSC to meet regulatory requirements and its financial needs and include:
 - Water Conservation Plan
 - Public Outreach and Education Programs
 - Plumbing Code
 - Water consumption Rate Structure

Chapter 4: SEWERAGE SYSTEMS

This Chapter describes the county's existing and planned community and private, individual sewerage systems. Main focus and updates included in this chapter include:

- **Updates to Wastewater Flow Analysis and Projections:** The updated wastewater flow projections used in this Chapter are developed on 5-year intervals and are based on Round 9.1 Cooperative demographic forecasts and WSSC's latest wastewater flow factors. Wastewater flow forecasts are developed from detailed analyses of existing flow records and projected additional future flow based on projected demographics, wastewater flow per household and per employment, and other factors such as infiltration (extraneous groundwater) and inflow from rainfall. Population forecasting and flow projection are based on the best available data at the time the analysis is conducted.

- **Updates to Planned Sewerage System Needs:** Based on the latest population projections and using Wastewater System Modeling, WSSC identifies the potential impact of current and future wastewater flows on sewerage system capacities. The Wastewater System Modeling is also used to identify collection system needs such as capacity constraint due to insufficient capacity for present and/or future wastewater flows and plan needed improvements. Updates to planned sewerage systems based on the latest flow analysis for each service area and individual sewer basin include:
 - **Blue Plains Service Area:** Approximately 85% of the municipal wastewater generated in Montgomery County is treated at the Blue Plains WWTP. This service area encompasses much of the central and eastern part of the county which includes Muddy Branch, Rock Creek, Watts Branch, Cabin John Creek, Rock Run, Little Falls Branch, Northwest Branch, Paint Branch, and Sligo Creek Basins. The Blue Plains service area also includes the Rockville Sanitary District.
 - - Projected Treatment Capacity Needs: Produced by WSSC and based on COG's Round 8.1 Cooperative demographic forecasts and WSSC's latest wastewater flow factors. The County's projected wastewater treatment needs within the Blue Plains service area will be met well beyond the year 2025.
 - Projected Transmission and Conveyance Needs: Projected needs for all sewersheds discharging to the Blue Plains WWTP are listed below. These projections are based on COG's Round 8.1 Cooperative demographic forecasts and WSSC's latest wastewater flow factors.
 - I. Muddy Branch - 7,500 feet of trunk sewers along the main stem in Muddy Branch may have capacity constrains under 2025 wet weather conditions.
 - II. Watts Branch - Basin's conveyance facilities will be able to handle the basin's anticipated wastewater flows through the year 2025
 - III. Rock Run - 5,495 feet along the main stem of Rock Run Branch may have capacity constrains under 2025 wet weather conditions.
 - IV. Cabin John - 3,300 feet of relief sewer along Cabin John Creek near River Road and the Capital Beltway may have capacity constrains under 2025 wet weather conditions.
 - V. Rock Creek – Capacity constrains under 2025 wet weather conditions near Reddy Branch Wastewater Pumping Station and a tributary to Mill Creek Branch
 - VI. Little Falls - Based on the latest WSSC wastewater flow, it has been determined that the Little Falls trunk sewer has adequate capacity to receive the projected wastewater flows through 2025.
 - VII. Anacostia Interceptor System – Flows discharged into Anacostia Interceptor System from Montgomery County include Sligo Creek Basin, Northwest Branch Basin, and Paint Branch Basin - Much of the development potential in Sligo Creek is limited to redevelopment of existing commercial areas, such as the downtown areas of Silver Spring and Wheaton. Although, the basin is identified as a Potential Overflow Basin, WSSC does not anticipate future sewage capacity constraints or overflows within Montgomery County. The Northwest Branch Basin is currently identified as a Potential Overflow Basin. A small length of gravity sewer (about 200 feet) is identified as having capacity constraints under projected future wet weather conditions. Major sewer lines in Paint Branch Basin have adequate capacity at present, and there are no planned CIP projects in this basin. However, considerable growth is expected to occur in this area along the U.S. Route 29 corridor. WSSC has determined through its sewer modeling that that 17,000 feet of sewer in the Paint Branch basin within Montgomery County will have capacity constraints under projected future wet weather flow conditions.
 - **Seneca Service Area:** - Projected flows based on forecasted population and other flow factors for the Seneca Service Area have been developed by the WSSC and are based on Round 8.1 Cooperative demographic forecasts. The basin has been one of the most active basins in the County in providing

new wastewater services during recent years. There are a number of active projects in this service area to address wastewater conveyance constraints/needs and improve service in the Seneca Creek Basin. The Seneca WWTP has adequate capacity to treat the 2025 projected flows.

- **Damascus Service Area:** - Projected flows based on demographic forecasts and other flow factors for the Damascus Service Area indicate that existing treatment facility will handle all expected wastewater flows from this service area for the foreseeable future.
- **Poolesville Service Area:** - The Town of Poolesville has developed a Wastewater Capacity Management Plan. The Plan utilizes a three-year rolling average of discharge flows from the WWTP to determine the available capacity for development allocation.

- **Updates to Sanitary Sewer Overflows Consent Decree:** In December 2005, the Washington Suburban Sanitary Commission (WSSC) entered into a Consent Decree with the U.S. Environmental Protection Agency (EPA), the State of Maryland and four Citizen Groups on an action plan to significantly minimize, and eliminate where possible, sanitary sewer overflows (SSOs). The Citizens Groups were the Natural Resources Defense Council (NRDC), the Anacostia Watershed Society (AWS), the Friends of Sligo Creek (FOSC), and the Audubon Natural Society. On January 19, 2006, the Court entered the First Amendment to the Consent Decree to add Patuxent Riverkeeper to the definition of Citizens Groups. The sanitary sewer system is being inspected and rehabilitated. The agreement estimates approximately \$1.3 billion in improvements to the WSSC's wastewater collection system, provides \$4.4 million for additional environmental improvement projects and includes a \$1.1 million civil penalty.

A short description of the requirements of the Consent Decree and additional details regarding the current status and the remedial measures progress to date have been provided in the Plan.

- **Updates to Biosolids Management:** - WSSC has recently completed a major facility planning study to explore and determine the best alternative in managing its future biosolids produced from all of its wastewater treatment plants within both Montgomery and Prince George's counties.

The focus of this facility plan was to examine and develop a comprehensive program providing for the best alternative to process biosolids in a manner that is environmentally beneficial and is also economically feasible. The recommended and approved alternative included the design and construction of a central bio-energy project comprised of Thermal Hydrolysis, Mesophilic Anaerobic Digestion, and Combined Heat and Power facilities. The project is currently at the preliminary design stage and the expected completion date has been scheduled for the year 2021. When complete, some of the expected environmental and economic benefits would include:

- Significant reduction in biosolids quantity.
- Production of digester gas as renewable fuel which will be used to produce heat and electric power.
- Producing high quality (Class-A) biosolids which can be used more widely than the Class-B biosolids currently produced.

As part of their updated Biosolids Management Program (BMP), the DC-Water is currently at the final phases of constructing major facilities to upgrade its biosolids processing and management practices. The upgraded biosolids processing plant when complete will largely replace the current lime stabilization with thermal hydrolysis and anaerobic digestion.

- **UPDATES TO TABLES, FIGURES, GRAPHICS, AND OTHER TECHNICAL DATA:** All the tables, figures, and graphics contained in the current approved Plan have been updated to reflect the latest data, information, and trends. These include:
 - Wastewater Service Area Category Map for Montgomery County
 - Wastewater Service Area district maps

- Planning areas and sewersheds
 - Projected Transmission and Conveyance Needs for individual sewersheds
 - Wastewater treatment plant service area maps
 - Projected wastewater treatment capacity needs for all wastewater treatment plants
 - Current and projected safe capacities for all wastewater pumping stations
 - Individual sewershed maps
 - Existing and projected wastewater flows for individual sewersheds
 - Projected facility needs for individual sewersheds
 - Projected facility needs for all districts and treatment service areas
 - Inventory of existing and approved Multi-Use sewerage systems
- **New Policy Initiatives and Program Recommendations:** Included in this updated draft version of the Plan, few policy and program recommendations relative to County’s Sewerage systems have been presented for considerations and include:
 - ❖ **WSSC - IMA Allocated Flow Capacity and Related Nitrogen and Phosphorus Load Allocations at the Blue Plains WWTP:** WSSC 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’s Seneca Wastewater Treatment Plant. WSSC should initiate a process to explore the possibilities of restoring the full WSSC’s allocated capacity in the Blue Plains Wastewater Treatment Plant.
 - ❖ **County to Develop Program Addressing the Potential Sanitation Problems from Aging Individual, On-Site Systems in the County’s Neighborhoods:** The County should create, budget, and implement appropriate programs to research, prioritize, and address the potential sanitation problems from aging individual, on-site systems facing the County’s neighborhoods. This will be especially important for rural neighborhoods located outside the effective/efficient reach of community water and sewerage systems.

Solving the concerns about older neighborhoods using individual on-site systems may require new and innovative solutions beyond the usual provision of community water and/or sewer service. These may include, but are not limited to:

- I. Proactive, periodic on-site systems maintenance and inspection programs coordinated with public outreach and education on individual systems maintenance;
- II. Alternative community distribution, collection and treatment systems;
- III. Shared water and/or sewerage systems, owned by local communities and operated by authorized agencies or utilities
- IV. Alternative financing for relief systems (community or otherwise), including but not limited to special assessment districts, grants or loans from government resources, or utility assistance programs;
- V. Programs to assist lower-income individuals and communities in financing required relief systems.

APPENDIX C: EXCEPTIONAL SERVICE POLICIES AND RECOMMENDATIONS

This appendix complies existing areas with either exceptional service allowances or exceptional service restrictions.

- In the Glen Hills Study Area section, added that properties within the City of Rockville cannot be used as justification for sewer category change approvals under the Potomac peripheral sewer service policy. (II.E.)
- In the Jonesville and Jerusalem section, added language addressing repeated sewage flow events exceeding WSSC Water’s negotiated 20,000 gallons per day maximum flow into the Poolesville Wastewater Treatment Plant. Noted that, pending WSSC Water investigations into possible infiltration and inflow within its sewerage system, the County and

WSSC Water may need to consider either further service restrictions in the service area or renegotiation on flow limits with the Town.

- In the Potomac Area RE-1 and RE-2-Zoned Properties section, added that properties within the City of Rockville cannot be used as justification for sewer category change approvals under the Potomac peripheral sewer service policy. (II.M.)
- In the Riverwood Drive section, proposed to reduce the area of the existing restriction as part of the existing area already has public sewer service and other parts of the existing area are not accessible from the Riverwood Drive sewer main. (II.N.)