

WRE 2024



- **Summary & Staff Recommendations to Planning Commissions re: 60-Day Review (State & Neighboring) & Public Comment Period**
- **Redline pages reflecting staff recommendations**
- **Comments received**

January 20, 2026

Chair Janice R. Kirkner
Carroll County Planning and Zoning Commission
225 North Center Street
Westminster, MD 21157

Re: 2024 Carroll County Comprehensive Plan Water Resources Element 60-Day Review

Dear Chair Kirkner,

Thank you for requesting Maryland Department of Planning (MDP) comments on the update to the 2010 Carroll County Water Resources Element. MDP appreciates the opportunity to comment on the draft amendment (Draft Amendment) in preparation for the Planning Board hearing(s). These comments are offered to guide the county in ways to improve the Draft Amendment and better address the statutory requirements of the Land Use Article.

The Department forwarded a copy of the Draft Amendment to state agencies for review including the Maryland Historic Trust, the Departments of Transportation (MDOT), Environment (MDE), Natural Resources (DNR), Commerce, Disabilities, and Housing and Community Development (DHCD). To date, we have received comments from DHCD, MDOT, MDE, and DNR, and they are attached to this review. Any plan review comments received after the date of this letter will be forwarded upon receipt.

Maryland Sustainable Growth Principles Synopsis

Land Use Article Section 1-201 requires Maryland jurisdictions with planning & zoning authority to implement the state's eight planning principles (Principles) through a comprehensive plan. The Principles reflect the state's ongoing aspiration to create sustainable communities and to protect the environment to foster a high quality of life for all residents of Maryland. The Principles are land, transportation, housing, economy, equity, resilience, place, and ecology.

Plan Analysis

MDP acknowledges that through most of Carroll County's planning process, the Principles were not in effect and that it would be challenging for the town to incorporate them thoroughly at this stage. Of the eight Principles, Ecology and Land seem to be the most represented throughout the Draft Amendment,

which reflects the county’s intentions to conserve natural resources and direct growth toward existing population centers. MDP encourages the county to consider how it will apply the Principles through comprehensive plan implementation generally, and WRE implementation specifically.

Background

This update to Carroll County Comprehensive Plan is limited to the Water Resources Element (WRE), with a plan horizon of 2040. The purpose of the WRE is to identify:

- (1) “drinking water and other water resources that will be adequate for the needs of existing and future development proposed in the land use element of the plan; and,
- (2) suitable receiving waters and land areas to meet stormwater (SW) management and wastewater treatment and disposal needs of existing and future development proposed in the land use element of the plan” (Land Use Article §1-410 and §3-106).

The Draft Amendment includes the following chapters: Summary, Introduction, Carroll County Master Plan, Municipal Comprehensive Plans, and Planned Growth, Regulatory Setting, Drinking Water Supply, Wastewater, Stormwater, Countywide Strategies: Objectives and Action Items for All, Overview by Municipal System, and a List of Supporting, Contributing, and Guiding Documents.

The Draft Amendment is a collaboration between the county and the eight municipalities. The Draft Amendment was prepared in advance of updating comprehensive plans for the county and the municipalities with planning and zoning authority to facilitate and inform land use decisions and to update other plan elements. As each jurisdiction’s comprehensive plan is updated, those plans should consider and include action items in the approved WRE for prioritization and expansion, as appropriate.

The Draft Amendment includes a Buildable Land Inventory (BLI) that analyzes land development potential as of 2022 zoning for residential uses as well as other uses, and by using a certain growth rate (Round 10 projections, p. 19) The Draft Amendment indicates that full build-out is estimated in the year 2110. (See the table labelled Carroll County Population Projections [2022 Zoning] on p. 19) The Draft Amendment estimates county growth using a combination of the BLI and an anticipated growth rate, resulting in a population of approximately 183,956 by 2040 (67,701 households) and 214,138 (81,306 households).

Comprehensive Plan Amendment Analysis – Water Resources Element Synopsis

The water resource element is required to consider available data provided by the Maryland Department of the Environment (MDE) to identify drinking water that will be adequate for the needs of existing and future development proposed in the plan, as well as suitable receiving waters and land areas to meet stormwater management and wastewater treatment and disposal needs. MDE and MDP are available to provide technical assistance to prepare the water resources element, ensuring consistency with MDE programs and goals. MDE and MDP jointly developed WRE guidance to demonstrate how local governments can ensure compliance with the WRE requirements. Local jurisdictions are expected to implement the most important aspects of the [MDE/MDP WRE guidance](#).

Plan Analysis

Drinking Water Supply (pages 59–95)

Potential new residential lots include residential, agricultural, and conservation zoned lands, and potential additional non-residential acreage includes commercial, industrial, and employment campus zoned lands (page 63). MDP suggests including the potential for institutional land uses in this section, if appropriate.

The Future Water Demand table on page 65 shows the countywide demand at total buildout is 9,929,401 gallons per day. The following table on page 66 breaks down the future demand by residential versus non-residential in each of the Designated Growth Areas (DGA). In addition, page 66 explains that the combined additional residential and non-residential future water demand for the areas outside the DGAs/water service areas (WSAs) is estimated to be 1,272,650 gpd (536,250 gpd for residential uses and 736,400 gpd for non-residential uses). In total the combined total future water demand estimate for the county is 12,268,452 gpd at build-out.

The table on page 68 demonstrates that seven out of the eight DGAs would need additional water capacity to meet demand at buildout of their respective WSAs. The Draft Amendment states that all municipal systems understand that when capacity reaches 80%, a Water Supply Capacity Management Plan (WSCMP) will need to be submitted to MDE. MDP suggests that the Draft Amendment include additional information about water capacity outside of DGAs.

The Draft Amendment includes the findings of water balance assessment by watershed to help identify potential additional water supplies that may be available, including both groundwater and surface water. This assessment was originally completed in 2009 and updated in 2024. The analysis for each of the nine county watersheds shows that “Given the present level of analysis, water resources [in each watershed] are available in sufficient quantities that they could be developed to meet projected buildout demands” (pages 77–85). Furthermore, “With estimated existing and projected buildout demands of 23-31 mgd, groundwater and surface water resources in the county are theoretically more than adequate to meet existing and buildout demands” (page 87). The analysis includes residential and non-residential demand.

The Draft Amendment estimates that countywide water capacity will be 87,597,193 gpd of groundwater at buildout. Though the total future water demand at buildout represents only approximately 25% of the theoretical capacity, predicted shortages in the future demand projections exist due to an uneven distribution of water resources across the county as well as access and funding limitations. If adequate funding were available, then many of the capacity limitations could be overcome (page 89).

In summary, MDP commends the county on the excellent, thorough, and nuanced analyses completed in the Draft Amendment to assess the capacity and deficits of county water resources to meet future demand at buildout, including an assessment of limitations and how those limitations can be overcome.

Wastewater (pages 98–116)

The wastewater section includes detailed analyses to estimate future demand at buildout (page 100-101) including additional demand by land use [residential and non-residential]) and capacity at buildout, by municipal system. The total demand at buildout for all DGAs combined is 9,664,583 gpd. This includes residential and non-residential demand.

Current wastewater capacity is calculated by subtracting infiltration and inflow (I&I) from current permitted flows. Combined existing flows totaled 6,239,685 gpd countywide, serving a population of 69,838 (page 101). However, the table on page 102 indicates estimated current (2023) combined flows at 5,774,447 gpd serving a population of 84,208. MDP recommends clarifying this discrepancy.

Wastewater capacity needed to support demand, within all DGAs combined, at buildout is at a 539,259 gpd deficit (page 103). Two of the eight DGAs have sufficient capacity to meet demand at buildout. MDP suggests that the county consider including an analysis of the additional wastewater capacity needed outside of DGAs, particularly if sewer service areas expand outside of the DGA.

The wastewater section of the Draft Amendment also explains the limitations of each municipal system by watershed. Six of the eight wastewater treatment systems are projected to experience limitations to wastewater discharges at full buildout (page 106). Several planned or enacted improvements include WWTP expansions, ENR upgrades, I&I reduction, and effluent reuse. The Draft Amendment notes that “other strategies to maintain capacity and offset nutrient loads will need to be considered”, along with an analysis of several methods to do so (page 107).

The Summary of Long-Range Capacity and Limitations [of] Individual Municipal Wastewater Systems table summarizes the limiting factors for each municipal WWTP, the overall greatest limitation for each system, the design capacity, 2023 flows, and buildout demand (page 110). Two of the eight systems will have adequate capacity, four will need additional capacity that may be able to be met through I&I improvements and increasing allocations, while two would need to expand or construct a new WWTP to meet demand.

Enhanced Nutrient Removal (ENR) is proposed for the new WWTP, and while ENR is a high level of treatment to remove nutrients from wastewater discharge, it does not remove those nutrients entirely. MDP notes that there is a prohibition on new WWTPs that discharge to surface waters and suggests that the Draft Amendment should address the ban with respect to the new WWTP.

The wastewater section of the Draft Amendment also discusses septic systems and wastewater issues in unincorporated small communities. The county is working with Maryland Environmental Service (MES) and the University of Maryland Environmental Finance Center (EFC) to complete an alternatives analysis to investigate options to upgrade from failing septic tanks to a community-based wastewater treatment plant. The county commissioners will determine how to move forward after the study is complete.

The wastewater section of the Draft Amendment includes an explanation of the effects of climate change and emerging contaminants on the county’s wastewater systems.

In summary, MDP commends the county on the excellent, thorough, and nuanced analyses completed

in the Draft Amendment to assess the capacity and deficits of county wastewater resources to meet future demand at buildout, including an assessment of limitations and how those limitations can be overcome.

Stormwater (pages 119–148)

The stormwater section of the Draft Amendment assesses the current and planned land use and the effect on nonpoint source pollutant loading. It explains the various requirements for restoration and TMDLs.

Carroll County has a stormwater management code (CHAPTER 151: STORMWATER MANAGEMENT), and each municipality either implemented the county's code or adopted their own. The code enforces environmental site design (ESD) to the maximum extent practicable (MEP). The county provides education outreach about the importance of stormwater management and water resource protection.

The county also has protections in place, such as perpetual easements, on more than 98,745 acres of Rural Legacy areas, agricultural best management practices, forest conservation enhancement (including forest banking), and stream buffer preservation.

Whereas the county previously used Nonpoint Source Spreadsheet and MapShed tool to analyze TMDL progress, they are now using the online TMDL Implementation Project and Planning (TIPP) spreadsheets developed by MDE.

The county is working toward Chesapeake Bay restoration. Page 138 includes a table that summarizes the Chesapeake Bay TMDL progress for each of the county's three land-river segments, providing the Chesapeake Bay TMDLs, percent progress achieved through implemented BMPs, and percent progress of future CIP-planned projects for each portion of the land-river segment watersheds within the county.

The stormwater section of the Draft Amendment also discussed the NPDES MS4 permit, TMDL benchmarks, and Countywide TMDL Stormwater Implementation Plan. The section concludes that stormwater management is not expected to be a limiting factor in achieving buildout in the WSAs and is not expected to limit the amount and location of future development.

The wastewater section of the Draft Amendment includes several pages that explain the effects of climate change and emerging contaminants on the county stormwater.

Additional Comments and Recommendations

MDP reminds the county of the current Housing Element requirements and understands that a lack of water supply presents a barrier to the development of an affordable and fair housing supply. As the county considers its needs during the update to its comprehensive plan, it should also consider how the requirements of Land Use Article 3-114 can be met within the limitations of a restricted water supply. MDP is available to help the county with these considerations.

DHCD projects that Carroll County will need an additional 3,253 units by 2030 to meet the needs of Maryland's current population projections. While the Draft Amendment shows that Carroll County has insufficient supply to meet projected demand at buildout, it also shows that current capacity is sufficient

to achieve the cumulative housing production need of 3,253 additional units by 2030.

The Draft Amendment routinely mentions the new state requirements for considering climate change impacts. MDP recommends further evaluation into how human-induced hazards may impact future water resources development and infrastructure. The Draft Amendment could incorporate capital projects into the plan to highlight where human-induced hazards such as dam failures, infrastructure failure or disruption, deferred maintenance and other hazards may impact core infrastructure. Remarkably, the Draft Amendment notes that 33% of flooding is due to undersized infrastructure and 50% of flooding is occurring in designated growth areas.

The Draft Amendment dedicates significant attention to PFAS removal and water treatment. MDP suggests expanding PFAS goals to include the testing of private wells and the potential need for additional capacity from contaminated well or failing septic systems.

The Draft Amendment outlines its vision of Equity. MDP recommends incorporating further background information about equitable outcomes of the relevant policy goals. Incorporating and connecting equity outcomes to specific capital projects would cover the gap between having a vision for equitable outcomes and proactive planning to reach these goals. MDP also recommends that Carroll County include any mapping that supports the WRE planning process.

MDP recognizes the significant and thoughtful effort that Carroll County staff applied to the development of the Draft Amendment and looks forward to coordinating with the county and its municipalities on any assistance it seeks for plan adoption and implementation.

Sincerely,

A handwritten signature in blue ink, appearing to read "Joseph Griffiths".

Joseph Griffiths, AICP
Director, Planning Best Practices

cc: Christopher Heyn, Director, Carroll County Department of Planning and Land Management
Daphne Daly, Deputy Director, Carroll County Department of Planning and Land Management
Susan Llareus, Planning Supervisor, Maryland Department of Planning

Attachments - State Agency Letters

**Maryland Department of Planning Review Comments
Draft Carroll County Water Resources Element**

STATE AGENCY COMMENTS

The following are state agency comments in support of MDP's review of the Draft Amendment. Comments not included here may be submitted under separate cover, or via the State Clearinghouse. If comments from other agencies are received by MDP, the department will forward them to Carroll County as soon as possible.

Attachments

Maryland Department of Housing and Community Development

Maryland Department of Transportation

Maryland Department of the Environment

Maryland Department of Natural Resources

December 11, 2025

Mr. Brooks Phelps
Regional Planner, Central Maryland
Maryland Department of Planning
120 E. Baltimore Street
Suite 2000
Baltimore, MD 21202

Dear Mr. Phelps:

Thank you for the opportunity to review and comment on the Carroll County & Municipalities Water Resources Element (the "Plan"). When reviewing plans, the Maryland Department of Housing and Community Development ("DHCD") comments on items for which political subdivisions can strategically leverage DHCD's resources to accomplish their housing and community development goals. DHCD also reviews comprehensive plans for consistency with relevant statutes and, if appropriate, Sustainable Communities Plans.

Overall, DHCD staff were impressed with the quality of the Plan. Staff in the DHCD Division of Neighborhood Revitalization reviewed the Plan and provided the following comments, which are meant to help realize the Plan's goals. We present the following in no particular order:

1. The housing and economic development components of the Plan are consistent with and build upon the Sustainable Communities Plan.
2. The plan mentions the importance of locating affordable housing away from areas prone to flooding (page 175). DHCD's Local government Infrastructure Finance Program (LGIF) can help finance public infrastructure improvements to mitigate the risk of flooding. LGIF can also finance maintenance to existing water, sewer and stormwater systems, as well as improvements to increase capacity. For more information, please contact Charles Day, email: charles.day@maryland.gov.
3. DHCD's State of Maryland revitalization programs may also be able to help finance public infrastructure improvements and pre-development costs for projects within designated Sustainable Communities. For more information, visit <https://dhcd.maryland.gov/Communities/Pages/programs/default.aspx> or contact Sara Jackson, Project Manager for western Maryland at sara.jackson@maryland.gov.

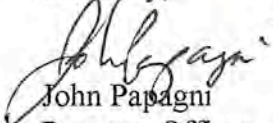


December 11, 2025

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We in the Division of Neighborhood Revitalization look forward to continuing our productive partnership with Carroll County in its future initiatives. Again, thank you for the opportunity to comment on the Plan. If you have any questions regarding the comments above, please contact me at john.papagni@maryland.gov or 443-257-1682.

Sincerely,



John Papagni

Program Officer

Division of Neighborhood Revitalization

Cc: Joseph Griffiths, Maryland Department of Planning
Rita Pritchett, Maryland department of Planning
Sara Jackson, DHCD Division of Neighborhood Revitalization
Olivia Ceccarelli, DHCD Division of Neighborhood Revitalization
Charles Day, DHCD Local Government Infrastructure Finance Program Manager



December 18, 2025

Mr. Brooks Phelps
c/o Rita Pritchett
Maryland Department of Planning
120 E. Baltimore Street, Suite 2000
Baltimore MD 21202

Dear Mr. Phelps:

Thank you for coordinating the State of Maryland's comments on Carroll County and Municipalities Water Resources Element, Maryland 2025 Comprehensive Plan (the Plan). The Maryland Department of Transportation (MDOT) offers the following comments on the Plan for consistency with the State of Maryland and MDOT's goals and objectives:

General Comments

- In general, the Plan is consistent with MDOT plans and programs. The MDOT supports the goals of the Plan, which include:
 - To evaluate water supply, wastewater and stormwater to ensure that projected demands are consistent with the availability and capacity to those needs – both long term and short term.
 - To ensure future plans address the relationship between planned growth and water resources.
- Shifting transportation mode choice towards transit and active transportation, shortening automobile trips, and increasing carpooling and vanpooling, are critical components to building efficient, equitable, and sustainable places, and is also essential to accommodating Maryland's changing demographic composition. The MDOT manages several active transportation programs:
 - Transportation Alternatives (TA) Program: a reimbursable, federally funded program for local sponsors to complete community projects designed to strengthen the intermodal transportation system. The program provides funding for projects that enhance the cultural, aesthetic, historic, and intermodal transportation system. The program can assist with projects that create bicycle and pedestrian facilities, restore historic transportation buildings, convert abandoned railway corridors to pedestrian trails, mitigate highway runoff, and other transportation-related enhancements. Project sponsors are required to provide a minimum 20% of the total project as a match.

- **Recreational Trails Program:** a federally funded program that the State Highway Administration (SHA) administers on a reimbursement basis. Like the TA Program, the Recreational Trails Program may reimburse a local project sponsor up to 80% of the project's total eligible costs to develop community-based, motorized, and non-motorized recreational trail projects.
- **The MDOT's Kim Lamphier Bikeways Network Program:** a program that allocates State transportation funds administered by the MDOT Secretary's Office to promote biking as an alternative transportation mode.
- For more information on MDOT's active transportation planning and programming efforts, please see our Maryland's Bicycle and Pedestrian Plans and Programs web page:
<https://www.mdot.maryland.gov/tso/pages/Index.aspx?PageId=24>.
- **Commuter Choice Maryland** is MDOT's Travel Demand Management (TDM) program, and it could be incorporated into the Plan as a strategy to support the plan. The program offers an extensive menu of commuter transportation services, such as ridesharing and incentives. Please visit the Commuter Choice Maryland web site at <https://www.mdot.maryland.gov/tso/pages/Index.aspx?PageId=29> for more information.
- The MDOT supports continued improvements to expand and enhance transit options. Please coordinate with the Maryland Transit Administration (MTA) Office of Statewide Planning for any coordination regarding regional transit and the coordination of MDOT supported locally-operated transit services (LOTS). The MTA also supports park and ride (with SHA), demand response services, paratransit, medical services, and senior-center transportation options. For regional transit planning, please contact Mr. Stephen Miller, Chief of Strategic Planning, via email at SMiller6@mdot.maryland.gov or phone at 410-767-3869. For local transit service planning, please contact Mr. Jason Kepple, MTA Regional Planner, via email at Jkepple@mdot.maryland.gov.
- A Transit Oriented Development (TOD) Program was established within MDOT to provide services including identifying potential TOD opportunities and evaluating existing and future needs of public transportation facilities. For TOD related data resources please visit the Transit-Oriented Development in Maryland web page:
<https://data-maryland.opendata.arcgis.com/pages/tod>

Detailed Comments

- Consider adopting the MDOT's Complete Streets initiative. The Complete Streets initiative identifies a range of options for multimodal transportation, which includes active transportation (i.e., human-powered mobility such as biking or walking) during roadway improvement delivery. To review other resources and access this information, please visit: <https://www.mdot.maryland.gov/tso/pages/Index.aspx?PageId=207>.

Mr. Brooks Phelps
Page Three

- Pp. 31. Carroll County Water and Sewer Master Plan and Service Areas. When work is to be completed within SHA right-of-way, a utilities permit may be needed, which requires coordination with SHA District 7 Utilities Engineer, Anthony Cregger, at 301-624-8122 or acregger@mdot.maryland.gov.
- Pp. 145. Section 29: Potential Effects Related to Climate Change: Stormwater: Consider mentioning the SHA Climate Change Vulnerability online ArcGIS web application map: <https://hub.arcgis.com/apps/maryland::mdot-sha-climate-change-vulnerability-viewer-cccv/explore>). The map showcases geospatial data products related to climate change and the potential impacts on State transportation infrastructure. The purpose of this application is to support efforts to avert and mitigate potential impacts of sea-level rise that result from global climate change on State roadway and bridge infrastructure. To review other MDOT Climate Change programs and to access this information please visit: <https://www.mdot.maryland.gov/tso/pages/Index.aspx?PageId=169>
- Pp 262. Section 43.1.4: Protect and restore water quality and make progress toward any applicable TMDLs.
- Consider mentioning that in May 2025, SHA completed a drainage improvement project on MD 851 from Main Street to Warfield Road in Sykesville. This project included drainage and pavement upgrades to address failing storm drain system and impacts to the road surface.

Thank you again for the opportunity to review the Plan. If you have any additional questions or concerns, please do not hesitate to contact Mr. Ryan Iacaruso, Transportation Planner, MDOT Office of Planning, Programming, and Project Delivery (OPPPD) at 410-230-6606, or via email at riacaruso@mdot.maryland.gov. Mr. Iacaruso will be happy to assist you.

Sincerely, .



Geoff Anderson
Chief, OPPPD, MDOT

cc: Mr. Ryan Iacaruso, Transportation Planner, OPPPD, MDOT
Mr. Shawn Kiernan, Regional Planner, OPPPD, MDOT
Mr. Benjamin Allen, Regional Planner, Office of Planning and Preliminary Engineering (OPPPE), SHA



Local Plan Review: Carroll County & Municipalities Water Resources Element

Maryland Department of the Environment – WSA/WPRPP

REVIEW FINDING: R2 Contingent Upon Certain Actions

(MD20251121-0719)

Water & Sewer:

Carroll County Draft WRE 2024 Comments

Pg 68 Table – The table Water Supply Capacity Available indicates that the Westminster Permitted capacity is 3.8 MGD but 2023 Carroll County Water & Sewer Master Plan (W&S) Plan Table 15 says the existing capacity is 4.231 MGD. Please confirm the value.

Pg 99 – The text indicates that I&I was removed from the Wastewater demand. This can cause confusion in the “Existing demand” shown in Table Future Wastewater Demand by Service Category for Each Designated Growth Area at Buildout. As an example, New Windsor is shown as 41,716 gpd but in the W&S Plan it is 79,000 gpd. It should be reiterated in a footnote that the demand shown has I&I removed to show only usage generated by development and/or include the I&I as a column in the Table but not incorporated into the totals.

Pg 103 - The Table Wastewater Capacity for Each Designated Growth Area at Buildout of 2023 Sewer Service Area indicates that the “Existing Flows” are from 2022 but on Page 99 the Table with those values are called 2023 Existing Demand. Please confirm which values these columns represent and update as needed.

Overall Wastewater Comment: While explained, it can be confusing to remove I&I from the demand in that the WWTP still needs to treat that flow and have the capacity to treat that amount and subsequently discharge. This is especially true if it’s an ongoing issue. It can also cause the reader who has access to the actual average annual flow to question the “demand” amount.

Tier II:

Direct any questions regarding the Antidegradation Review to Angel Valdez via email at angel.valdez@maryland.gov, or by phone at 410-537-3606.

Special protections for high-quality waters in the local vicinity, which are identified pursuant to Maryland's anti-degradation policy.

Anti-degradation of Water Quality: Maryland requires special protections for waters of very high quality (Tier II waters). The policies and procedures that govern these special waters are commonly called "anti-degradation policies." This policy states that "proposed amendments to county plans or discharge permits for discharge to Tier II waters that will result in a new, or an increased, permitted annual discharge of pollutants and a potential impact to water quality, shall evaluate alternatives to eliminate or reduce discharges or impacts." Satisfactory completion of the Tier II Antidegradation Review is required to receive numerous State permits, such as those for wastewater treatment, nontidal wetlands disturbance, waterways construction, and coverage under the general construction permit.

The Tier II review is applicable to all portions of the project within the **Tier II Watersheds of Carroll County**. The Review consists of (1) a no-discharge alternatives analysis which considers if the activity can avoid any impacts to Tier II waters, i.e., an alternative site or strategic design, (2) a minimization alternatives analysis to limit associated water quality degradation, and potentially (3) a mitigation analysis to account for net loss of vital resources such as forest cover. If there is no assimilative capacity within the Tier II watershed identified above, additional social and economic justification for unavoidable impacts is required. No assimilative capacity means that new water quality data indicates that the Tier II stream segment has degraded below Tier II standards.

To ensure that essential information is provided to MDE when conducting the Tier II Review, MDE has developed forms to assist applicants in completing the no-discharge alternatives analysis, minimization analysis, and mitigation analysis. Adequate completion of these forms and accompanying Tier II report is required to successfully satisfy the Review and is necessary for State permitting and other approvals. A Tier II report template, which uses the information from the completed forms, is also available to help with document formatting and information organization. There are some activities that may require MDE permitting and approval but may not warrant additional Tier II review. Applicants are encouraged to review the Tier II Preliminary Report Form and its applicability to the project before proceeding with the more detailed review analysis explained below.

Tier II Preliminary Report Form ¹

1. Code of Maryland Regulations (COMAR) 26.08.02.04-2 (G(1)) states that "If a Tier II antidegradation review is required, the applicant shall provide an analysis of reasonable

¹

alternatives that do not require direct discharge to a Tier II water body (no-discharge alternative). The analysis shall include cost data and estimates to determine the cost effectiveness of the alternatives”.

2. This form is for the evaluation of land disturbing activities such as those requiring a nontidal wetlands or waterways construction permit, or a general stormwater construction permit (NOI). To qualify for a determination of no additional Tier II review, at a minimum 8(c) on the form, must apply.

Tier II No-Discharge Analysis Form:²

1. Code of Maryland Regulations (COMAR) 26.08.02.04-2 (G(1)) states that “If a Tier II antidegradation review is required, the applicant shall provide an analysis of reasonable alternatives that do not require direct discharge to a Tier II water body (no-discharge alternative). The analysis shall include cost data and estimates to determine the cost effectiveness of the alternatives”.

2. For land disturbing projects that result in permanent land use change, this ‘no discharge’ analysis specifically evaluates the reasonability of other sites or alternate routes which could be developed to meet the project purpose, but are located *outside* of the Tier II watershed. Reasonability considerations, as applicable, may take into account property availability, site constraints, natural resource concerns, size, accessibility, and cost to make the property suitable for the project.

3. This analysis shall be performed regardless of whether or not the applicant has ownership or lease agreements to a preferred property or route.

Tier II Minimization Alternative Analysis Form:³

1. Code of Maryland Regulations (COMAR) 26.08.02.04-2 (G(3)) states that “If the Department determines that the alternatives that do not require direct discharge to a Tier II water body are not cost effective, the applicant shall: (a) Provide the Department with plans to configure or structure the discharge to minimize the use of the assimilative capacity of the water body”.

2. This form helps to ensure that water quality impacts due to the proposed project are comprehensively identified and minimized.

3. To demonstrate that appropriate minimization practices have been considered and implemented, applicants must identify any minimization practices used when developing the project, calculate major Tier II resource impacts, consider alternatives for impacts, and adequately justify unavoidable impacts.

²

https://mde.maryland.gov/programs/water/TMDL/WaterQualityStandards/Documents/Tier-II-Forms/No_Discharge_Alternatives_Analysis.pdf

³

https://mde.maryland.gov/programs/water/TMDL/WaterQualityStandards/Documents/Tier-II-Forms/TierII_Minimization_Analysis_Form.pdf

Tier II Mitigation Analysis Form:⁴

1. Code of Maryland Regulations (COMAR) 26.08.02.04-2 (G(3)) states that “If the Department determines that the alternatives that do not require direct discharge to a Tier II water body are not cost effective, the applicant shall: (a) Provide the Department with plans to configure or structure the discharge to minimize the use of the assimilative capacity of the water body”.
2. No net change in Tier II water quality is the overarching goal of the Tier II Review, and mitigation is an essential part of the analysis process to reduce cumulative degradation prior to justification of unavoidable impacts.
3. This form helps to ensure that alternatives to mitigate or offset unavoidable impacts to Tier II watersheds and streams are identified and properly implemented.
4. Mitigation and offsets are required before MDE can evaluate any social and economic justifications.
5. Additional guidance and forms to help navigate the mitigation process are now available for download from the Tier II High Quality Waters⁵ webpage under the “Other Tier II Resources” tab.

Tier II Watersheds of Carroll County, which are located within the vicinity of the Project, have been designated as a Tier II stream. The Project is within the Catchment (watershed) of the segment. (See attached map).

Additionally, there is no assimilative capacity in this Tier II watershed. 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 this Tier II watershed. 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>

Social and Economic Justification and the Tier II Report

1. Code of Maryland Regulations (COMAR) 26.08.02.04-2 (K). Components of the Social and Economic Justification states that “(1) Components of the SEJ may vary depending on

⁴ https://mde.maryland.gov/programs/water/TMDL/WaterQualityStandards/Documents/Tier-II-Forms/TierII_Mitigation_Analysis_Form.pdf

⁵ https://mde.maryland.gov/programs/water/tmdl/waterqualitystandards/pages/antidegradation_policy.aspx

factors including, but not limited to, the extent and duration of the impact from the proposed discharge and the existing uses of the water body. (2) The economic analyses shall include impacts that result from treatment beyond the costs to meet technology-based or water quality-based requirements. (3) The economic analysis shall address the cost of maintaining high water quality in Tier II waters and the economic benefit of maintaining Tier II waters. (4) The economic analysis shall determine whether the costs of the pollution controls needed to maintain the Tier II water would limit growth or development in the watershed including the Tier II water”.

2. The Tier II template is designed to give the applicant an outline to follow when submitting information for review that organizes the information from the forms, supporting narratives, other documentation, and identifies the basic information an applicant needs to provide to MDE to evaluate social and economic benefits of a project when there are still unavoidable impacts after minimization and mitigation.

a. Tier II Report Template for PUBLIC entities⁶

b. Tier II Report Template for PRIVATE entities⁷

Fee Legislation Update⁸ (Nontidal Wetlands and Waterways Construction Permits)

1. The Maryland General Assembly approved updates to the fee structure established in the Maryland Environment Article 5–203.1 for Wetlands and Waterways projects during the 2025 Legislative Session (House Bill 352⁹ of 2025, beginning on pg. 40). These adjustments will ensure the continued high level of service to the regulated community by supporting program capacity and resources. The updated fees aim to reduce delays and improve the overall efficiency of the permit review process.
2. The fee for a minor project or minor modification is **\$400.00**, and the fee for a major project or major modification is **\$1,600.00**. Certain public entities are fee-exempt. This will be determined at the time of permit application.
3. This review is required regardless of assimilative capacity status.

Planners should be aware of legal obligations related to Tier II waters described in the Code of Maryland Regulations (COMAR) 26.08.02.04 with respect to current and future land use plans. Information on the Antidegradation Policy can be obtained online at:

<https://dsd.maryland.gov/regulations/Pages/26.08.02.04.aspx>

and Tier II Waters are located at

<https://dsd.maryland.gov/regulations/Pages/26.08.02.04-2.aspx>

⁶

https://mde.maryland.gov/programs/water/TMDL/WaterQualityStandards/Documents/Tier-II-Forms/BasicTierIIReportTemplate_Public.pdf

⁷

https://mde.maryland.gov/programs/water/TMDL/WaterQualityStandards/Documents/Tier-II-Forms/BasicTierIIReportTemplate_Private.pdf

⁸ <https://mde.maryland.gov/programs/water/WetlandsandWaterways/Pages/Fee-Schedule.aspx>

⁹ <https://mgaleg.maryland.gov/2025RS/bills/hb/hb0352e.pdf>

Planners should also note as described in the Code of Maryland Regulations (COMAR) 26.08.02.04-2(B), "Compilation and Maintenance of the List of High Quality Waters", states that "When the water quality of a water body is better than that required by water quality standards to support the existing and designated uses, the Department shall list the water body as a Tier II water body. *All readily available information may be considered to determine a listing. The Department shall compile and maintain a public list of the waters identified as Tier II waters.*"

Additional Tier II resources are available on the Maryland's High Quality Waters (Tier II) website:

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

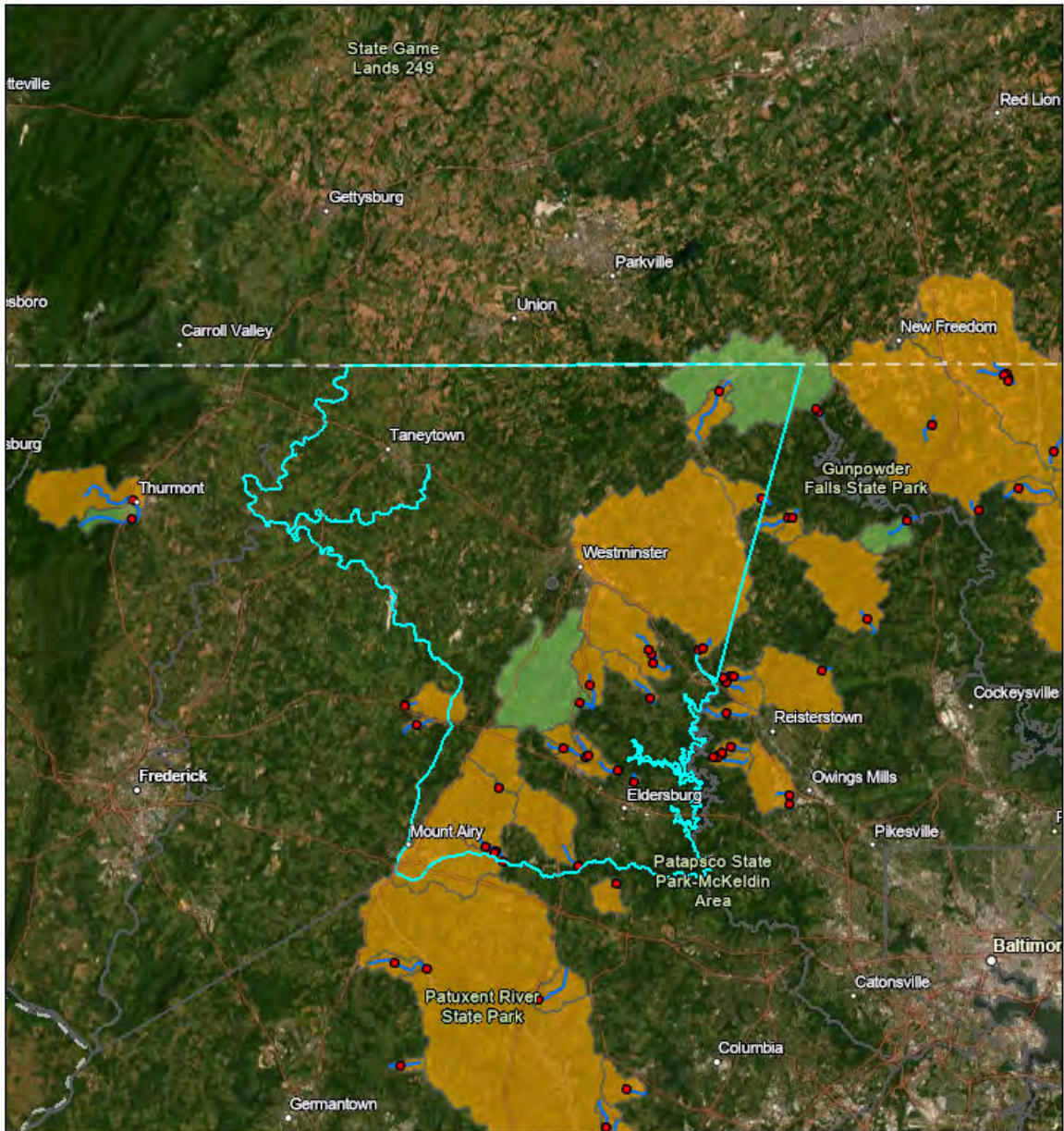
The public list is available in PDF from the following MDE website:

http://mde.maryland.gov/programs/Water/TMDL/WaterQualityStandards/Documents/Tier_II_Updates/Antidegradation-Tier-II-Data-Table.pdf.

The interactive Tier II webmap is located at the following website:
(<https://mdewin64.mde.state.md.us/WSA/TierIIWQ/index.html>).

Direct any questions regarding the Antidegradation Review to Angel Valdez via email at angel.valdez@maryland.gov, or by phone at 410-537-3606.

MD20251121-0719 - Tier II Watersheds of Carroll County

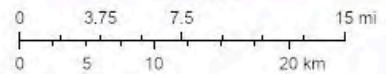


12/1/2025, 3:28:41 PM

TierII_Assimilative_Capacity_Catchments

- Assimilative Capacity Remaining
- No Assimilative Capacity Remaining
- TierII Stream Segments
- TierII Baseline Stations
- Maryland County Boundaries

1:577,791



Earthstar Geographics, Creator: Maryland Department of the Environment, Water and Science Administration (MDE WSA), Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, OpenStreetMap contributors, and the GIS User Community, MD IMAP, SHA, DoIT

Web AppBuilder for ArcGIS

MD IMAP, SHA, DoIT | Creator: Maryland Department of the Environment, Water and Science Administration (MDE WSA) | MD IMAP, MDR, SDAT | Earthstar Geographics | Esri, TomTom, Garmin,

Flooding:

Please be advised, the property or properties in MD20251121-0719 is/are in close proximity to Flood Zone AE (100-year Floodplain) and X (500-year Floodplain). The project coordinator(s) should follow local floodplain ordinances and Federal Emergency Management Agency's guidelines and standards.

It is advised that the coordinator(s) consider climate resiliency, which could include but not limited to the following steps (<https://toolkit.climate.gov/>):

- Explore Hazards: Identify climate and non-climate stressors, threats, and hazards and how they could affect assets (people and infrastructure).
- Assess vulnerability and risks: Evaluate assets vulnerability and estimate the risk to each asset.
- Investigate options: Consider possible solutions for your highest risks, check how others have responded to similar issues, and reduce your list to feasible actions.
- Prioritize and plan: Evaluate costs, benefits, and capacity to accomplish each action integrating the highest value actions into a stepwise plan.
- Take action: Move forward with your plan and check to see if your actions are increasing your resilience with monitoring.

The coordinator(s) is advised to contact Dave Guignet, State National Flood Insurance Program Coordinator, of MDE's Stormwater, Dam Safety, and Flood Management Program, at (410) 537-3775 for additional information regarding the regulatory requirements for Floodplains and Storm Surges.

The coordinator(s) is advised to contact Matthew C. Rowe, CC-P, Deputy Director of MDE's Water and Science Administration, at (410) 537-3578 for additional information regarding Climate Change and Resiliency.

MDE Comments for Clearinghouse Project Review: Local Plan Review: Carroll County & Municipalities Water Resources Element

Response Code: R-1

1. Any above ground or underground petroleum storage tanks, which may be utilized, must be installed and maintained in accordance with applicable State and federal laws and regulations. Underground storage tanks must be registered and the installation must be conducted and performed by a contractor certified to install underground storage tanks by the Land and Materials Administration in accordance with COMAR 26.10. Contact the Oil Control Program at (410) 537-3442 for additional information.
2. If the proposed project involves demolition – Any above ground or underground petroleum storage tanks that may be on site must have contents and tanks along with any contamination removed. Please contact the Oil Control Program at (410) 537-3442 for additional information.
3. Any solid waste including construction, demolition and land clearing debris, generated from the subject project, must be properly disposed of at a permitted solid waste acceptance facility, or recycled if possible. Contact the Solid Waste Program at (410) 537-3315 for additional information regarding solid waste activities and contact the Resource Management Program at (410) 537-3314 for additional information regarding recycling activities.
4. The Solid Waste Program should be contacted directly at (410) 537-3315 by those facilities which generate or propose to generate or handle hazardous wastes to ensure these activities are being conducted in compliance with applicable State and federal laws and regulations. The Program should also be contacted prior to construction activities to ensure that the treatment, storage or disposal of hazardous wastes and low-level radioactive wastes at the facility will be conducted in compliance with applicable State and federal laws and regulations.
5. The proposed project may involve rehabilitation, redevelopment, revitalization, or property acquisition of commercial, industrial property. Accordingly, MDE's Brownfields Site Assessment and Voluntary Cleanup Programs (VCP) may provide valuable assistance to you in this project. These programs involve environmental site assessment in accordance with accepted industry and financial institution standards for property transfer. For specific information about these programs and eligibility, please Land Restoration Program at (410) 537-3437.
6. Borrow areas used to provide clean earth back fill material may require a surface mine permit. Disposal of excess cut material at a surface mine may requires site approval. Contact the Mining Program at (410) 537-3557 for further details.



Wes Moore, Governor
Aruna Miller, Lt. Governor
Josh Kurtz, Secretary
David Goshorn, Deputy Secretary

Maryland Department of Planning
301 West Preston Street
Suite 1101
Baltimore, MD 21201

Memo: MD DNR comments on Carroll County draft Water Resources Element

To: Brooks Phelps
cc: Rita Pritchett

On behalf of the Department of Natural Resources, thank you for the opportunity to comment on the Carroll County draft Water Resources Element. The draft document was distributed to appropriate contacts at the Maryland Department of Natural Resources and reviewed. DNR offers the following comments:

The Maryland Forest Service commends the County for working to expand Rural Legacy Areas, adopting several enhancements to the FCA requirements, and pioneering forest banking. Additionally, Carroll County's focus on planting riparian forest buffers (RFBs) is to be applauded. The 251.85 acres of RFBs established between 2013-2023 is a much-appreciated achievement. With the focus on reducing TMDL's, improving water quality, air quality, and wildlife habitat, the conservation and implementation of RFBs is encouraged. For assistance with locating future buffer sites and planting forest buffers please reach out to your county forester. With urban and buffer plantings, thought should be given to climate change and what species would thrive in an altered climate.

- Recommended Resource:
<https://www.climatehubs.usda.gov/hubs/northern-forests/topic/climate-change-projections-individual-tree-species>

Additionally, the USFS Wildland urban interface is an important concept to consider. We reviewed Carroll County based on this map. UWI is not significant at this time, however with the changing climate, the county would benefit from further review and development of an urban wildland prevention plan. Please reach out to MD Forestry Fire Staff for more information.

- Recommended Resource:
<https://data-usfs.hub.arcgis.com/documents/7804d89ed1094ccb9aae753228e8d89a/explore>

As listed in the WRE, Carroll County is drained by nine 8-digit watersheds. Most of these watersheds contain important coldwater fisheries and two (Prettyboy Reservoir watershed and Loch Raven Reservoir watershed) contain naturally reproducing trout populations. All nine watersheds vary in biological condition, but all harbor diverse aquatic resources. Portions of Double Pipe Creek, Upper Monocacy, Liberty, Prettyboy, and Patapsco River watersheds are designated as Stronghold watersheds due to the presence of multiple species of Greatest Conservation Need. There are also 15 stream reaches within the county currently designated by MDE to be among the state's highest quality waters due to excellent water quality and robust biological communities. Resource Assessment Service recommends that the County consider these stronghold and Tier II watersheds while prioritizing conservation efforts, restoring riparian forest buffers, enhancing stormwater management, and expanding Rural Legacy Areas. The County should be commended for incorporating forecasted climate change effects on current and future stormwater mitigation projects. The County should also consider incorporating

state-of-the-art culvert design (e.g., bottomless arch culverts, stream simulation design) in new road construction to replace conventional culverts. These non-conventional culvert designs may mitigate debris jams and flooding events associated with high, intensive stormflow events projected to occur more frequently with climate change. Advanced culvert/stream crossing designs will also facilitate passage of fishes and other aquatic organisms and improve connectivity among populations.

- Additional information on Stronghold watersheds: <https://dnr.maryland.gov/streams/pages/streamhealth/default.aspx>
- Additional information on MDE Tier II designations: <https://mde.geodata.md.gov/TierIIHQWaters/>

Once again, thank you for the opportunity to provide comments. If you have any questions about these comments or would like further information, please do not hesitate to contact me at 443-534-4151 or christine.burns1@maryland.gov.

Best,
Christine Burns



FREDERICK COUNTY GOVERNMENT

Jessica Fitzwater
County Executive

DIVISION OF PLANNING & PERMITTING
Livable Frederick Planning & Design Office

Deborah A. Carpenter, AICP, Division Director
Kimberly Gaines, Director

December 18, 2025

Brenda Dinne, Special Projects Coordinator
Carroll County Department of Planning & Land Management
225 North Center Street
Westminster, MD, 21157

Re: Draft Carroll County Water Resources Element

Dear Ms. Dinne,

Thank you for the opportunity to review the Draft Water Resources Element for Carroll County. We enjoyed reading the plan, and we appreciate the careful thought and thorough effort invested in the evaluation of the impacts of future growth on public water service, public sewer service, and stormwater management. Our comments on the draft document are included below. We hope they prove useful to Carroll County's work.

1. Clarifying the source and providing background information about "Round 10 projections" could be beneficial for a general audience (Page 19, Sub-Heading 6.2).
2. Water reuse is identified as a Long-Term Action on Page 160 of the document. The draft document also includes many references to the PUREWater currently being trialed by the City of Westminster. Could the status of the program result in a shorter term for implementation of water reuse in Carroll County?
3. The document analyzes capacity and demand across several time horizons using varying methodologies in several tables. The addition of a summary table to compare the results could be helpful to illustrate and compare the differences between them.
4. Frederick County does not support the inclusion of the "Interconnection with Frederick County" for the Mount Airy water system and purchase agreement (Page 244, Section 41.3.2). Livable Frederick staff appreciate the caveat that "inclusion here does not imply that there is a definite plan to move forward with an option." However, Frederick County's WRE (2025) demonstrates additional permitted water supplies will likely be needed by mid-century to support growth in unincorporated Frederick County. Given this context, it is highly unlikely such an interconnection would be feasible as it is not aligned with our long-term water supply planning.

We appreciate the opportunity to review and comment on the draft Water Resources Element. Carroll County is a special place deserving of the thoughtful consideration and planning represented in the draft document.

Sincerely,

Kimberly Gaines, Director
Livable Frederick Planning & Design Office

cc: Deborah Carpenter, AICP, Director, Frederick County Division of Planning and Permitting