

2023 Water and Sewer Master Plan Fall 2024 Amendment



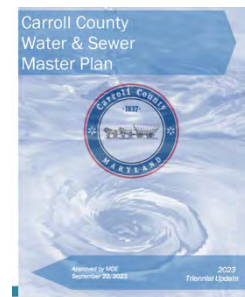
1. Freedom Water Amendment Staff Report
2. Hampstead Sewer Amendment Staff Report
3. Manchester Water and Sewer Amendment Staff Report
4. MDE/MDP Comments

2023 Water and Sewer Master Plan – Fall 2024 Amendment Staff Report

To: Board of County Commissioners
From: Andrew R. Gray, AICP, Planner
Meeting Date: December 19, 2024
System Change: Freedom Water – Amendment No. 3
Requestor: Carroll County Bureau of Utilities
GPD Transferred: 1,000 GPD or 0.001 MGD
Current Service Area: Existing (W-1)
Proposed Service Area: Long Range Future (W-6)
Request Summary: To have property with SDAT No. 0705-020026, 0705-026512, 0705-026504, and 0705-026490 designated in the Long-Range Water Service Area (W-6).
Requested Action: **Approve**



Bureau of
Comprehensive Planning

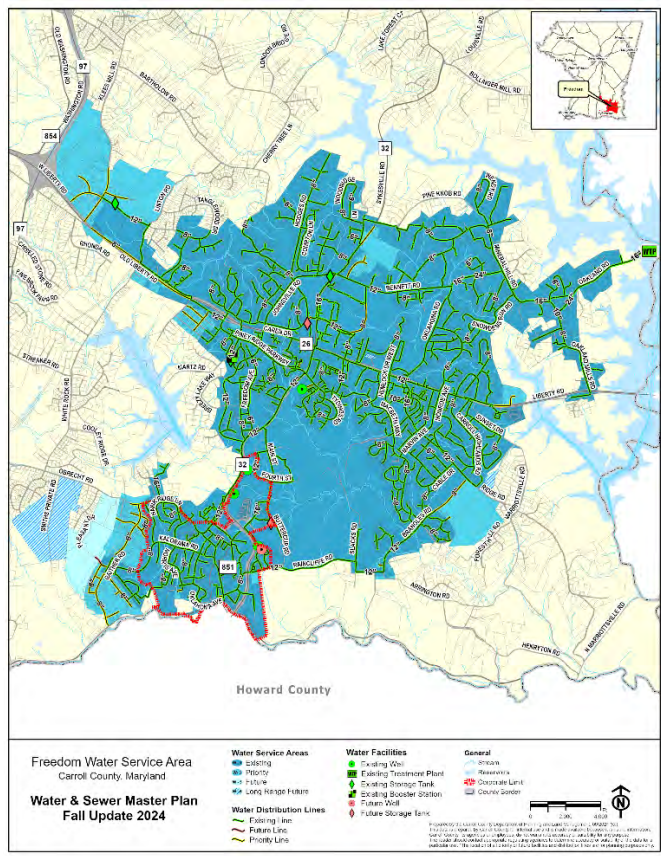


Summary

On March 18, 2024, the Carroll County Bureau of Comprehensive Planning received a request from the Carroll County Bureau of Utilities to transfer a total 1,000 GPD of water capacity from the Freedom/Sykesville *Existing Water Service Area (W-1)* to the *Long-Range Water Service Area (W-6)* removing four residential properties. Per the Bureau of Utilities, three of the properties have existing wells and one property has no reasonable way to connect to water.

On November 19, 2024, the Carroll County Planning and Zoning Commission certified the recommended amendment to the 2023 Carroll County Water and Sewer Master Plan, as they pertain to the County, are consistent with the 2014 Carroll County Master Plan, as amended in 2019, and the 2018 Freedom Community Comprehensive Plan and further forwards this amendment to the Board of County Commissioners for final review and adoption.

Maps



Comprehensive and Master Plan Goals

The **2018 Freedom Community Comprehensive Plan** identifies applicable goals that are related to providing properties with public water as follows:

Element 3: Public Input & Plan Vision, Goals & Structure - GOAL 1 - Pursue policies that facilitate the implementation of the plan vision, including development in appropriate areas within density limits that respect the overall Vision of the community, where water, sewer, and other infrastructure are projected to be available.

Element 3: Public Input & Plan Vision, Goals & Structure - GOAL 8 - Efficiently and cost effectively provide adequate public facilities and services for the Freedom CPA, including education, safety, recreational, water, sewer, and other community facilities and services to enhance and meet the changing needs of the Freedom CPA.

The **2014 Carroll County Master Plan, as amended in 2019**, identifies applicable goals that are related to providing properties with public water as follows:

Chapter 3: Vision Statement & Goals - Promote communication and coordination between and among the County, the municipalities, and state and regional jurisdictions on projects and issues of mutual concern. Encourage the involvement of the community in developing, amending, and implementing the Master Plan.

Chapter 3: Vision Statement & Goals - Protect and enhance the water quality of Carroll County's rivers, streams, reservoirs, and aquifers; comply with applicable state and federal requirements related to water quality and quantity; and maintain and protect adequate water supplies to serve current and planned development.

Analyzing Changes to Projected Water Supply and Capacity

According to County Policy, the County is using MDE multipliers for water and wastewater supply (unless otherwise noted) as follows:

Residential GPD	250 GPD x No. of units (Residential Buildable Land Inventory GIS Layer)
Commercial GPD	700 GPD x usable acres (Non-Residential BLI GIS Layer)
Industrial GPD	800 GPD x usable acres (Non-Residential BLI GIS Layer)

According to Table 15 in the Master Plan, water capacity for the Freedom/Sykesville Area is currently 4,427,000 GPD.

Freedom Water Service Area Map (Map 12) and Demand Calculations:

This amendment is the third amendment to the 2023 Water & Sewer Master Plan for the Freedom water service area. Amendment No. 3 will update the Freedom/Sykesville Water Map and Text by moving four single-family dwelling units on property with SDAT No. 0705-020026, 0705-026512, 0705-026504, and 0705-026490 from Existing Water Service (W-1) to Long-Range Future Water Service (W-6) and subtracting 1,000 GPD of *Residential Demand* from Priority and Future, in Table 15.

As exhibited above, the change in water demand will modify Table 15, as follows:

	Table 15 Projected Water Supply Demands and Planned Capacity*					
	Present Year					
	Residential Population Served	Gallons Per Capita Per Day	Capacity Million Gallon Daily (MGD)			
			Residential Demand	Other Demand	Total Demand	Existing Capacity
Triennial	22,893	85	1.938	0.102	2.040	4.427
Amendment 1			1.938	0.102	2.040	4.427
Amendment 2			1.938	0.102	2.040	4.427
Amendment 3			1.938	0.102	2.040	4.427

	Table 15 Projected Water Supply Demands and Planned Capacity*					
	Priority Planning (0-6 Years)					
	Residential Population Served	Gallons Per Capita Per Day	Capacity Million Gallon Daily (MGD)			
			Residential Demand	Other Demand	Total Demand	Existing Capacity
Triennial	29,120	86	2.490	0.541	3.031	4.427
Amendment 1			2.489	0.541	3.030	4.427
Amendment 2			2.488	0.541	3.029	4.427
Amendment 3			2.487	0.541	3.028	4.427

	Table 15 Projected Water Supply Demands and Planned Capacity*					
	Future Capacity (7-10 Years)					
	Residential Population Served	Gallons Per Capita Per Day	Capacity Million Gallon Daily (MGD)			
			Residential Demand	Other Demand	Total Demand	Existing Capacity
Triennial	31,199	82	2.550	0.541	3.091	7.000
Amendment 1			2.549	0.541	3.090	7.000
Amendment 2			2.548	0.541	3.089	7.000
Amendment 3			2.547	0.541	3.088	7.000

Note: Please be advised that water and sewer as shown in the charts are cumulative. For instance, water in Existing is also reflected in Priority and Future. Water in Priority is also reflected in Future.

Definitions

Definitions for service area categories can be found on pages 23 and 24 of the 2023 Water and Sewer Master Plan:

Agency Comments

The Bureau of Comprehensive Planning had sent out the staff report and information to the review agencies on the listed dates below, for their preliminary review:

- Department of Natural Resources (DNR) – October 2, 2024
- Carroll County Health Department (CCHD) – October 2, 2024
- Maryland Department of the Environment (MDE) – October 2, 2024
- Maryland Department of Planning (MDP) – October 2, 2024
- Carroll County Bureau of Utilities (Utilities) – October 2, 2024

Carroll County Bureau of Comprehensive Planning received MDE and MDP comments dated November 13, 2024 and discussed these comments with MDE on November 20, 2024. MDE/MDP Comments are attached to this report.

Staff Recommendation

County Planning Staff recommends the Board of County Commissioners of Carroll County adopt the request to amend the Existing Water Service Area on Map 12 (Freedom Water Service Area) as described above, removing 1,000 GPD from the demand calculations in Table 15.

Attachments:

1. Planning and Zoning Commission Consistency Letter
2. MDE/MDP November 13, 2024 Comments

Janice R. Kirkner, Chair
Michael Kane, Vice Chair
Peter Lester
Matthew Hoff
Steven Smith
Ralph Robertson
Richard Soisson, Alternate
Tom Gordon, III, Ex-officio
Daphne Daly, Secretary



Planning & Zoning Commission
Carroll County Government
225 North Center Street
Westminster, Maryland 21157
410-386-5145
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MD Relay service 7-1-1/800-735-2258

2023 Carroll County Water and Sewer Master Plan Fall 2024 Amendment Cycle

November 19, 2024

The Carroll County Planning and Zoning Commission hereby Certifies the following recommended amendments to the *2023 Carroll County Water and Sewer Master Plan*, as they pertain to the County, are consistent with the 2014 Carroll County Master Plan, as amended in 2019, and the 2018 Freedom Community Comprehensive Plan. Furthermore, this Commission forwards all amendments, and Planning Commission Certifications for the Town of Hampstead 2010 Community Comprehensive Plan, as amended in 2023 and the 2018 Manchester Comprehensive Plan, to the Board of County Commissioners for final review and adoption.

Fall 2024 Water Amendment:

Freedom Area:

- Move four single-family dwelling units on property with SDAT No. 0705-020026, 0705-026512, 0705-026504, and 0705-026490 from Existing Water Service (W-1) to Long-Range Future Water Service (W-6) and subtracting 1,000 GPD of Residential Demand from Priority and Future, in Table 15.

Town of Manchester:

- Move five single-family dwelling units on property with SDAT No. 0706-037666 from Long-Range Future (W-6) to Existing (W-1) and add 1,250 GPD of Residential Demand to Future and Priority, in Table 15.
- Move property with SDAT No. 0706-033938, 0706-039669, and 0706-041051 from Priority (W-3) to Existing (W-1). Note: no demand changes are necessary because according to the Town of Manchester, these properties have been connected to Public Water for at least ten years and therefore this amendment is not proposed to affect water flows since this water has been accounted for in the 2023 Triennial Update.
- Depicting the 8" Existing Line that connects the Existing Storage Tank (near Manchester Baptist Church) to the 8" Existing Line.
- Removing the Future Water Storage Tank on the map near Manchester Baptist Church Road.
- Depicting the 6" Existing Line along Oak Street ending at the perpendicular 6" Existing Line.
- Designate the two Priority Wells as two Existing Wells, south of Manchester Valley High School and north of Maple Grove Road.

- Depict the 1.5” Existing Line to connect the Existing Well to the Existing Pumping Station south of Manchester Valley High School and north of Maple Grove Road.
- Depict the Existing Line between the Existing Pumping Station and the Existing Well located to the northwest of the Washington Way and Southwestern Avenue Intersection.
- Depict the connection of the Existing Pumping Station located west of Susanann Drive to the Existing Well located east of the Southwestern Avenue and Coleman Court intersection, with a 4” Existing Line.
- Removing the Future Storage Tank in the map legend under “Water Facilities”.

Fall 2024 Sewer Amendment

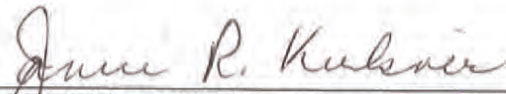
Town of Hampstead:

- Move Property with SDAT No. 0708-033196 and 070-8040923 from Future (S-5) to Priority (S-3) and add 5,554 GPD of Other Demand, to Priority, in Table 32.

Town of Manchester:

- Move 0.438 acres of Property with SDAT No. 0706-034667 from Existing (S-1) to Future (S-5), and subtract 307 GPD of Other Demand from Priority, in Table 32.
- Move one single-family dwelling unit with SDAT No. 0706-039758 from No Planned Service to Existing (S-1) and add 250 GPD of Residential Demand, to Future and Priority, in Table 32, for part of Property with SDAT No. 0706-039758. The other part of the Property is already located in Existing (S-1).
- Move nine single-family dwelling units with SDAT No. 0706-035302, 0706-048129, 0706-048110, 0706-048684, 0706-048536, 0706-041612, 0706-433964, 0706-433965, and 0706-048293 from No Planned Service to Long-Range (S-6).
- Move Property with SDAT No. 0706-039669 and 0706-041051 from Priority (S-3) to Existing (S-1). Note: according to the Town of Manchester, these properties have been connected to Public Sewer for at least ten years and therefore this amendment is not proposed to affect sewer flows since this water has been accounted for in the 2023 Triennial Update.
- Move one single-family dwelling unit with SDAT No. 0706-054609 from Existing (S-1) to Future (S-5) and subtract 250 GPD of Residential Demand from Priority, in Table 32.
- Move one single-family dwelling unit with SDAT No. 0706-036201 from Future (S-5) to Existing (S-1) and add 250 GPD of Residential Demand to Priority, in Table 32.
- Move eight single-family dwelling units with SDAT No. 0706-036139, 0706-037933, 0706-034535, 0706-034233, 0706-003036, 0706-038123, 0706-038980, and 0706-035817 from Existing (S-1) to Priority (S-3). No demand changes are necessary since these undeveloped lots are moving to Priority.
- Move 11 single-family dwelling units with SDAT No. 0706-033962, 0706-036856, 0706-038549, 0706-035728, 0706-036791, 0706-035957, 0706-038352, 0706-036120, 0706-035426, 0706-035418, and 0706-035396 from Existing (S-1) to Future (S-5) and subtract 2,750 GPD of Residential Demand, from Priority, in Table 32.

- Move 17 single-family detached dwelling units with SDAT No. 0706-034977, 0706-035868, 0706-035272, 0706-038964, 0706-038921, 0706-033970, 0706-035922, 0706-036171, 0706-038859, 0706-035647, 0706-033857, 0706-037461, 0706-035787, 0706-038425, 0706-033954, 0706-035582, and 0706-038808 from Future (S-5) to Priority (S-3) and add 4,250 GPD of Residential Demand to Priority, in Table 32.
- Move one single-family detached dwelling unit with SDAT No. 0706-047556 from Existing (S-1) to Priority (S-3). No demand changes are necessary since this undeveloped lot is moving to Priority.
- Depict the Existing Line, in two areas along Arizona Way.
- Depict the Existing Line along the full length of Oak Street.
- Depict the Existing Force Mains near the Existing Treatment Plant to align with what is currently existing, per the map.
- Removing the Future Pumping Station near Valley View Court.
- Removing a Priority Line at Valley View Court.
- Removing the Existing Line to the south of Property with SDAT No. 0706-038808.



Janice R. Kirkner, Chair
Carroll County Planning and Zoning Commission



Daphne Daly, AICP, Secretary
Carroll County Planning and Zoning Commission

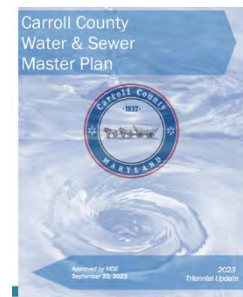
c. Andrew Gray, AICP, Comprehensive Planner

2023 Water and Sewer Master Plan – Fall 2024 Amendment Staff Report

To: Board of County Commissioners
From: Andrew R. Gray, AICP, Planner
Meeting Date: December 19, 2024
System Change: Hampstead Sewer – Amendment No. 2
Requestor: Town of Hampstead
GPD Transferred: 5,554 GPD or 0.006 MGD
Current Service Area: Future (S-5)
Proposed Service Area: Priority (S-3)
Request Summary: To have property with SDAT No. 0708-033196 and 0708-040923 designated in the Priority Sewer Service Area (S-3)
Requested Action: **Approve**



Bureau of Comprehensive Planning



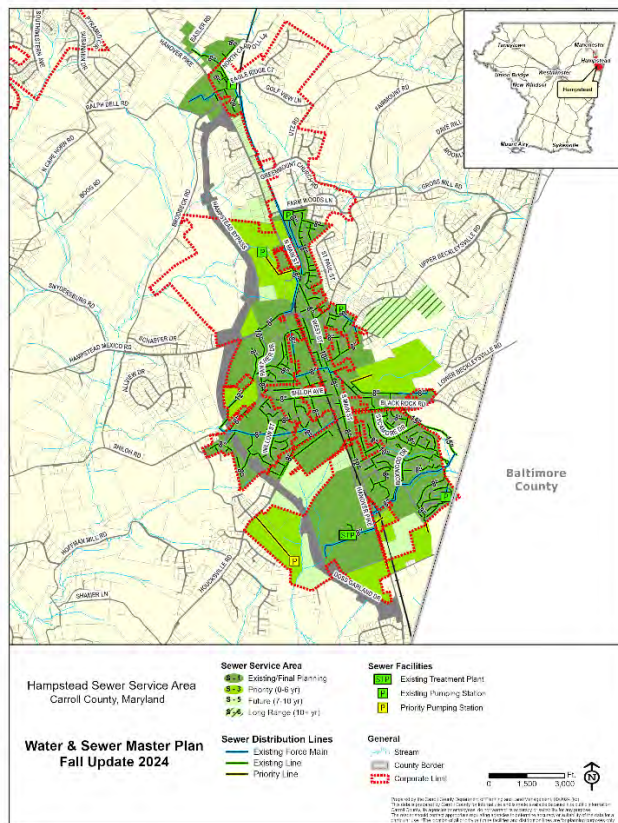
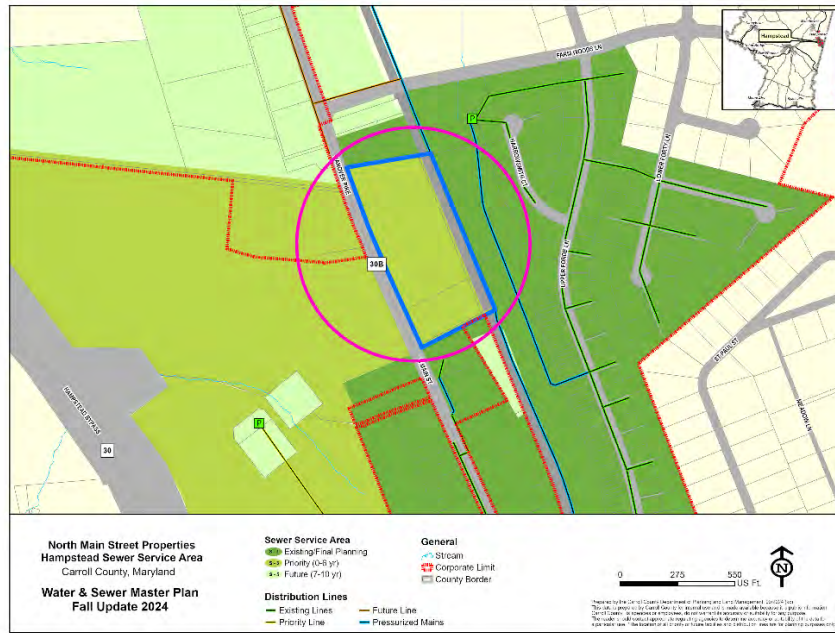
Summary

On April 11, 2024, and July 31, 2024, the Carroll County Bureau of Comprehensive Planning received requests from the Town of Hampstead (Town) to transfer a total 5,554 GPD of sewer capacity from the Hampstead *Future Sewer Service Area (S-5)* to the *Priority Sewer Service Area (S-3)* to accommodate the development of new commercial uses.

On October 23, 2024, the Hampstead Planning and Zoning Commission certified the 2024 Fall Amendment to the 2023 Carroll County Water and Sewer Master Plan, as it pertains to the Town of Hampstead, is consistent with the 2010 Hampstead Community Comprehensive Plan, amended in 2023.

On November 19, 2024 the Carroll County Planning and Zoning Commission forwarded the Hampstead amendment, and Planning Commission Certification for the Town of Hampstead 2010 Community Comprehensive Plan, as amended in 2023, to the Board of County Commissioners for final review and adoption.

Maps



Comprehensive and Master Plan Goals

The **2010 Hampstead Community Comprehensive Plan, as amended in 2023** identifies applicable goals that support providing properties with public water and sewer as follows:

Chapter 8: Community Facilities, Goal 1 - To allow new development only when all community facilities are available or can be expanded to serve that development.

Chapter 9: Natural and Agricultural Resources, Goal 4 - To protect the aquifer and manage the use of groundwater.

The **2014 Carroll County Master Plan, as amended in 2019**, identifies applicable goals that are related to providing properties with public water and sewer as follows:

Chapter 3: Vision Statement & Goals - Promote communication and coordination between and among the County, the municipalities, and state and regional jurisdictions on projects and issues of mutual concern. Encourage the involvement of the community in developing, amending, and implementing the Master Plan.

Chapter 3: Vision Statement & Goals - Protect and enhance the water quality of Carroll County's rivers, streams, reservoirs, and aquifers; comply with applicable state and federal requirements related to water quality and quantity; and maintain and protect adequate water supplies to serve current and planned development.

Analyzing Changes to Projected Sewer Supply and Capacity

According to County Policy, the County is using Maryland Department of the Environment multipliers for water and wastewater supply (unless otherwise noted), as follows:

Residential GPD	250 GPD x No. of units (Residential Buildable Land Inventory GIS Layer)
Commercial GPD	700 GPD x usable acres (Non-Residential BLI GIS Layer)
Industrial GPD	800 GPD x usable acres (Non-Residential BLI GIS Layer)

According to Table 32 in the Master Plan, sewer capacity for the Town of Hampstead is currently 900,000 GPD.

Hampstead Sewer Service Area Map (Map 22) and Demand Calculations:

This is the second amendment to the 2023 Water & Sewer Master Plan for the Hampstead sewer service area. Amendment No. 2 will update the Hampstead Sewer Map and Text by moving Property with SDAT No. 0708-033196 and 070-8040923 from Future (S-5) to Priority (S-3) and add 5,554 GPD of *Other Demand*, to Priority, in Table 32.

This amendment is for two properties. One property (0708-033196) is proposed to have a commercial use (Tractor Supply Company) on 6.570 acres of buildable land (4,599 GPD). The other property (0708-040923) will have a commercial type use on 1.364 acres of buildable land (955 GPD). This would combine to total 5,554 GPD.

As exhibited above, the change in sewer demand will modify Table 32, as follows:

	Table 32					
	Projected Sewerage Demands and Planned Capacity*					
	Priority Planning					
	(0-6 Years)					
	Residential Population Served	Gallons Per Capita Per Day	Capacity			
			Million Gallon Daily (MGD)			
			Residential Demand	Other Demand	Total Demand	Existing Capacity
Triennial	7,721	72	0.555	0.314	0.869	0.9
Amendment 1			0.565	0.314	0.879	0.9
Amendment 2			0.565	0.320	0.885	0.9

Note: Please be advised that water and sewer as shown in the charts are cumulative. For instance, water in Existing is also reflected in Priority and Future. Water in Priority is also reflected in Future.

Definitions

Definitions for service area categories can be found on pages 23 and 24 of the 2023 Water and Sewer Master Plan:

Agency Comments

The Bureau of Comprehensive Planning had sent out the staff report and information to the review agencies on the listed dates below, for their preliminary review:

Department of Natural Resources (DNR) – October 2, 2024
Carroll County Health Department (CCHD) – October 2, 2024
Maryland Department of the Environment (MDE) – October 2, 2024
Maryland Department of Planning (MDP) – October 2, 2024
Carroll County Bureau of Utilities (Utilities) – October 2, 2024

Carroll County Bureau of Comprehensive Planning received MDE and MDP comments dated November 13, 2024 and discussed these comments with MDE and subsequently Hampstead on November 20, 2024. MDE/MDP Comments are attached to this report.

Staff Recommendation

County Planning Staff recommends the Board of County Commissioners of Carroll County adopt the request to amend the Priority Sewer Service Area on Map 22 (Hampstead Sewer Service Area) as described above, adding 5,554 GPD to the demand calculations in Table 32 as described above.

Attachments:

1. Hampstead Planning and Zoning Commission Consistency Letter
2. MDE/MDP November 13, 2024 Comments

Council Members:
Diane Barrett
Deborah Painter
Wayne H. Thomas
David Unglesbee
Benjamin Zolman

Christopher M. Nevin
Mayor



Jim Roark
Town Manager

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2023 CARROLL COUNTY WATER AND SEWER MASTER PLAN

2024 FALL AMENDMENT

October 23, 2024

To Whom It May Concern:

The Hampstead Planning and Zoning Commission hereby certifies the 2024 Fall Amendment to the 2023 Carroll County Water and Sewer Master Plan, as it pertains to the Town of Hampstead, is consistent with the 2010 Hampstead Community Comprehensive Plan, amended in 2023, as exemplified in the associated submission information.

A handwritten signature in blue ink, reading "Sharon Callahan", is written over a horizontal line.

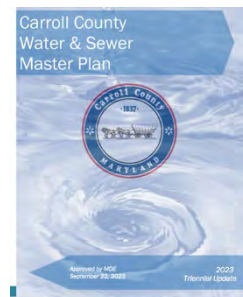
Sharon Callahan
Chair of the Hampstead Planning and Zoning Commission

2023 Water and Sewer Master Plan – Fall 2024 Amendment Staff Report

To: Board of County Commissioners
From: Andrew R. Gray, AICP, Planner
Meeting Date: December 19, 2024
System Change: Manchester Water and Sewer – Amendment No. 1 for each
Requestor: Town of Manchester
GPD Transferred: See Table 15 and 32 excerpt below
Current Service Area: See descriptions below
Proposed Service Area: See descriptions below
Request Summary: To make several edits to the Water and Sewer Master Plan maps and text as detailed below.
Requested Action: **Approve**



**Bureau of
Comprehensive Planning**



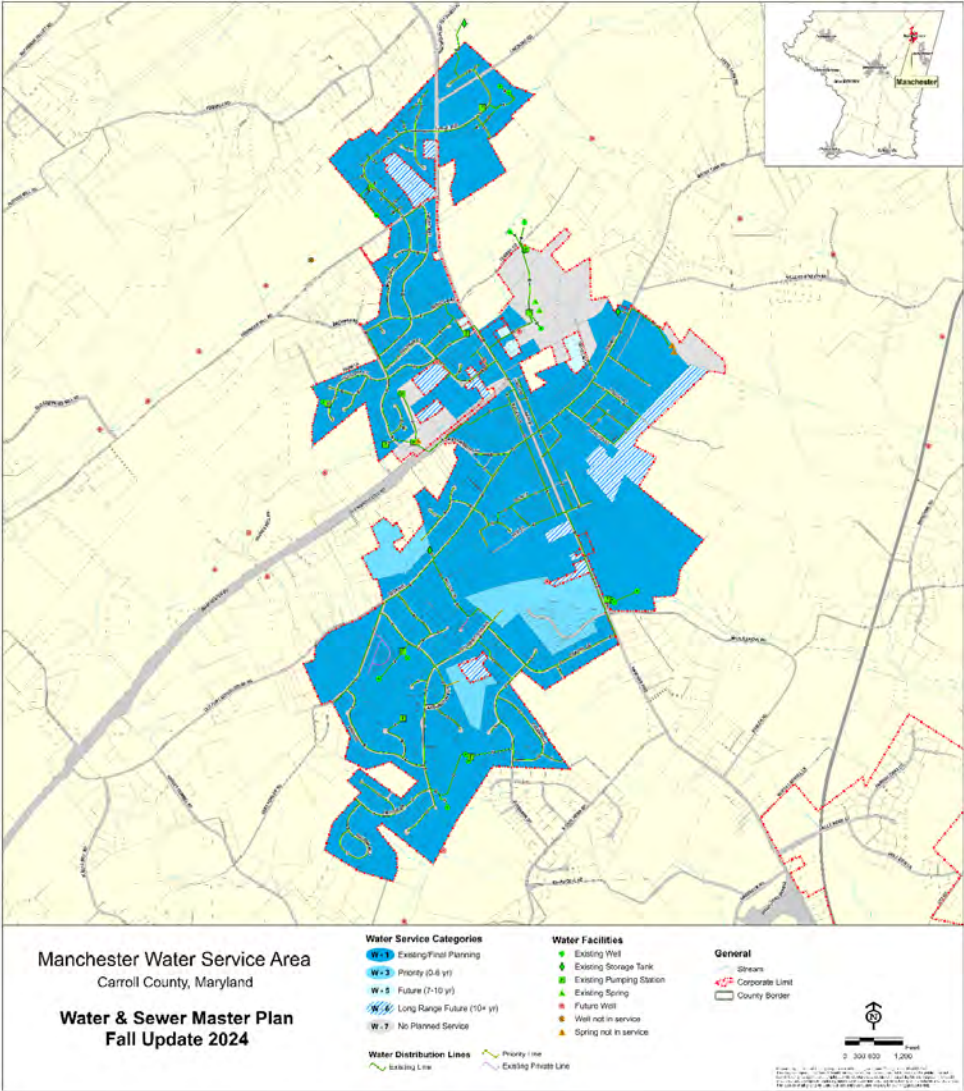
Summary

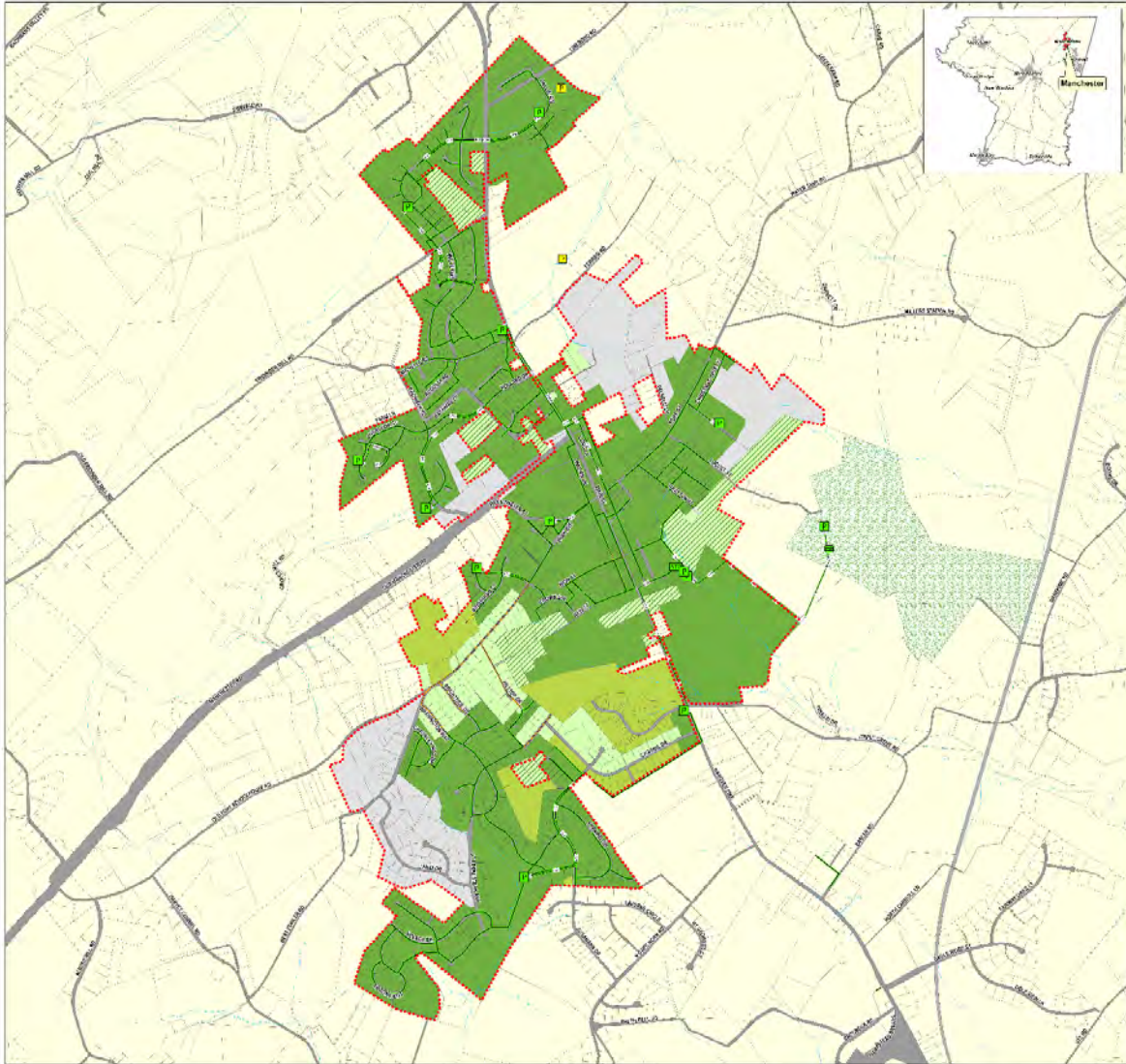
On July 18, 2024, the Carroll County Bureau of Comprehensive Planning received a request from the Town of Manchester (Town) to transfer a total 250 GPD of residential **sewer** demand from the Manchester *Future Sewer Service Area (S-5)* to the *Existing Sewer Service Area (S-1)*. On August 1, 2024, the Carroll County Bureau of Comprehensive Planning received a request from the Town to transfer a total 2,000 GPD of **sewer** capacity from the Manchester *Existing Sewer Service Area (S-1)* to the *Priority Sewer Service Area (S-3)*. On August 12, 2024, Andrew Gray, met with Town Staff to go over proposed edits to the Manchester **Water and Sewer** Service Area Maps to confirm these maps and all proposed changes were accurate. Edits from this discussion reflect what is proposed in this amendment.

On October 15, 2024, the Manchester Planning and Zoning Commission certified the 2024 Fall Amendment to the 2023 Carroll County Water and Sewer Master Plan, as it pertains to the Town of Manchester, is consistent with the 2018 Manchester Comprehensive Plan.

On November 19, 2024 the Carroll County Planning and Zoning Commission forwarded the Manchester amendment, and Planning Commission Certification for the Town of Manchester 2018 Comprehensive Plan, to the Board of County Commissioners for final review and adoption.

Maps





Manchester Sewer Service Area
Carroll County, Maryland

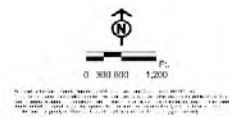
**Water & Sewer Master Plan
Fall Update 2024**

- Sewer Service Areas**
- Existing/Final Planning
 - Priority (0-5 yr)
 - Future (7-10 yr)
 - Long Range (10+ yr)
 - Wastewater Treatment
 - No Planned Service

- Sewer Distribution Lines**
- Existing Line
 - Existing Force Main
 - Priority Line
 - Future Line

- Sewer Facilities**
- Existing Treatment Plant
 - Existing Pumping Station
 - Existing Storage Pond
 - Priority Pumping Station

- General**
- Corporate Limit
 - County Border
 - Stream



Comprehensive and Master Plan Goals

The **2018 Manchester Community Comprehensive Plan** identifies applicable goals that support providing properties with public water and sewer as follows:

Vision #4 - Natural Resources and Sensitive Areas Element

GOAL # 1 - Clean Water, Air and Land. Develop written guidelines and other measures that protect the community's water, air, and land from the impact of future growth and development.

Vision #5 - Land Use Element

GOAL # 4 - Population Cap. At build-out, the ultimate population must be adequately served by the current .5 MGD capacity of the town's WWTP and other essential public services, resources, facilities, and infrastructure (including population in the future growth area). A capacity analysis should be completed annually to ensure that essential public services are available to serve the public and to determine if any physical, natural, quantitative, qualitative, or financial limitations exist that might impede the provision of these services.

Vision# 6- Water Resources Element

Identify, secure, and provide adequate drinking water supplies, in keeping with the town's approved land use plan and population cap.

GOAL# 1 - Mapping. Prepare a water resources map, showing the town's existing public water system components, including wells, well-head protection zones, springs, streams, hydro-geologic factors, soils, water treatment plants, distribution lines, pumps, storage tanks, fire suppression systems (hydrants), etc.

GOAL # 5 - Water Resources Protection. Recommend measures to monitor, protect, and guard all public water resources through appropriate design, regulations, and security measures, as necessary.

The **2014 Carroll County Master Plan, as amended in 2019**, identifies applicable goals that are related to providing properties with public water and sewer as follows:

Chapter 3: Vision Statement & Goals - Promote communication and coordination between and among the County, the municipalities, and state and regional jurisdictions on projects and issues of mutual concern. Encourage the involvement of the community in developing, amending, and implementing the Master Plan.

Chapter 3: Vision Statement & Goals - Protect and enhance the water quality of Carroll County’s rivers, streams, reservoirs, and aquifers; comply with applicable state and federal requirements related to water quality and quantity; and maintain and protect adequate water supplies to serve current and planned development.

Analyzing Changes to Projected Water and Sewer Supply and Capacity

According to County Policy, the County is using MDE multipliers for water and wastewater supply (unless otherwise noted) as follows:

Residential GPD	250 GPD x No. of units (Residential Buildable Land Inventory GIS Layer)
Commercial GPD	700 GPD x usable acres (Non-Residential BLI GIS Layer)
Industrial GPD	800 GPD x usable acres (Non-Residential BLI GIS Layer)

According to Table 15 and 32 in the Master Plan, existing water capacity for the Town of Manchester is currently 581,000 GPD and the existing sewer capacity for the Town is currently 500,000 GPD.

Manchester Water Service Area Map (Map 14) and Demand Calculations:

This is the first amendment to the 2023 Water & Sewer Master Plan for the Manchester water service area. Amendment No. 1 consists of the following:

1. Move five single-family dwelling units on property with SDAT No. 0706-037666 from Long-Range Future (W-6) to Existing (W-1) and add 1,250 GPD of *Residential Demand* to Future and Priority, in Table 15.
2. Move property with SDAT No. 0706-033938, 0706-039669, and 0706-041051 from Priority (W-3) to Existing (W-1). Note: no demand changes are necessary because according to the Town of Manchester, these properties have been connected to Public Water for at least ten years and therefore this amendment is not proposed to affect water flows since this water has been accounted for in the 2023 Triennial Update.
3. Depicting the 8" Existing Line that connects the Existing Storage Tank (near Manchester Baptist Church) to the 8" Existing Line.
4. Removing the *Future Water Storage Tank* on the map near Manchester Baptist Church Road.
5. Depicting the 6" Existing Line along Oak Street ending at the perpendicular 6" Existing Line.

6. Designate the two *Priority Wells* as two *Existing Wells*, south of Manchester Valley High School and north of Maple Grove Road.
7. Depict the 1.5" Existing Line to connect the *Existing Well* to the *Existing Pumping Station* south of Manchester Valley High School and north of Maple Grove Road.
8. Depict the *Existing Line* between the *Existing Pumping Station* and the *Existing Well* located to the northwest of the Washington Way and Southwestern Avenue Intersection.
9. Depict the connection of the *Existing Pumping Station* located west of Susanann Drive to the *Existing Well* located east of the Southwestern Avenue and Coleman Court intersection, with a 4" Existing Line.
10. Removing the *Future Storage Tank* in the map legend under "Water Facilities".

Manchester Sewer Service Area Map (Map 23) and Demand Calculations:

This is the first amendment to the 2023 Water & Sewer Master Plan for the Manchester sewer service area. Amendment No. 1 consists of the following:

1. Move 0.438 acres of Property with SDAT No. 0706-034667 from Existing (S-1) to Future (S-5), and subtract 307 GPD of *Other Demand* from Priority, in Table 32.
2. Move one single-family dwelling unit with SDAT No. 0706-039758 from No Planned Service to Existing (S-1) and add 250 GPD of *Residential Demand*, to Future and Priority, in Table 32, for part of Property with SDAT No. 0706-039758. The other part of the Property is already located in Existing (S-1).
3. Move nine single-family dwelling units with SDAT No. 0706-035302, 0706-048129, 0706-048110, 0706-048684, 0706-048536, 0706-041612, 0706-433964, 0706-433965, and 0706-048293 from No Planned Service to Long-Range (S-6).
4. Move Property with SDAT No. 0706-039669 and 0706-041051 from Priority (S-3) to Existing (S-1). Note: according to the Town of Manchester, these properties have been connected to Public Sewer for at least ten years and therefore this amendment is not proposed to affect sewer flows since this water has been accounted for in the 2023 Triennial Update.
5. Move one single-family dwelling unit with SDAT No. 0706-054609 from Existing (S-1) to Future (S-5) and subtract 250 GPD of *Residential Demand* from Priority, in Table 32.
6. Move one single-family dwelling unit with SDAT No. 0706-036201 from Future (S-5) to Existing (S-1) and add 250 GPD of *Residential Demand* to Priority, in Table 32.
7. Move eight single-family dwelling units with SDAT No. 0706-036139, 0706-037933, 0706-034535, 0706-034233, 0706-003036, 0706-038123, 0706-038980, and 0706-035817 from Existing (S-1) to Priority (S-3). No demand changes are necessary since these undeveloped lots are moving to Priority.
8. Move 11 single-family dwelling units with SDAT No. 0706-033962, 0706-036856, 0706-038549, 0706-035728, 0706-036791, 0706-035957, 0706-038352, 0706-036120, 0706-

035426, 0706-035418, and 0706-035396 from Existing (S-1) to Future (S-5) and subtract 2,750 GPD of *Residential Demand*, from Priority, in Table 32.

9. Move 17 single-family detached dwelling units with SDAT No. 0706-034977, 0706-035868, 0706-035272, 0706-038964, 0706-038921, 0706-033970, 0706-035922, 0706-036171, 0706-038859, 0706-035647, 0706-033857, 0706-037461, 0706-035787, 0706-038425, 0706-033954, 0706-035582, and 0706-038808 from Future (S-5) to Priority (S-3) and add 4,250 GPD of *Residential Demand* to Priority, in Table 32.
10. Move one single-family detached dwelling unit with SDAT No. 0706-047556 from Existing (S-1) to Priority (S-3). No demand changes are necessary since this undeveloped lot is moving to Priority.
11. Depict the *Existing Line*, in two areas along Arizona Way.
12. Depict the *Existing Line* along the full length of Oak Street.
13. Depict the *Existing Force Mains* near the *Existing Treatment Plant* to align with what is currently existing, per the map.
14. Removing the *Future Pumping Station* near Valley View Court.
15. Removing a *Priority Line* at Valley View Court.
16. Removing the *Existing Line* to the south of Property with SDAT No. 0706-038808.

Water and Sewer Text:

Please see Attachment 1.

This amendment will transfer water demand resulting in the following highlighted changes in Table 15 (below):

	Table 15 Projected Water Supply Demands and Planned Capacity*					
	<u>Present Year</u>					
	Residential Population Served	Gallons Per Capita Per Day	Capacity Million Gallon Daily (MGD)			
			Residential Demand	Other Demand	Total Demand	Existing Capacity
Triennial	5,408	42	0.225	0.031	0.256	0.581
Amendment 1			0.225	0.031	0.256	0.581

	Table 15 Projected Water Supply Demands and Planned Capacity*					
	<u>Priority Planning</u> (0-6 Years)					
	Residential Population Served	Gallons Per Capita Per Day	Capacity Million Gallon Daily (MGD)			
			Residential Demand	Other Demand	Total Demand	Existing Capacity
Triennial	6,776	51	0.347	0.053	0.400	0.606
Amendment 1			0.348	0.053	0.401	0.606

	Table 15 Projected Water Supply Demands and Planned Capacity*					
	<u>Future Capacity</u> (7-10 Years)					
	Residential Population Served	Gallons Per Capita Per Day	Capacity Million Gallon Daily (MGD)			
			Residential Demand	Other Demand	Total Demand	Existing Capacity
Triennial	6,784	51	0.348	0.053	0.401	0.606
Amendment 1			0.349	0.053	0.402	0.606

This amendment will transfer sewer demand resulting in the following highlighted changes in Table 32 (below):

	Table 32					
	Projected Sewerage Demands and Planned Capacity*					
	Present Year					
	Residential Population Served	Gallons Per Capita Per Day	Capacity Million Gallon Daily (MGD)			
Residential Demand			Other Demand	Total Demand	Existing Capacity	
Triennial	4,046	59	0.237	0.032	0.269	0.5
Amendment 1			0.237	0.032	0.269	0.5

	Table 32					
	Projected Sewerage Demands and Planned Capacity*					
	Priority Planning (0-6 Years)					
	Residential Population Served	Gallons Per Capita Per Day	Capacity Million Gallon Daily (MGD)			
Residential Demand			Other Demand	Total Demand	Existing Capacity	
Triennial	4,304	80	0.343	0.053	0.396	0.5
Amendment 1			0.345	0.053	0.397	0.5

	Table 32					
	Projected Sewerage Demands and Planned Capacity*					
	Future Planning (7-10 Years)					
	Residential Population Served	Gallons Per Capita Per Day	Capacity Million Gallon Daily (MGD)			
Residential Demand			Other Demand	Total Demand	Existing Capacity	
Triennial	4,548	77	0.349	0.053	0.402	0.5
Amendment 1			0.349	0.053	0.402	0.5

Note: Please be advised that water and sewer as shown in the charts are cumulative. For instance, water in Existing is also reflected in Priority and Future. Water in Priority is also reflected in Future.

Definitions

Definitions for service area categories can be found on pages 23 and 24 of the 2023 Water and Sewer Master Plan.

Agency Comments

The Bureau of Comprehensive Planning had sent out the staff report and information to the review agencies on the listed dates below, for their preliminary review:

- Department of Natural Resources (DNR) – October 2, 2024
- Carroll County Health Department (CCHD) – October 2, 2024
- Maryland Department of the Environment (MDE) – October 2, 2024
- Maryland Department of Planning (MDP) – October 2, 2024
- Carroll County Bureau of Utilities (Utilities) – October 2, 2024

Carroll County Bureau of Comprehensive Planning received MDE and MDP comments dated November 13, 2024 and discussed these comments with MDE and subsequently Manchester on November 20, 2024. MDE/MDP Comments are attached to this report.

Staff Recommendation

County Planning Staff recommends the Board of County Commissioners of Carroll County adopt the following requests:

1. Amend the Existing Water Service Area on Map 14 (Manchester Water Service Area) as described above.
2. Amend the Priority Water Service Area on Map 14 (Manchester Water Service Area) as described above, adding 1,250 GPD to the demand calculations in Table 15 as described above.
3. Amend the Future Water Service Area on Map 14 (Manchester Water Service Area) as described above, adding 1,250 GPD to the demand calculations in Table 15 as described above.
4. Amend the Existing Sewer Service Area on Map 23 (Manchester Sewer Service Area) as described above, adding 250 GPD to the demand calculations in Table 32 as described above.

5. Amend the Priority Sewer Service Area on Map 23 (Manchester Sewer Service Area) as described above, adding 1,500 GPD to the demand calculations in Table 32 as described above.
6. Amend the Future Sewer Service Area on Map 23 (Manchester Sewer Service Area) as described above, adding 250 GPD to the demand calculations in Table 32 as described above.
7. Make Text changes to the Water and Sewer Text as exhibited in the Attachment.

Attachments:

1. Water and Sewer Text Edits
2. Manchester Planning and Zoning Commission Consistency Letter
3. MDE/MDP November 13, 2024 Comments

Manchester Water Service Area

Current Conditions

The Town of Manchester owns and operates the public water system which limits service to its corporate boundary. The existing and planned WSA serves 1,792 EDUs, covers approximately 1,533 acres and is in the northeast portion of the County along MD 30. See Map 14: Manchester WSA. 2021 average daily use was 0.256 MGD. Average daily appropriations are 0.581 MGD.

The system is currently supplied by 19 wells, Hillside Spring, and 12 pumping stations. Hillside Spring is a spring within the larger Walnut Street Area Spring system. Water is treated at each well pumping station. Treatment consists of chlorination at all 12 pumping stations. Soda ash is also added at all 12 pumping stations for pH control. The High School plant (TP15) also incorporates anion exchange for removal of nitrate.

Water storage for the Town of Manchester is comprised of three elevated water storage tanks. A 500,000-gallon storage tank is located on York Street on the northeast side of Town; a 100,000-gallon storage tank located on Park Avenue in the western part of Town; and a 250,000-gallon storage tank located at the Manchester Baptist Church. The current storage system is a “floating” system which means three tanks are connected and act as overflow for the distribution system. When demand is low, additional water in the system goes to the tanks. When demand is high, water is relieved from the tanks by gravity. See Table 8A for Manchester WSA appropriations; Table 8B: Manchester WSA for average daily use; and Table 8C for Manchester WSA storage tanks.

Map 14

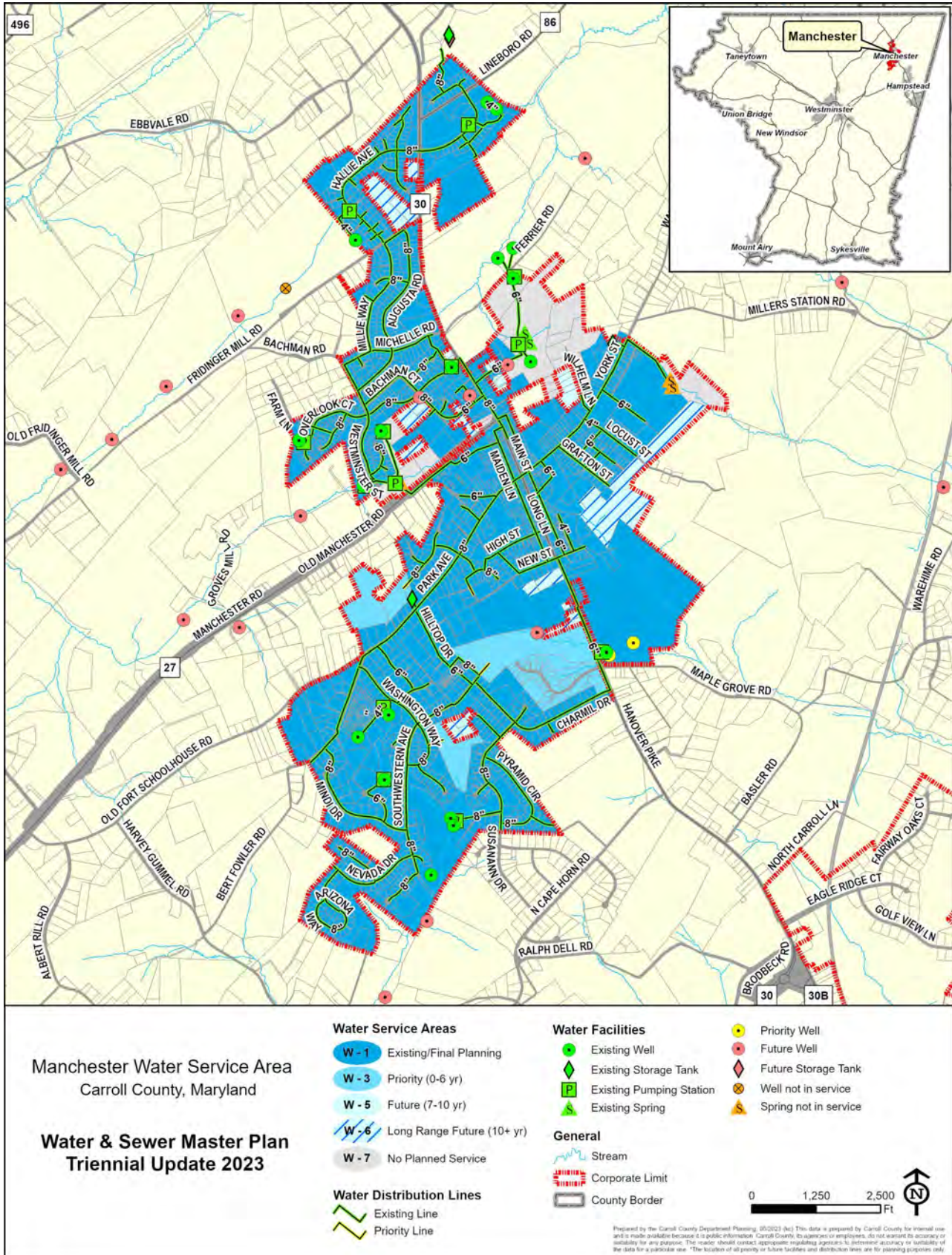


Table 8A: Manchester WSA Appropriations

6-Digit Watershed	Permit No.	Allocation		Wells/Springs Included in the Permit
		Average Daily Demand on Yearly Basis (gpd)	Daily Demand for Month of Maximum Use (gpd)	
Middle Potomac	CL1966G112(04)	134,000	199,000	<ul style="list-style-type: none"> ▪Bachman Road Well (Well #4) ▪Crossroads Well #1 (Well #8) ▪Crossroads Well #2 (Well #9) ▪Hallie Hill Well (Well #11)
Patapsco	CL1966G212(05)	27,700	50,600	<ul style="list-style-type: none"> ▪Patricia Court Well (Well #7) ▪Manchester Farms Well D ▪Manchester Farms Well B (Well #10) ▪Park Ridge Well (Well #13a) ▪Park Ridge B Well (Well #13b)
	CL1995G046(03)	69,700	116,400	
	CL2002G005 (04)	25,600	38,000	
	CL2004G021(05)	9,300	11,800	
Gunpowder	CL1966G012(12)	324,000	486,000	<ul style="list-style-type: none"> ▪Walnut Street Spring Area ▪MV1 Well #6 Route 30 Lippy ▪MV2 Manchester V RW ▪MV3 Manchester V TW4Alt ▪Holland Drive Well (Well #2) ▪Black Farm Well #1 (Hallie Hill L Well #14L) ▪Black Farm Well #2 (Hallie Hill N Well #14N) ▪Ferrier Road Wells (A, B, C) (Well #12) ▪Walnut Street Well (Well #1)
Totals		581,000	890,000 886,200	

Since 2000, 9 new wells have been brought online. Most recently (2009), the Chauncy Hill Well, also known as Park Ridge B Well #13b, was connected. Hallie Hill Wells “L” and “N”, also known as Black Farms Well #1 and #2, were connected in 2007.

A hydraulic model of the Town’s entire water system was originally developed along with a 15-year projection for water storage needs. The hydraulic model is an ongoing process, as new water supplies or additional developments are brought onto the system the model is updated. If the update is not a Town project, the cost of the update is paid by the developer. ~~Walnut Street Spring storage capacity is 47,965 gpd.~~

Table 8B: Manchester WSA Average Daily Use

Water Sources	Max. Safe Yield (MGD)	Avg. Daily Use (MGD)	Max. Peak Flow (MGD)
Bachman Road (Dell) Well	0.069	0.056	0.137
Park Ridge Well 13B	0.020	0.008	0.044
Crossroads #1 Well	0.038	0.030	0.076
Crossroads #2 Well	0.044	0.012	0.087
Holland Drive Well	0.041	0.016	0.083
Manchester Farms Well B	0.056	0.039	0.113
Manchester Farms Well D	0.010	0.006	0.008
Manchester Valley Wells (3 Wells)	0.100	0.042	0.075
Patricia Court Well	0.014	0.007	0.029
Hallie Hill Well	0.037	0.021	0.074
Hallie Hill "L" Well 14a	0.024	0.012	0.057
Hallie Hill "N" Well 14b	0.039	0.023	0.068
Ferrier Road Well A	0.020	0.011	0.052
Ferrier Road Well B	0.020	0.005	0.029
Ferrier Road Well C	0.019	0.016	0.038
Park Ridge Well 13A	0.029	0.007	0.055
Walnut Street Well	0.012	0.005	0.020
<i>Total</i>	<i>0.592</i>	<i>0.316</i>	<i>1.045</i>

Table 8C: Manchester WSA Storage Tanks

Storage Tank	Storage Capacity (mg)
Manchester Baptist Church Water Tank	0.250
Park Avenue Water Tank	0.100
York Street Water Tank	0.500
<i>Total</i>	<i>0.850</i>

Allocation Procedure

Prior to approving a development, the proposed use shall be considered in light of the Town's current water supply capacity, as limited by the Town's water appropriations, pumping capability, peaking and drought factors. If the Town determines that adequate water capacity for the proposed use, a fee of **\$15,000** per EDU will be assessed, payable with the application of each building permit.

In addition, Chapter 241, the water section of the Town Code requires that public facilities, including water, be adequate for Planning Commission approval at each stage of the approval process.

Needs Analysis

The Huppman Spring, which is part of the larger Walnut Street Area Spring system, has been out-of-service for approximately four years due to surface water influence. Manchester has identified potential municipal groundwater sources and completed rehabilitation of the Walnut Street Area Spring system to address susceptibility to surface water influence and restore water quality. The Town is studying the extent of the contamination problems. Once studies are complete, the Town will develop a strategy to remediate water quality, if needed. **Currently, due to budget constraints, the study for the Walnut Street Spring remediation has not been completed. At this time, the Springs are offline due to contamination. The Town wants to keep the option of remediation available for the future should they need additional water resources.**

The Town has had a long-standing goal of developing an accurate and complete map of its distribution system. Such a comprehensive inventory is needed to make the most efficient decisions in emergency situations such as a water main break or if an individual home’s water valve will not shut off.

Given that policy changes related to groundwater or changes in projected demand may occur in the future, additional water sources may need to be planned. See Table 8D: Manchester WSA Inventory of Manchester WSA water problem areas.

Table 8D: Manchester WSA Water Problem Areas

Location	Population	Nature of Problem	Status
Manchester	5,440	Impact of Surface Water Treatment Rule under the Safe Drinking Water Act on Town’s springs	Under study
Sheetz Store		Petroleum and MTBE	Under Study

Planned Projects and Recommendations

See Table 8E for Manchester WSA priority projects.

Table 8E: Manchester WSA Priority Projects

Project Name	Planning Category	Description	Location	Added Capacity
Computer Mapping	Priority (W-3) Immediate	Develop mapping of complete water distribution system	Entire Town	0 MGD
Refurbish Walnut Street Springs	Priority (W-3) 5 Years	Refurbish springs to meet Surface Water Treatment Rule	North side of Town	.025 MGD
Aging Infrastructure Replacement	Priority (W-3)	Replace aged infrastructure to reduce leaks	Entire Town	TBD*
New Wells	Future (W-5) 10 Years	Develop and connect new wells	Walnut Street and Bachman Road	TBD*
PFAS Mitigation	Priority (W-3)	Construct a treatment facility to treat 3 stations (Manchester Farms, Park Ridge, Patricia Court)	Manchester Farms	0 MGD

* As conversations progress this additional capacity will be determined

Long-Term Recommendations (10+ years)

- Map the water distribution system for tracking purposes and make decisions in instances of drought in inadequate water supply.
- Maintain long-term options for non-groundwater water supply.

Manchester Sewer Service Area

Current Conditions

The Town of Manchester owns and operates its sewer system and limits service to the corporate boundary. The Manchester SSA area comprises about 1,301 acres located in the northeast corner of the county along MD 30 and serves 1,883 EDUs. Manchester WWTP capacity is 0.500 MGD. Average flow in 2023 was 0.263 MGD.

The existing sewer system became operational in 1969 and consists of a collection system, eleven pumping stations, and a sewage treatment plant located east of Beaver Street. A spray irrigation facility is also utilized in the waste treatment process and is located south of Manchester on Warehime Road. Sewage flow is primarily domestic, with a small amount of commercial waste.

The sewage treatment plant is a package secondary treatment facility utilizing contact stabilization with anaerobic digestion of sludge. The design capacity is 0.500 MGD, with a three-year average flow from 2021-2023 of approximately 0.264 MGD, excluding estimated I&I. Effluent from the treatment plant is pumped from the treatment plant via a 14-inch diameter force main to a 5.0 mg storage lagoon, and in turn, spray irrigated onto Town-owned irrigation fields. The Town of Manchester utilizes and harvests a crop of reed canary grass for nutrient uptake on the spray irrigation fields. The Town is allowed to spray irrigate March 1 through November 30. For the remaining 3 months, December 1 through February 28, the plant's effluent is discharged into George's Run, which is a tributary of Prettyboy Reservoir in Baltimore County. The Town is permitted to spray 0.5 mg of effluent per day. See Tables 19A-19D for Manchester SSA infrastructure.

Inventory of Existing Wastewater Treatment Plants, Interceptors, Sewage Pumping Stations, and Force Mains

Table 19A: Manchester SSA Treatment Plant

WWTP Treatment Type	Points of Discharge	WWTP Design Capacity (MGD)	Flows Average/Peak	Method of Sludge Disposal
WWTP activated sludge contact stabilization with land application via spray irrigation	Land application via spray irrigation /George's Run (winter)	0.500	0.269/ 0.498 mgd	Stabilized sludge is dewatered onsite and is trucked to the Modern Landfill, York PA. by an independent hauler

Discharge Permit Number: 18-DP-0642 NPDES Number: MD0022578

Map 23

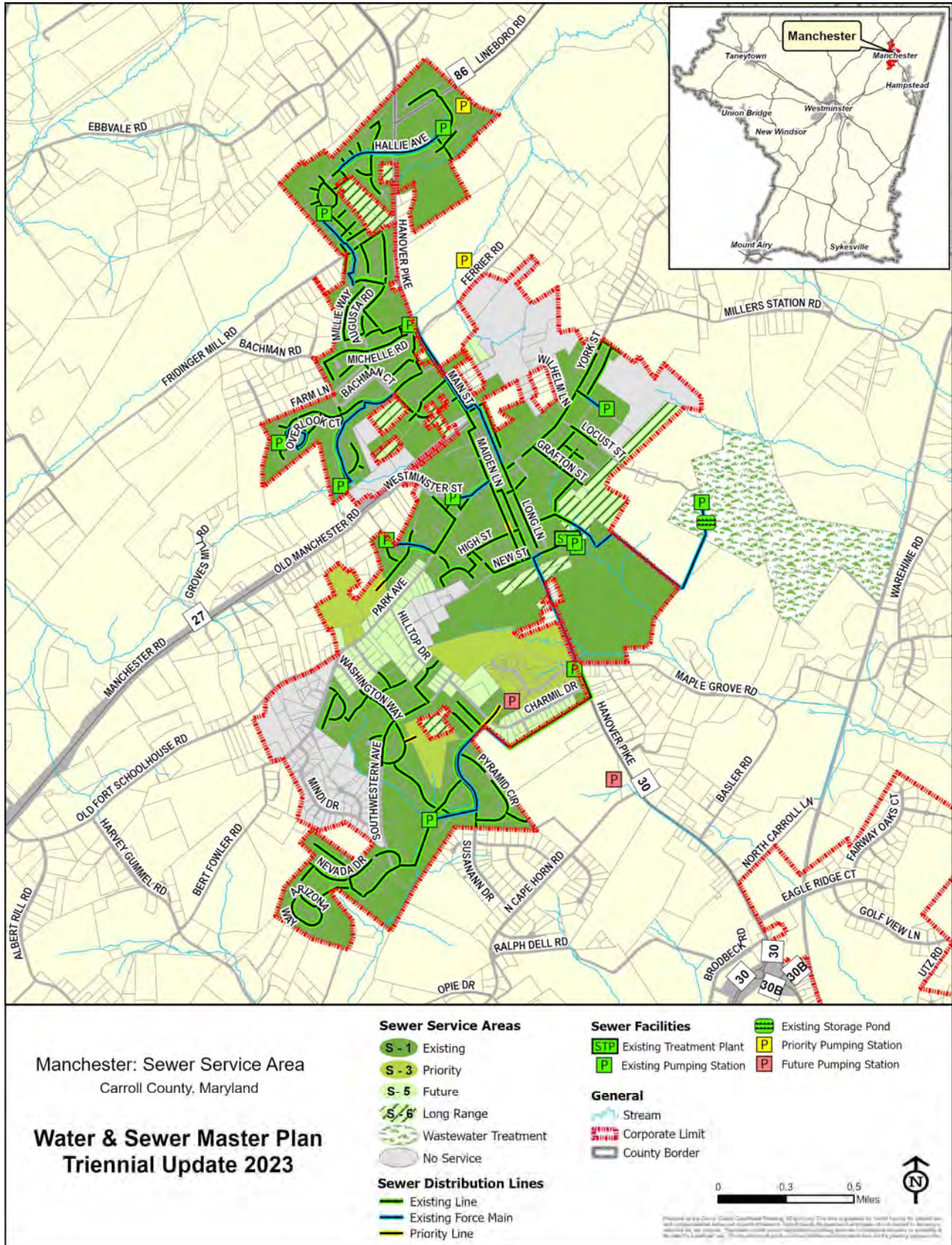


Table 19B: Manchester SSA Interceptors

Interceptor	Diameter (inches)	Average Day Flow (MGD)	Design Flow (MGD)
Main Influent line to WWTP	16	0.269	2.000
Northern Line	8	0.117	1.800
Westminster Street	8	Not metered	0.288
Hallie Hills #1	8	Not metered	0.518
Hallie Hills #2	8	Not metered	0.500
Coachman Way	8	Not metered	0.288
Victory Street	6	Not metered	0.072
Southern Line	8	0.055	1.000
Crossroads Overlook #1	8	Not metered	0.700
Crossroads Overlook #2	8	Not metered	0.288
<i>Total</i>		<i>0.441</i>	<i>7.454</i>

Table 19C: Manchester SSA Pumping Stations

Pumping Station	Coordinate Location*	# Of Pumps	Capacity of Each Pump (MGD)	Normal Pumping Capacity (MGD)	Average Day Pumping (MGD)
Manchester WWTP	N 725574.11 E 1346217.60	2	2.000	0.250	0.237
Westminster Street	N 726009.53 E 1343736.75	2	0.144	Unknown (No Flow Meter)	0.030 (Est.)
Hallie Hills Station #1	N 3940.525 W 7653.793	2	0.259	n/a No Flow Meter	0.030 (Est.)
Hallie Hills Station #2	N 3940.790 W 7653.294	2	0.250	n/a No Flow Meter	0.014 (Est.)
Maple Grove Road (South Station)	N 725250.08 E 1346561.88	2	0.500	0.038	0.038
Michelle Road (North Station)	N 729472.59 E 1343058.31	4	0.450	0.056	0.056
Park Ave. Estates Station	N 725229.83 E 1342521.64	2	0.144	Unknown (No Flow Meter)	0.100 (Est.)
Victory Street	N 727741.06 E 1347311.20	2	0.036	Unknown (No Flow Meter)	0.002 (Est.)
Effluent P.S. to Lagoon	N 725270.33 E 1346551.75	2	2.100	0.356	0.356
Manchester Farms	N 1343199.85 W 718901.51	4	0.430	n/a No Flow Meter	0.032 (Est.)
Crossroads Station #1	N 1341755.22 W 726143.27	2	0.350	n/a No Flow Meter	0.045 (Est.)
Crossroads Station #2	N 393976.50 W 765398.70	2	0.144	n/a No Flow Meter	0.180 (Est.)
Irrigation Pump Station (Spray Fields)	N 725857.64 E 1348779.45	3	1.600	0.522	0.498
<i>Total</i>		<i>31</i>	<i>8.407</i>	<i>1.222</i>	<i>1.618</i>

*Coordinate locations are Maryland State Plane 1983 Datum.

Table 19D: Manchester SSA Force Mains

Force Main	Maximum Day Pumpage in MGD (date)	Diameter (inches)	Design Flow (MGD)
Westminster Street	Unknown (No Flow Meter)	4	0.300
Millie Way	Unknown (No Flow Meter)	4	0.030
Coachman Way	Unknown (No Flow Meter)	4	0.290
Christmas Tree Lane (Victory St.)	Unknown (No Flow Meter)	2	0.036
Lagoon	0.730 (01/01/21)	14	4.200
Sprayfields	0.707 (06/01/21)	10	1.600
Hanover Pike (North Station)	n/a	10	1.800
Hanover Pike (South Station)	.055 (08/04/21)	10	2.000
Westminster Street (from Crossroads Station #1)	No Flow Meter	4	0.350
Susanann Drive	No Flow Meter	6	0.860
Main St. to Long Lane (North Station)	0.119 (10/21/21)	10	2.000
Westminster Street (Westminster St. Station)	Unknown	4	0.144/pump
Hallie Ave. to Millie Way (Hallie Hill Station)	Unknown	6	0.091
Hallie Ave West to Hallie Ave.	Unknown	6	0.145
Coachman Way (Park Ave. Station)	Unknown	4	0.144/pump
Christmas Tree Lane (Victory St. Station)	Unknown	2	.3600
Eff. Line to Lagoon (Eff. Pump Station)	0.730	14	2.100
Eff. Line to Sprayfields (Sprayfield Station)	0.499-Based on Lagoon Level	2-10	4.800
Westminster Street (Crossroads Station #1)	Unknown	6	0.350/pump
Overlook Court (Crossroads Station #2)	Unknown	4	0.144/pump
Susanann Drive (Manchester Farms Station)	Unknown	6	0.430/pump
WWTP	0.497 (12/20/09)	8	2.000
<i>Total</i>	<i>3.337</i>		<i>24.174</i>

*Provided Design Average Daily Flow for Design Flow.

Sludge Management

The Manchester Wastewater Treatment Plant generates approximately 1.6 million gallons of wet sludge per year. The stabilized sludge which is generated at the facility is dewatered via a belt-filter press. Dewatered sludge cake is then transported to the Modern Landfill for disposal. The average amount of dewatered sludge transported is 23 tons per month, or 454 tons per year. See Table 19E for Manchester SSA Sludge Management.

Table 19E: Manchester SSA Sludge Management

Quantity	Quality	Method of Disposal/Use	Permit #s	Future Disposal Method	Problems
Average of 23 tons of dewatered sludge per month	Digested liquid sludge, 12% solids, aerobic digestion	Dewatered sludge transported to Modern Landfill	S-02-06-4853L	Agricultural land application, composting	None

Allocation Procedure

Allocations are made on a “first-come, first-served” basis following approval of a site plan or subdivision. Flows for residential development are calculated at 375 gallons per dwelling unit per day. Commercial and industrial flows are calculated by the applicant’s engineers and reviewed by the Town.

In addition, Section 173 “Sewer” section of the Town Code requires that public facilities, including sewer, be adequate for the Planning Commission to approve a project at each stage of the development approval process.

Needs Analysis

No further expansion of the existing 0.500 mgd wastewater treatment plant capacity is contemplated or planned. The planned service area has been scaled to the remaining capacity of the existing facility, consistent with the Comprehensive Plan for Manchester and Environs, as amended. The Town’s sewer system experiences **inflow & infiltration** (I&I), which results in additional flows of approximately 29,613 gpd to the wastewater treatment plant. To reduce I&I, the Town conducted an I&I study to determine levels of inflow and made system improvements to address the problem. This will make the most efficient use of the system and allow available capacity to be allocated to the planned service area. Periodic monitoring and correction of future problem areas will continue to be necessary.

In the southwestern end of Town, there are existing homes and areas planned for development, but sewer lines do not currently exist to serve them. Most notably, the existing homes on Charmil Drive are not served by public sewer. The sewer line that carries wastewater from Manchester Farms could, in the future, serve approximately 28 homes along the south side of Charmil Drive. However, service to the remaining homes in the Charmil Drive area would still require construction of additional sewer lines. See Table 19F: Manchester SSA sewage problem areas.

Table 19F: Manchester SSA Sewage Problem Areas

Location	Population (Where Applicable)	Nature Of Problem	Status
Charmil Drive	90	Groundwater contamination from failing septic systems in the area	Extend community sewer service to this area

Planned Projects and Recommendations

See Table 19G for Manchester SSA priority projects.

Table 19G: Manchester SSA Priority Projects

Project Name	Planning Category	Description	Location	Capacity Added
Infiltration/Inflow Improvements	Priority (S-3 5 years)	Continue to locate and remedy areas experiencing I&I problems	Various locations throughout the Town	.0 MGD*

Computer Mapping	Priority (S-3) Immediate	Develop computer mapping of complete wastewater collection system	Entire Town	0 MGD
Subsurface Discharge	Priority (S-3) 5 years	Design and explore feasibility of sub surface discharge to utilize the spray fields year-round	Spray Irrigation Facility	0 MGD
Wastewater Treatment Plant Upgrades	Priority (S-3) 5 years	Improvements to meet Enhanced Nutrient Removal goal	Existing WWTP	.0 MGD*

*These projects will be completed if grant funding becomes available

Long-Term Recommendations (10+ years)

- Explore options for providing public sewer service to existing developed areas in Town that currently are not served.



TOWN OF MANCHESTER

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MELINDA SMITH, MAYOR

2023 CARROLL COUNTY WATER AND SEWER MASTER PLAN

2024 FALL AMENDMENT

October 15, 2024

The Manchester Planning and Zoning Commission hereby certifies the 2024 Fall Amendment to the 2023 Carroll County Water and Sewer Master Plan, as it pertains to the Town of Manchester, is consistent with the 2018 Manchester Comprehensive Plan, as exemplified in the associated submission information.

Henry Keskinen, Chairperson

Manchester Planning and Zoning Commission

DISCLAIMER: Below are MDE's Comments on the Carroll County Fall 2024 Amendment, additional comments may be sent under a separate cover.

Water Resources Planning Division Comments:

- Hampstead
 - The request to move 2 properties (SDAT No. 0708-033196 and 0708-040923) from Future Sewer Service Area (S-5) to Priority (S-3) adds 5,554 gallons per day (GPD) of "Other Demand" to "Priority" in Table 32 for the Hampstead Sewer Service Area. The Hampstead Wastewater Treatment Plant (WWTP) has a design capacity of 0.9 million gallons per day (MGD) and 3-year-average flow (2020-2022) of 0.48 MGD which is 53% of the capacity. There is adequate capacity at the Hampstead WWTP for this Amendment.

- Manchester
 - This Amendment proposes to move five single-family dwelling units on property with SDAT No. 0706-037666 from Long-Range (W-6) to Existing (W-1), adding 1,250 GPD of Residential Demand to Future, Priority and Existing in Table 15, and bringing the Existing Total Demand to 0.257 MGD. Table 15 shows an Existing Capacity of 0.581 MGD for the Manchester Water Service Area therefore, there is adequate capacity.

 - 17 properties with SDAT No. 0706-034977, 0706-035868, 0706-035272, 0706-038964, 0706-038921, 0706-033970, 0706-035922, 0706-036171, 0706-038859, 0706-035647, 0706-033857, 0706-037461, 0706-035787, 0706-038425, 0706-033954, 0706-035582, and 0706-038808 (4,250 GPD), 1 property with SDAT No. 0706-039758 (250 GPD) and 1 property with SDAT No. 0706-036201 (250 GPD) will contribute in total 4,750 GPD to the Manchester WWTP which has a design capacity of 0.5 MGD and a 3-year-average flow (2020-2022) of 0.2664 MGD (53.28% capacity). The additional flows from this Amendment will bring the capacity to 0.27115 MGD (54.23% capacity). There is currently adequate capacity at the Manchester WWTP for this Amendment.

- The Department notes that the properties with SDAT No. 0708-033196, 0708-040923, 0706-054609, 0706-036139, 0706-037933, 0706-034535, 0706-034233, and 0706-047556 are located within the watershed of North Branch Patapsco River 1, SDAT No. 0708-033196 is located within the watershed of Murphy Run 1, and SDAT No. 0706-034667 is located within the watershed of South Branch Gunpowder Falls UT 1, identified as Tier II streams pursuant to COMAR 26.08.02.04-2. Tier II streams are high quality waters that require, under regulation, "that the Department shall review proposed updates or amendments to County Plans for any new or major modifications to discharges to a Tier II watershed". Any new or expanded discharge to these Tier II watersheds would require an Anti-degradation Review. All possible considerations

should be implemented to protect high quality waters from water quality degradation. This primarily consists of rigorous watershed planning, with consideration of the extra provisions necessary to protect high quality waters. An interactive map can be found on MDE's website:

<https://mdewin64.mde.state.md.us/WSA/TierIIWQ/index.html>

Additionally, there is no assimilative capacity in the N Branch Patapsco River 1 and S Branch Gunpowder Falls UT 1 watersheds. This means that recent data indicates that sometime after designation, the Tier II stream segment has degraded. Therefore, a social and economic justification (SEJ) may be needed for projects within these Tier II watersheds. An SEJ must demonstrate that the benefits of a particular project outweigh the value of maintaining the high water quality of the Tier II watershed. SEJ documentation undergoes public review concurrently with any public review process associated with the relevant wetlands and waterways authorizations or NPDES permits. For more information regarding Maryland's Tier II Antidegradation Review and SEJ requirements, please visit:

<https://mde.maryland.gov/programs/Water/TMDL/WaterQualityStandards/Pages/Tier-II-Review.aspx>

The Department recommends that the County consider the following measures in an effort to maintain these high-quality waters when approving new growth in the watersheds of these stream segments:

- A. Implement restrictive zoning or ordinances to protect environmental features.
- B. Re-direct planned growth out of the watersheds of these stream segments.
- C. Retrofit existing stormwater infrastructure.
- D. Incorporate environmental site design (ESD) and other low-impact development (LID) practices into new development.
- E. Maintain and expand existing forest cover.
- F. Provide riparian buffers of 100-230 feet (depending upon soil types and slopes).

The County should be aware that future plans facilitated by this Amendment may incur an additional Tier II Antidegradation Review including an SEJ at later stages, on a project-by-project basis. For additional information about Maryland's Tier II high quality waters please visit:

https://mde.maryland.gov/programs/water/tmdl/waterqualitystandards/pages/antidegradation_policy.aspx

The County is advised to contact Matthew Stover, Water Quality Standards and Analysis Division, Watershed Protection, Restoration, and Planning Program, Water and Science Administration

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(WSA)/MDE, at (410) 537-3611 for additional information regarding the regulatory requirements for Tier II waters.

- Please be advised that there are properties within the Liberty and Prettyboy Reservoir watersheds, listed below, subject to the Reservoir Watershed Management Agreement and Action Strategy which requires that Carroll County maintain the extent of conservation zoning in the reservoir watersheds and limit additional urban development zoning in the reservoir watersheds insofar as possible.
 - Properties within the Prettyboy Reservoir watershed: SDAT No. 0708-033196, 0708-040923, 0706-037666, 0706-033938, 0706-039669, 0706-041051, 0706-034667, SDAT No. 0706-035302, 0706-048129, 0706-048110, 0706-048684, 0706-048536, 0706-041612, 0706-433964, 0706-433965, 0706-048293, 0706-039669, 0706-041051, 0706-036201, 0706-036139, 0706-037933, 0706-034535, 0706-034233, 0706-003036, 0706-038123, 0706-038980, 0706-035817, 0706-033962, 0706-036856, 0706-038549, 0706-035728, 0706-036791, 0706-035957, 0706-038352, 0706-036120, 0706-035426, 0706-035418, 0706-035396, 0706-034977, 0706-035868, 0706-035272, 0706-038964, 0706-038921, 0706-033970, 0706-035922, 0706-036171, 0706-038859, 0706-035647, 0706-033857, 0706-037461, 0706-035787, 0706-038425, 0706-033954, 0706-035582, and 0706-038808
 - Properties within the Liberty Reservoir watershed: SDAT No. 0705-020026, 0705026512, 0705-026504, 0705-026490, 0708-033196, 0708-040923, 0706-054609, 0706-003036, 0706-038123, 0706-038980, 0706-035817, and 0706-047556
- Please be advised that when submitting the adopted amendment, the County is required to provide documentation of the duly advertised public hearing, public notices, County planning agency review, certification of consistency with the comprehensive plan and the adopted signed resolution.

Water Supply Program Comments:

- Table 15 Future projected demand increases from 0.257 MGD to 0.401 MGD (0-6 years) to 0.402 MGD (7-10 years) is less than 80% of the present year existing capacity of 0.581 MGD. Therefore, the proposed future increase to capacity to 0.606 MGD is not anticipated to be necessary.
- Table 15 Future projected existing capacity (0-6 years) and (7-10) years of 0.606 MGD exceeds Table 8B Total Max. Safe Yield of 0.592 MGD for Average Daily Use. Additional hydrogeologic investigation would be necessary if future capacity is needed to be increased.
- Please make the following changes to Table 8A: Remove Permit No. CL2004G021(05) and its allocations, as Permit CL2004G023(05) is inactivated and merged into CL2002G005(04). Update the Average Daily Demand for Permit No. CL2002G005(04) to 25,600 GPD and the Month Maximum Daily Demand to 38,000 GPD. Update Permit No. CL1966G212(05) Average Daily

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Demand to 27,700 GPD and Month Maximum Daily Demand to 50,600 GPD. The totals will add to 581,000 GPD for Average Daily Demand and 890,000 GPD for Month Maximum Daily Demand.

- Manchester WSA "Current Conditions" and Present Year Table 15
Recommend updating the previous 2021 average daily use value of 0.256 MGD to represent the 2023 average daily use value
- Manchester WSA "Needs Analysis":
Recommend updating the status of the study of the Walnut Street Area Spring system contamination problems and expand details.

Maryland Department of Planning (MDP) Comments:

- The Draft Fall 2024 Amendments for Freedom include 4 map corrections to the Freedom Water Service Area Map. MDP finds these changes neither consistent nor inconsistent with the 2014 Carroll County Master Plan.
- MDP assumes either consistency with the comprehensive plan or with a prior MDE final action to approve a planned sewer service category for the two properties in Hampstead that are proposing sewer changing from Future (S-5) to Priority (S-3):
 - Property (0708-033196) is proposed to have a commercial use (Tractor Supply Company) on 6.570 acres of buildable land
 - Property (0708-040923) will have a commercial use on 1.364 acres of buildable land.
- The Draft Fall 2024 Amendments for Manchester include twenty-six (26) text and map corrections to the WSP. These changes update several category changes due to mapping errors, completed infrastructure projects, and current demand and flow information, confirmed by Manchester's Zoning Administrator. MDP finds these changes neither consistent nor inconsistent with the 2014 Carroll County Master Plan.

If there are comments or questions regarding MDP's review, MDE encourages the County to contact MDP. See enclosed MDP's comments and contact information.



Maryland DEPARTMENT OF PLANNING

November 6, 2024

Ms. Dinorah Dalmasy, Manager, Watershed Protection, Restoration and Planning Program
Maryland Department of the Environment
Water and Science Administration
1800 Washington Boulevard
Baltimore, Maryland 21230

RE: Carroll County Draft Fall 2024 Water and Sewer Plan (WSP) Master Amendment

- Map Corrections for the Freedom Water Service Area
- Sewer Service Category Change for the Town of Hampstead Sewer Service Area
- Text and Map Corrections for the Town of Manchester

Dear Ms. Dalmasy:

The Maryland Department of Planning (MDP) has reviewed the above-referenced water and sewerage amendment pursuant to our mandate to advise the Maryland Department of the Environment (MDE) on local comprehensive plan consistency and other appropriate matters as required by Environment Article Section 9-507 (b)(2).

Amendments and Comprehensive Plan Consistency Analysis

The Draft Fall 2024 Amendments for Freedom include 4 map corrections to the Freedom Water Service Area Map. MDP finds these changes **neither consistent nor inconsistent** with the 2014 Carroll County Master Plan.

MDP assumes either consistency with the comprehensive plan or with a prior MDE final action to approve a planned sewer service category for the two properties in Hampstead that are proposing sewer changing from Future (S-5) to Priority (S-3):

- Property (0708-033196) is proposed to have a commercial use (Tractor Supply Company) on 6.570 acres of buildable land
- Property (0708-040923) will have a commercial use on 1.364 acres of buildable land.

MDE should contact MDP if it needs additional comprehensive plan consistency analysis for these amendments, which are all located in the Priority Funding Area.

The Draft Fall 2024 Amendments for Manchester include twenty-six (26) text and map corrections to the WSP. These changes update several category changes due to mapping errors, completed infrastructure projects, and current demand and flow information, confirmed by Manchester's Zoning Administrator. MDP finds these changes **neither consistent nor inconsistent** with the 2014 Carroll County Master Plan.

If you have any questions regarding this review, please contact Brooks Phelps at brooks.phelps@maryland.gov or Susan Llareus at susan.llareus@maryland.gov.

Sincerely,



Jason Dubow, CC-P, Director
Research, Review and Policy Division

cc: Robin Pellicano; Nicholai Francis-Lau; and Steve Alfaro, Maryland Department of the Environment
Tony Redman, Maryland Department of Natural Resources
Dwight Dotterer, Maryland Department of Agriculture
Jason Dubow; Susan Llareus; Keith Lackie, and Cassandra Malloy, Maryland Department of Planning