

Listed below are an overall summary of changes and updates included in the draft 2022-2030 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 to avoid crossing an environmentally sensitive feature on the property. This would also allow another property that abuts the new extension to qualify for community service under this policy (II.G.3.a) in cases where an onsite systems failure is documented. Properties that abut new main extensions are limited to one connection per property and new connections will be limited to improved properties and recoded building lots. 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. (II.G.3.d.)
 - 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 Review and Consideration of Plan Amendments (Section V.D.)**
 - Added text that expands the discussion of the primary reviewing agencies for service area category change requests and those agencies’ responsibilities in the process.
- **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 under construction and its expected completion date has been scheduled for the year 2024. 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, reduced the area of the existing restriction, removing those areas served by community sewerage systems and with existing and access to existing community sewerage systems. (II.N.)