Existing Use Determination and Rationale:

North Branch Potomac River (Allegany County)

August 1, 2024

Notice: This existing use determination was provided for public review and comment from September 6, 2024 - December 9, 2024. The Department has not made a final determination on this existing use at this time, see information provided in the Comment Response Document, published on the Department's webpage[1] and notice provided in the April 17, 2026 edition of the Maryland Register. The following information and document are provided for public reference.

Description of Setting and Data Sources

The portion of the North Branch Potomac River (NBPR) mainstem (12-digit watersheds 021410050052, 021410010053, 021410010055, and 021410010056) being evaluated in this document is located along the Maryland and West Virginia state border and flows from the confluence with Savage River downstream to Pinto, MD. This portion of the North Branch Potomac River mainstem (NBPR) is approximately 19.9 miles in length and is currently designated as Use Class I-P. Maryland DNR Fisheries staff have conducted temperature and biological monitoring over multiple years in the NBPR mainstem. Figure 1 displays the location of the NBPR mainstem section along with all sampling stations. The data from these sampling stations, including water temperatures and cold water obligate information, are summarized in the data tables below. For the purposes of this existing use determination, sub-sections of this segment of the NBPR mainstem were evaluated both separately and in aggregate to account for spatial gaps between stream confluences.

[1]https://mde.maryland.gov/programs/water/TMDL/WaterQualityStandards/Documents/EU_Comment_Response_Document_4-17-26.pdf

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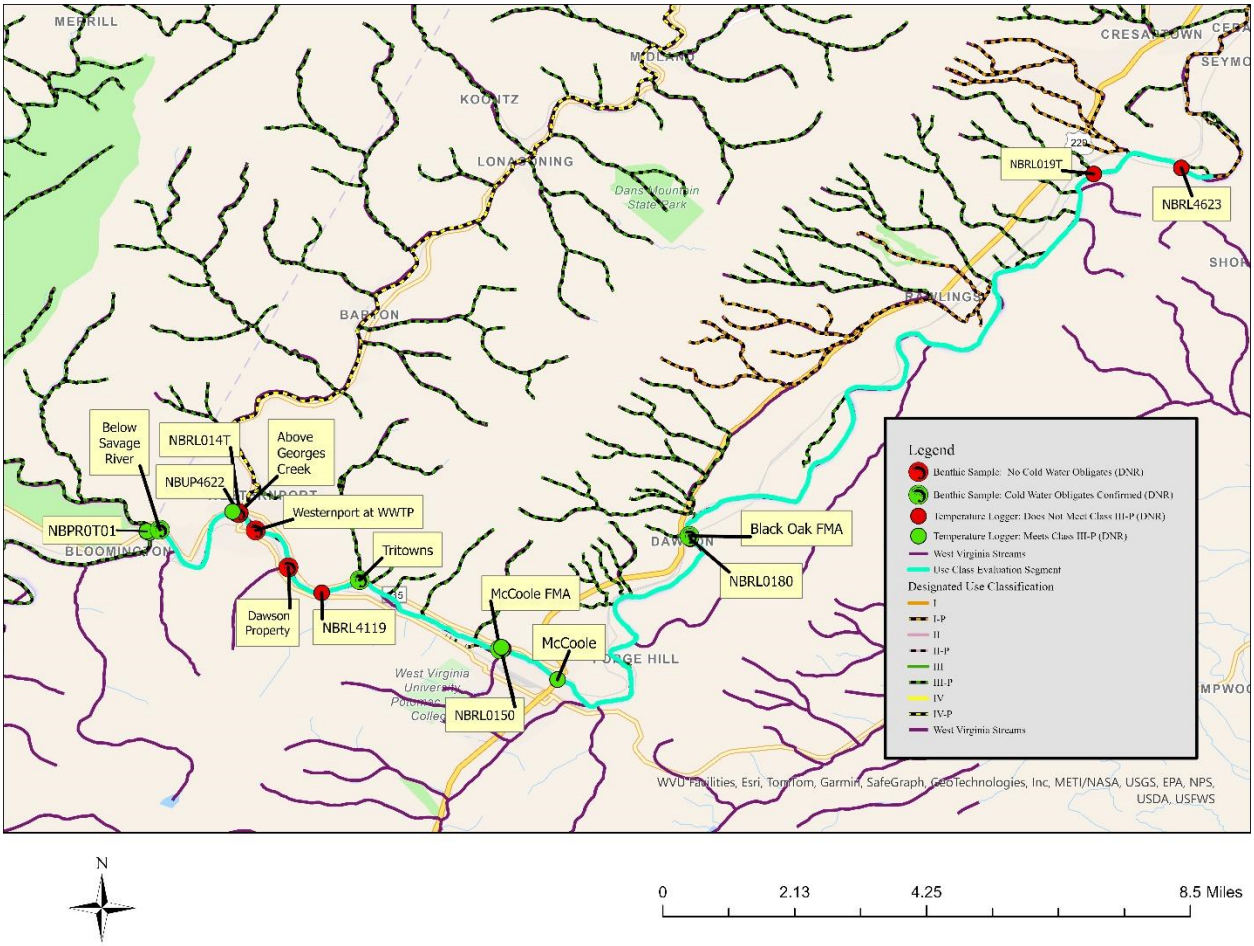
Figure 1. Map of the segment being evaluated along with Use Class information and the locations of monitoring events.



Trout Stocking in the North Branch Potomac River and Hydrologically-Connected Waters

Since 1989, sections of the North Branch Potomac River (NBPR) have been stocked for trout by the Maryland Department of Natural Resources (MD DNR). The Catch and Release (C&R) area begins at the outflow of the Jennings Randolph Reservoir, extending to the confluence with the West Virginia tributary, Piney Swamp Run (personal communications, 4/16/15, Alan Klotz & Tony Prochaska of MD DNR). The Put and Take (P&T) Trout Fishing Area begins at the confluence of Piney Swamp Run and extends downstream about 3.8 miles to the Upper Potomac River Commission's Wastewater Treatment Plant's (UPRC WWTP) effluent into the North Branch Potomac River (personal communications, 4/16/15, Alan Klotz & Tony Prochaska of MD DNR). This section of the river has been managed as a Put and Take recreational trout fishery for brown and rainbow trout since 1989 (personal communications, 4/16/15, Alan Klotz & Tony Prochaska of MD DNR). In 2003, MD DNR began stocking and managing the Zero Creel area for trout, located from Westernport, MD to Pinto, MD (personal communications, 4/16/15, Alan Klotz & Tony Prochaska of MD DNR). See Figure 2 - Maryland DNR Special Trout Management Areas for the North Branch Potomac River.

In personal communications (10/19/23) with the MD Regional Fisheries manager, Matt Sell, the MD DNR has continued to stock the NBPR with rainbow and brown trout of both adult and fingerling age classes annually. Brown trout stocking was briefly paused after a final stocking event in April 2022 to determine if natural reproduction of brown was occurring in the water body; rainbow trout have continued to be stocked in the NBPR (personal communications, 9/22/23, Matt Lawrence MD DNR).

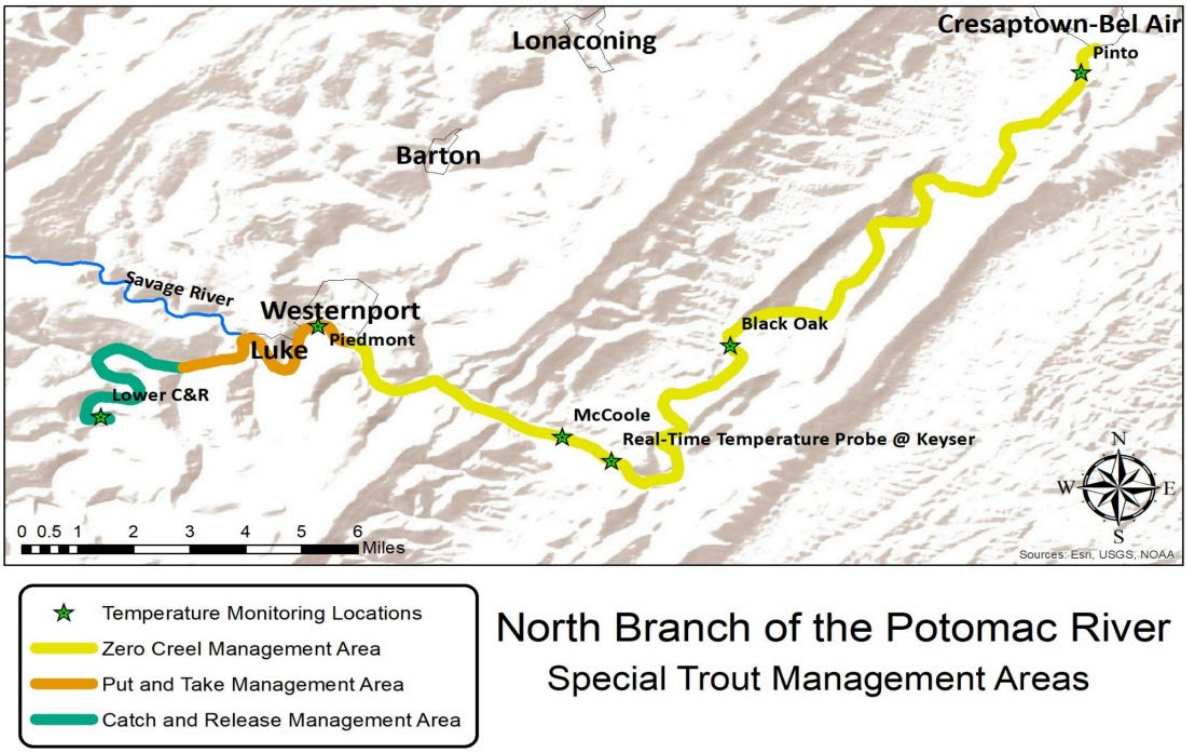
Waters hydrologically connected to the NBPR are also stocked with trout by West Virginia's Department of Natural Resources (WV DNR). According to West Virginia DNR's online trout stocking maps[2], a tributary to the North Branch Potomac near Keyser, WV, New Creek, is stocked with trout once in January, twice in February, and once each week March through May. From review of the daily trout stocking reports, trout appear to have been last stocked in New Creek on May 13, 2024, as of this report writing[3].

In personal communications (12/28/23) with the District 2 Fisheries WV DNR Biologist, Brandon Keplinger, and the Hatchery Program Manager, Jim Hedrick of WV DNR, the NBPR downstream of the Jennings Randolph Reservoir is also stocked with golden, rainbow, and/or brown trout annually at Barnum, MD. Internal records shared by WV DNR demonstrate annual trout stocking activity in this area by WV DNR since 1998 (personal communications, 1/8/24, Jim Hedrick WV DNR). WV DNR also stocks fingerling rainbow trout to portions of the NBPR

[2] https://www.mapwv.gov/huntfish/map/?v=fish
[3] https://wvdnr.gov/fishing/fish-stocking/fish-stockings/

mainstem starting from Luke, MD and continuing downstream (personal communications, 1/8/24, Jim Hedrick WV DNR).

Figure 2. Maryland DNR Special Trout Management Areas for the North Branch Potomac River



Trout Data Considerations

MD DNR has stocked trout at least yearly in the NBPR since 1989. Additionally, West Virginia DNR has stocked both the mainstem of the NBPR and the New Creek tributary to the NBPR since 1998. According to the data policies outlined in Maryland's Cold Water Existing Use Determinations: Policy and Procedures[4] document, evidence of a self-sustaining trout population requires a minimum five years of no stocking activity within the stream system to determine if populations are sustained by natural conditions rather than on-going stocking efforts. Following the protocols outlined in the Policy & Procedures, the current presence of trout populations in the North Branch Potomac River cannot be used within the cold-water existing use determination at this time. The presence of other cold water obligates (macroinvertebrates) will instead be used for existing use determinations and/or potential redesignation to Class III-P, as applicable.

4 https://mde.maryland.gov/programs/Regulations/HB1124/Documents/Cold%20Water%20Existing%20Use%20Determinations%20Policy%20and%20Procedures.pdf

However, the historical and current use of the NBPR for recreational trout stocking and catching may qualify the segment for redesignation to Class IV-P. See the following section, Class IV-P Justification.

Class IV-P Justification

As part of Maryland's Cold Water Advisory Committee (CWAC)[5], Class IV(-P) re-designations of streams in Maryland were paused until the CWAC and the Department could explore further clarification on the definition of a Class IV(-P) waterway. Currently designated Class IV(-P) waterways encompass a wide variety of water bodies with current and/or historical put and take trout fisheries in the State. The goal of a Class IV-P re-assessment and definition clarification would likely result in additional sub-designations to better represent and capture the needs of different types of trout-managed waters in Maryland. However, upon review of the data and information available for the North Branch Potomac River (NBPR), the Department is proposing an exception to the hiatus on Class IV(-P) redesignations specifically for the NBPR due to its close and strong representation of the current Class IV-P waterway definition. The NBPR represents a unique natural resource for trout fisheries in Maryland. This section of the river has a long history of trout stocking and management and is highly regarded by trout anglers throughout the State. To date, this use has not been officially recognized or protected under Maryland's water quality standards. As such, the Department proposes segments of the NBPR for a redesignation to Class IV-P, as described below, to better ensure protection of this put and take recreational trout fishery.

Maryland's Code of Maryland Regulations (COMAR) 26.08.02.02[6] describes Class IV(-P) waters as the following:

> B. (7) Class IV: Recreational Trout Waters. This class designation includes all uses identified for Class I in cold or warm waters that have the potential for or are:
>
> (a) Capable of holding or supporting adult trout for put-and-take fishing; and
>
> (b) Managed as a special fishery by periodic stocking and seasonal catching.

Stocking records demonstrate that this portion of the NBPR has been managed as a put-and-take recreational trout fishery by MD DNR since at least 1989 (personal communications, 4/16/15, Alan Klotz & Tony Prochaska of MD DNR). This history represents over 30 years of MD DNR trout fisheries management in the NBPR. Similarly, information shared by WV DNR staff demonstrates trout stocking in this part of the NBPR since at least 1998, representing over 20 years of WV DNR trout fisheries management. The historical and current stocking activity in the NBPR by both Maryland's and West Virginia's Departments of Natural Resources aligns with the definition of a Class IV(-P) water body as described in COMAR 26.08.02.02.

[5] https://mde.maryland.gov/programs/Water/TMDL/WaterQualityStandards/Pages/MDE-Cold-Water-Advisory-Committee.aspx

[6] https://dsd.maryland.gov/regulations/Pages/26.08.02.02.aspx

Additionally, Class IV(-P) waters are thermally distinguished from warm waters in the state with a more stringent temperature criterion. COMAR 26.08.02.03-3[7] defines the temperature criterion of Class IV(-P) waters as not to exceed "75°F (23.9°C) or the ambient temperature of the surface waters, whichever is greater." When assessing the available temperature data within the NBPR mainstem, from the confluence with Savage River [39.4801835° N, -79.0668370° W] to the confluence with New Creek [39.4390660° N, -78.9661628° W], the NBPR meets the thermal criterion of a Class IV-P waterway with multiple years of attainment (2015-2023). Additionally, the section below the New Creek tributary, near Black Oak, MD, has met the Class IV-P thermal criterion from 2021- 2023. See Figure 3- North Branch Potomac River Temperature Data Compared to Class IV-P Criteria and Table 1- All Temperature Data for the North Branch Potomac River.

Due to the historical and current history of trout stocking and fisheries management in the NBPR, as well as the consistent achievement of the Class IV-P thermal criterion throughout the mainstem, the Department proposes a redesignation of the section of the NBPR mainstem, from the confluence with Savage River [39.4801835° N, -79.0668370° W] to the confluence with the unnamed tributary to the North Branch Potomac River near Black Oak Rd [39.4785295° N, -78.9422151° W], as Class IV-P (See Figure 9 - Existing Use Determinations for the North Branch Potomac River) .

In the following sections of the report, the Department evaluates additional data for this section of the NBPR to determine the need for additional existing use protection or Class III-P redesignation along the NBPR. Any additional thermal protections proposed would be more stringent than and ultimately supersede the Class IV-P protection from the confluence of the Savage River to the confluence with the unnamed tributary near Black Oak Rd.

[7] https://dsd.maryland.gov/regulations/Pages/26.08.02.03-3.aspx

Figure 3. North Branch Potomac River Temperature Data Compared to the Class IV-P Criterion

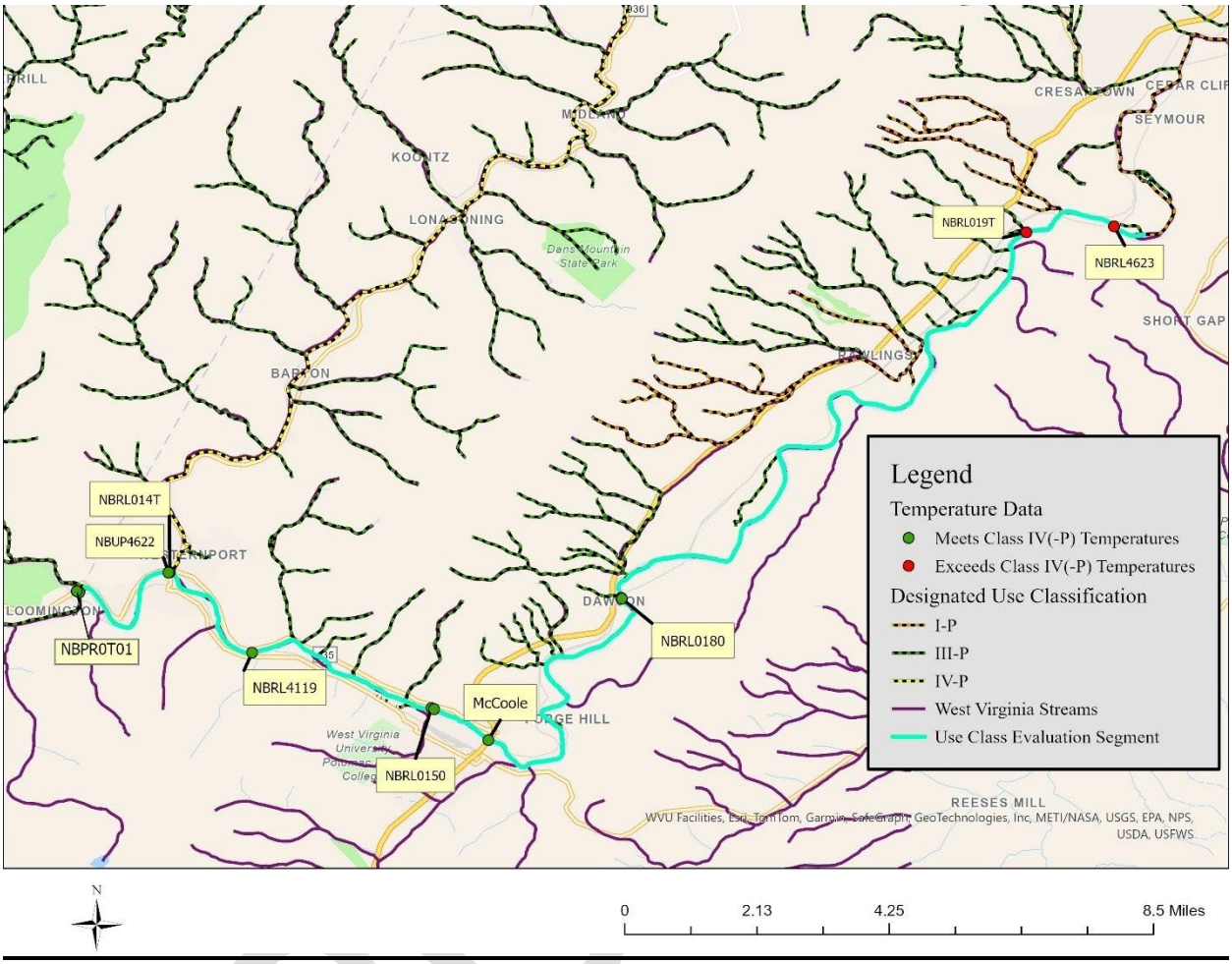


Table 1. All Temperature Data for the North Branch Potomac River

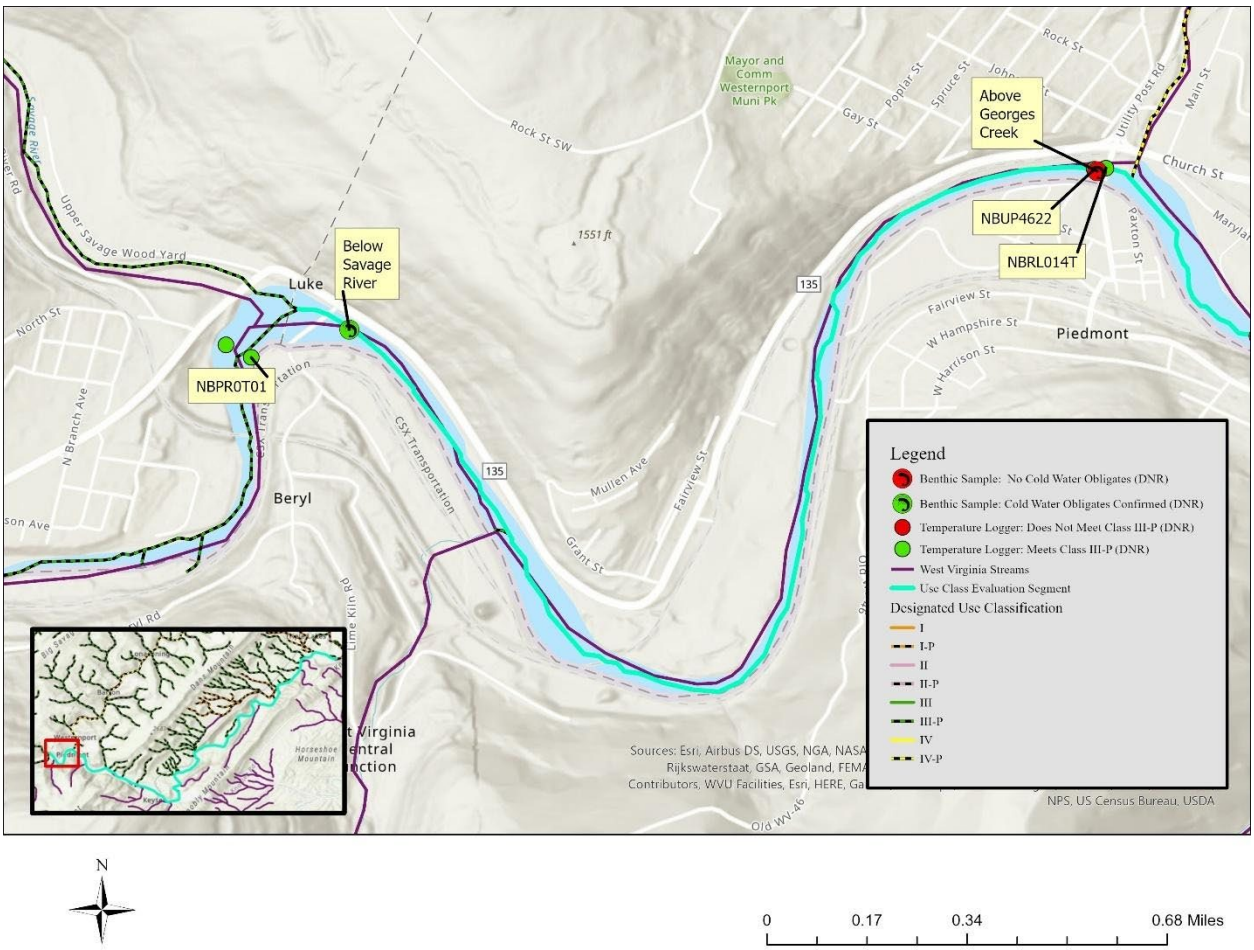
Date	Station ID	Station Name	Data Submitter	# Temp Readings	Percent>20°C	Percent>24°C	Avg Daily Mean (°C)	Daily Max (°C)
2015	NBPR0T01-2015	Upstream of confluence with Savage River	MDDNR Freshwater Fisheries	6300	0.079%	0%	15.38	20.25
2017	NBPR0T01-2017	Upstream of confluence with Savage River	MDDNR Freshwater Fisheries	5616	0.089%	0%	15.79	20.06
2021	NBPR0T01 - 2021	Upstream of confluence with Savage River	MDDNR Freshwater Fisheries	6624	0%	0%	15.53	19.67
2022	NBPR0T01-2022	Upstream of confluence with Savage River	MDDNR Freshwater Fisheries	6624	0.54%	0%	16.04	20.58
2023	NBPR0T01-2023	Upstream of confluence with Savage River	MDDNR Freshwater Fisheries	6624	0.17%	0%	15.87	20.29
2007	NBUP4622-2007	Piedmont / Above George's Creek	MDDNR Freshwater Fisheries	2004**	22.55%	0%	18.40	22.87
2012	NBUP4622-2012	Piedmont / Above George's Creek	MDDNR Freshwater Fisheries	2072**	19.88%	0%	18.45	23.31
2015	NBUP4622-2015	Piedmont / Above George's Creek	MDDNR Freshwater Fisheries	6300	3.06%	0%	16.64	21.10
2017	NBUP4622-2017	Piedmont / Above George's Creek	MDDNR Freshwater Fisheries	5616	6.78%	0%	17.13	21.63
2021	NBRL014T-2021	Above George's Creek	MDDNR Freshwater Fisheries	6624	0.39%	0%	16.12	20.22
2022	NBRL014T-2022	Above George's Creek	MDDNR Freshwater Fisheries	6624	2.17%	0%	16.54	21.01

Date	Station ID	Station Name	Data Submitter	# Temp Readings	Percent>20°C	Percent>24°C	Avg Daily Mean (°C)	Daily Max (°C)
2023	NBRL014T-2023	Above George's Creek	MDDNR Freshwater Fisheries	6624	0.94%	0%	16.28	20.56
2015	NBRL4119-2015	North Branch Potomac River - Tritowns	MDDNR Freshwater Fisheries	6300	22.41%	0%	18.35	23.14
2007	NBRL0150-2007	McCoole – Zero Creel	MDDNR Freshwater Fisheries	2004**	74.65%	4.29%	21.22	25.72
2012	NBRL0150-2012	McCoole – Zero Creel	MDDNR Freshwater Fisheries	2337**	85.20%	14.68%	22.09	26.43
2015	NBRL0150-2015	McCoole – Zero Creel	MDDNR Freshwater Fisheries	6300	32.30%	0%	18.86	23.47
2021	NBRL0150 - 2021	McCoole	MDDNR Freshwater Fisheries	6624	6.42%	0%	17.50	21.25
2022	NBRL0150 - 2022	McCoole	MDDNR Freshwater Fisheries	8773	10.11%	0%	18.19	21.43
2023	NBRL0150 - 2023	McCoole – Zero Creel	MDDNR Freshwater Fisheries	6624	9.78%	0%	17.80	21.80
2019	McCoole	McCoole	MDDNR Freshwater Fisheries	7553	2.67%	0%	16.98	20.61
2020	McCoole	McCoole	MDDNR Freshwater Fisheries	8829	2.63%	0%	17.63	20.84
2007	NBRL0180-2007	Black Oak	MDDNR Freshwater Fisheries	2004**	83.68%	10.73%	21.78	26.59
2012	NBRL0180-2012	Black Oak	MDDNR Freshwater Fisheries	2072**	90.88%	29.63%	22.84	27.37

Date	Station ID	Station Name	Data Submitter	# Temp Readings	Percent>20°C	Percent>24°C	Avg Daily Mean (°C)	Daily Max (°C)
2015	NBRL0180-2015	Black Oak	MDDNR Freshwater Fisheries	6300	47.37%	0.63%	19.57	24.90
2017	NBRL0180-2017	Black Oak	MDDNR Freshwater Fisheries	5616	54.97%	1.62%	19.96	25.11
2021	NBRL0180-2021	Black Oak	MDDNR Freshwater Fisheries	6624	24.62%	0%	18.76	23.18
2022	NBRL0180-2022	Black Oak	MDDNR Freshwater Fisheries	6624	34.90%	0%	19.29	23.52
2023	NBRL0180-2023	Black Oak	MDDNR Freshwater Fisheries	6624	28.59%	0%	18.94	23.4
2021	NBRL019T-2021	Pinto	MDDNR Freshwater Fisheries	6624	46.91%	0%	19.32	21.75
2022	NBRL019T-2022	Pinto	MDDNR Freshwater Fisheries	6624	73.08%	1.19%	20.92	24.77
2007	NBRL4623-2007	Pinto (downstream)	MDDNR Freshwater Fisheries	2004**	90.47%	22.90%	22.58	27.65
2012	NBRL4623-2012	Pinto (downstream)	MDDNR Freshwater Fisheries	2074**	95.71%	45.71%	23.67	29.55
2017	NBRL4623-2017	Pinto (downstream)	MDDNR Freshwater Fisheries	5616	63.89%	7.14%	20.90	26.13

Existing Use Determination for the North Branch Potomac River mainstem from the confluence with Savage River to the confluence with George's Creek

Figure 4. Temperature & Biological Data for the North Branch Potomac River from the Savage River confluence to George's Creek confluence



Temperature Data Summary

Water temperature data were collected during several sampling events from 2007 to 2023 by Maryland DNR Freshwater Fisheries. Of historical note for the temperature dataset, a major discharger to the North Branch Potomac River, the Luke Mill Paper Plant (approximate coordinates: 39.471643 °N, -79.056809 °W), closed in Spring 2019. Multiple sampling events occurred at two stations located at the downstream end of this segment near the confluence with George's Creek. Recent data at this location demonstrate this area meeting the Class III-P temperature criterion. Besides including the data from these two stations, the table below also includes temperature readings from a station located immediately upstream of the North Branch Potomac River's confluence with the Savage River to help determine the linear extent of waters that meet the Class III-P temperature criterion.

Table 2. Temperature Data in the North Branch Potomac River from the confluence with Savage River to the confluence with George's Creek.

Date	Station ID	Station Name	Data Submitter	# Temp Readings	Percent>20°C	Percent>24°C	Avg Daily Mean (°C)	Daily Max (°C)
2015	NBPR0T01-2015	Upstream of confluence with Savage River	MDDNR Freshwater Fisheries	6300	0.079%	0%	15.38	20.25
2017	NBPR0T01-2017	Upstream of confluence with Savage River	MDDNR Freshwater Fisheries	5616	0.089%	0%	15.79	20.06
2021	NBPR0T01 - 2021	Upstream of confluence with Savage River	MDDNR Freshwater Fisheries	6624	0%	0%	15.53	19.67
2022	NBPR0T01-2022	Upstream of confluence with Savage River	MDDNR Freshwater Fisheries	6624	0.54%	0%	16.04	20.58
2023	NBPR0T01-2023	Upstream of confluence with Savage River	MDDNR Freshwater Fisheries	6624	0.17%	0%	15.87	20.29
2007	NBUP4622-2007	Piedmont / Above George's Creek	MDDNR Freshwater Fisheries	2004**	22.55%	0%	18.40	22.87
2012	NBUP4622-2012	Piedmont / Above George's Creek	MDDNR Freshwater Fisheries	2072**	19.88%	0%	18.45	23.31
2015	NBUP4622-2015	Piedmont / Above George's Creek	MDDNR Freshwater Fisheries	6300	3.06%	0%	16.64	21.10
2017	NBUP4622-2017	Piedmont / Above George's Creek	MDDNR Freshwater Fisheries	5616	6.78%	0%	17.13	21.63
2021	NBRL014T-2021	Above George's Creek	MDDNR Freshwater Fisheries	6624	0.39%	0%	16.12	20.22

Date	Station ID	Station Name	Data Submitter	# Temp Readings	Percent>20°C	Percent>24°C	Avg Daily Mean (°C)	Daily Max (°C)
2022	NBRL014T-2022	Above George's Creek	MDDNR Freshwater Fisheries	6624	2.17%	0%	16.54	21.01
2023	NBRL014T-2023	Above George's Creek	MDDNR Freshwater Fisheries	6624	0.94%	0%	16.28	20.56

*Water temperature logger data assessed from June 1st to August 31st. The "Daily Max" represents the maximum temperature from June 1st to August 31st.

** Temperature data does not meet the proper collection protocol standards (at least 20-minute intervals of continuous monitoring throughout the June 1 – August 31st season) for Maryland's temperature assessment methodologies. These statistics are included for historical reference but will not be used for existing use determinations.

Biological Data Summary

Table 3. Cold Water Obligates Benthic Macroinvertebrate Data from the North Branch Potomac River from the Savage River confluence to George's Creek confluence.

Date	Station	Stream	Data Submitter	Species	Count	Maturity
April 20, 2023	Below Savage River	North Branch Potomac	MDDNR Freshwater Fisheries	*Tallaperla*	1	-
April 20, 2023	Above Georges Creek	North Branch Potomac	MDDNR Freshwater Fisheries	No benthic obligates found	-	-

Existing Use Determination & Rationale for the North Branch Potomac River from the confluence with Savage River, downstream to the confluence with George's Creek

Current Use Class: Class I-P

Existing Use Determination: The North Branch Potomac River mainstem, from the confluence with Savage River [39.4801835° N, -79.0668370° W] downstream to the confluence with George's Creek [39.4833651° N, -79.0463890° W] supports the cold-water benthic macroinvertebrate *Tallaperla* and water temperatures that have a 90th percentile below 20 °C, an average daily mean below 18°C, and daily maximum below 22°C. The segment also supports a recreational stocked trout fishery.

Is this Existing Use Determination Consistent with the Current (June 2024) Designated Use Class? **No.** The existing use as described above requires that water temperatures remain significantly colder than the water quality criterion established to protect the current use class (Class I-P) designation. Therefore, the existing use of this segment of the North Branch Potomac River requires protection to maintain the cold-water temperatures and cold-water obligate macroinvertebrate found here. This level of protection is different from that provided by the segment's current Use Class designation of I-P.

Changes Proposed to the Currently Designated Use Class: As shown in Figure 9, the Department recommends that the portion of the North Branch Potomac River mainstem, from the confluence with Savage River [39.4801835° N, -79.0668370° W] downstream to the confluence with George's Creek [39.4833651° N, -79.0463890° W], be redesignated to Class III-P.

Rationale for the Existing Use Determination: This portion of the North Branch Potomac River (NBPR) mainstem supports the coldwater obligate benthic macroinvertebrate, *Tallaperla,* and has water temperatures that meet the Use Class III-P criteria. Temperature data upstream at station NBPR0T01 has consistently demonstrated attainment of Class III-P temperature. Temperatures are likewise meeting Class III-P criteria at station NBRL014T. At this location, data has also demonstrated multiple years of attainment of the Class III-P temperature criterion even prior to the closure of the Luke Paper Plant (see temperature statistics for station NBUP4622).

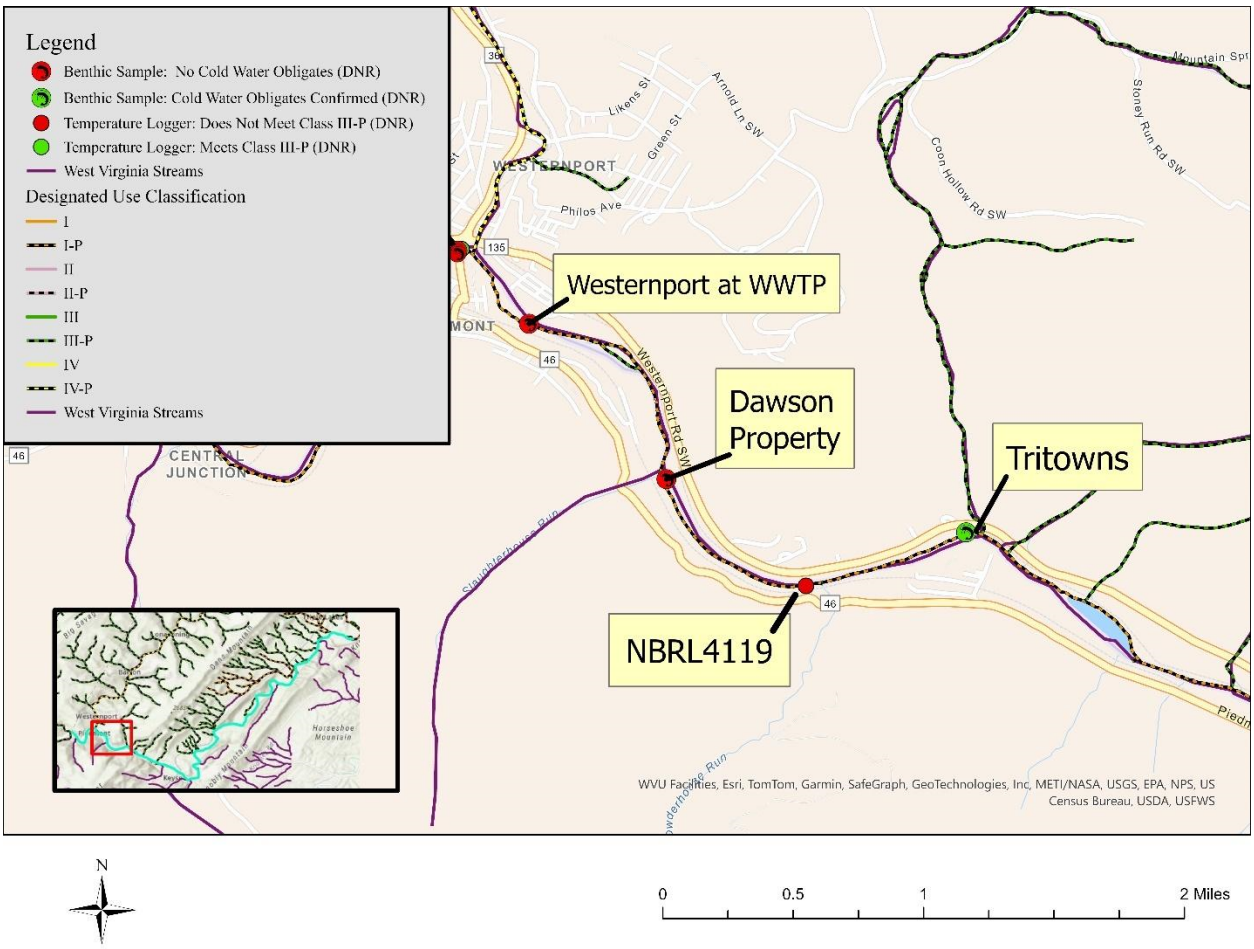
Also supporting this determination is that the coldwater obligate benthic macroinvertebrate, *Tallaperla*, was found in this section of the NBPR at the "Below Savage" station.

With no major stream inputs along this segment (Montgomery Run in West Virginia is a small, first order stream), the presence of multi-year attainment of Class III-P temperatures, and the presence of a cold-water obligate benthic macroinvertebrate within this portion of the North Branch Potomac River, the Department recommends that the portion of the North Branch Potomac River mainstem, from the confluence with Savage River [39.4801835° N, -79.0668370°

W] downstream to the confluence with George's Creek [39.4833651° N, -79.0463890° W], be redesignated to Class III-P. See Figure 9.

Existing Use Determination for the North Branch Potomac River from the confluence with George's Creek to the confluence with Stony Run

Figure 5. Temperature & Biological Data from George's Creek confluence to Stony Run confluence



Temperature Data Summary

Water temperature data were collected during one sampling event in 2015 by Maryland DNR Freshwater Fisheries. Of historical note for the temperature dataset, a major discharger to the North Branch Potomac River, the Luke Mill Paper Plant (approximate coordinates: 39.471643 °N, -79.056809 °W), closed in Spring 2019.

Table 4. Temperature Data Summary for the North Branch Potomac River from the confluence with George's Creek to the confluence with Stony Run.

Date	Station ID	Station Name	Data Submitter	# Temp Readings	Percent>20°C	Percent>24°C	Avg Daily Mean (°C)	Daily Max (°C)
2015	NBRL4119-2015	North Branch Potomac River - Tritowns	MDDNR Freshwater Fisheries	6300	22.41%	0%	18.35	23.14

*Water temperature logger data assessed from June 1st to August 31st. The "Daily Max" represents the maximum temperature from June 1st to August 31st.

Biological Data

Table 5. Benthic Cold Water Obligate Data for the North Branch Potomac River from the confluence with George's Creek to the confluence with Stony Run.

Date	Station	Stream	Data Submitter	Species	Count	Maturity
April 20, 2023	Westernport at WWTP	North Branch Potomac	MDDNR Freshwater Fisheries	No benthic coldwater obligates found	-	-
April 20, 2023	Dawson Property	North Branch Potomac	MDDNR Freshwater Fisheries	No benthic coldwater obligates found	-	-
April 20, 2023	Tritowns	North Branch Potomac	MDDNR Freshwater Fisheries	*Tallaperla*	1	-

Existing Use Determination & Rationale for the North Branch Potomac River from the confluence with George's Creek to the confluence with Stony Run

Current Use Class: Class I-P

Existing Use Determination: The North Branch Potomac River, from the confluence with George's Creek [39.4833651° N, -79.0463890° W] downstream to the confluence with the second order tributary Stony Run [39.4678909° N, -79.0182077° W] supports an actively stocked and managed recreational trout fishery and the cold-water benthic macroinvertebrate, *Tallaperla*. This segment also supports water temperatures that stay below 20 °C at least 87% of

the time, have an average daily mean below 19 °C, and never exceed 23.9°C as a daily maximum.

Is this Existing Use Determination Consistent with the Current (June 2024) Designated Use Class? **No.** The existing use of this portion of the North Branch Potomac River described above requires that water temperatures remain significantly colder than the water quality criterion established to protect the current use class (Class I-P) designation. The existing use of this stream segment of the upper North Branch Potomac River requires protection to maintain the colder water temperatures, the cold-water obligate macroinvertebrate *Tallaperla*, and the recreational stocked trout fishery as managed here. The protections necessary for this existing use are therefore different from those provided by the segment's current Use Class designation of I-P.

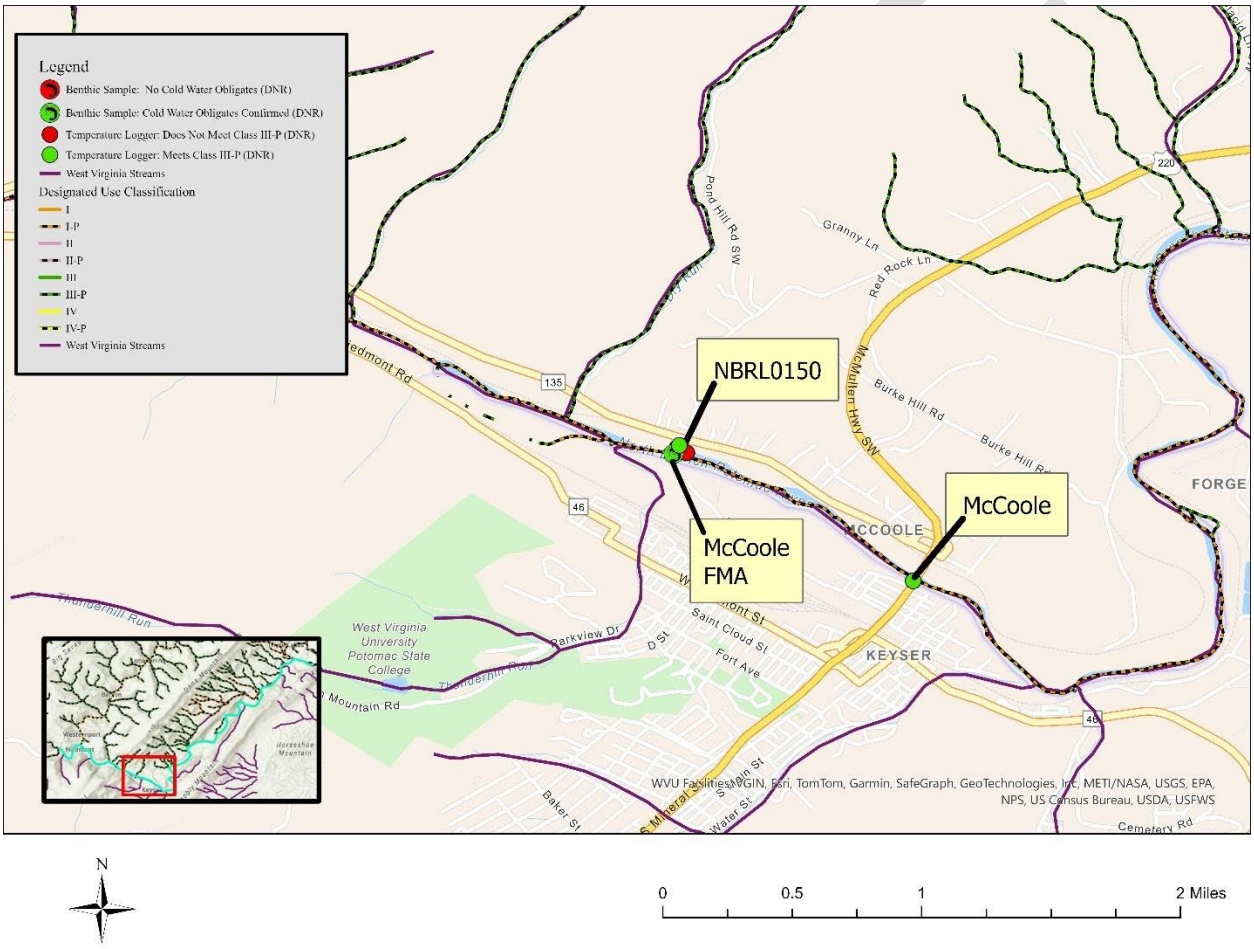
Changes Proposed to the Currently Designated Use Class: Since this segment meets the Class IV-P water temperature criteria, it has been managed consistently as a recreational stocked trout fishery for over 30 years, and to protect the coldwater obligate benthic macroinvertebrate found here, the Department proposes to re-designate this section of the NBPR as Class IV-P.

Rationale for the Existing Use Determination: Recent sampling conducted in this portion of the North Branch Potomac River found the coldwater obligate *Tallaperla.* The only water temperature data available for this segment was collected in 2015 and does not meet the Class III(-P) temperature criterion. At this time, the State cannot justify redesignating this portion of the North Branch Potomac River to Class III-P without more current temperature data demonstrating improvements in water temperature or without conducting a UAA. In the interim, following the rationale discussed in the "Class IV-P Justification" section of this report, the Department proposes to re-designate this segment as Class IV-P. The temperature criterion of a Class IV-P waterway, not to exceed a maximum of 23.9 °C, is consistent with the thermal regime demonstrated in 2015 and would be protective of the most recently measured thermal conditions. Additionally, this section of the mainstem segment is within the Put & Take trout management area in the NBPR. Therefore, due to available temperature data and the longstanding management of this water as a recreational trout fishery, the Department is including this section in the Class IV-P re-designation for the North Branch Potomac River.

Future Existing Use Evaluations Planned: Worth noting is that the most recent water temperature data for this segment was sampled prior (2015) to the closing of the Luke Mill Paper Plant in spring of 2019. It is also eight years prior to the observation of *Tallaperla* in 2023. The 2015 thermal regime, while cooler than Class I-P temperatures, may not be representative of current thermal conditions in the stream which are likely to be colder. MD DNR and MDE are working together to collect additional temperature data in 2024 to capture the current thermal regime of the segment. When this data becomes available, the Department will re-evaluate the existing use for this stream segment to ensure that it is accurately characterized.

Existing Use Determination for the North Branch Potomac River from the confluence with the unnamed tributary to the North Branch Potomac River to the confluence with New Creek

Figure 6. Temperature & Biological Data for the North Branch Potomac River mainstem from the UT North Branch Potomac River to New Creek



Temperature Data

Water temperature data were collected during multiple sampling events from 2007 to 2023 by Maryland DNR Freshwater Fisheries. Of historical note for the temperature dataset, a major discharger to the North Branch Potomac River, the Luke Mill Paper Plant (approximate coordinates, [39.471643 °N, -79.056809 °W]), closed in Spring 2019.

Table 6. Temperature data for the North Branch Potomac River mainstem from the confluence with UT North Branch Potomac River to New Creek.

Date	Station ID	Station Name	Data Submitter	# Temp Readings	Percent>20°C	Percent>24°C	Avg Daily Mean (°C)	Daily Max (°C)
2007	NBRL0150-2007	McCoole – Zero Creel	MDDNR Freshwater Fisheries	2004**	74.65%	4.29%	21.22	25.72
2012	NBRL0150-2012	McCoole – Zero Creel	MDDNR Freshwater Fisheries	2337**	85.20%	14.68%	22.09	26.43
2015	NBRL0150-2015	McCoole – Zero Creel	MDDNR Freshwater Fisheries	6300	32.30%	0%	18.86	23.47
2021	NBRL0150 - 2021	McCoole	MDDNR Freshwater Fisheries	6624	6.42%	0%	17.50	21.25
2022	NBRL0150 - 2022	McCoole	MDDNR Freshwater Fisheries	8773	10.11%	0%	18.19	21.43
2023	NBRL0150 - 2023	McCoole – Zero Creel	MDDNR Freshwater Fisheries	6624	9.78%	0%	17.80	21.80
2019	McCoole	McCoole	MDDNR Freshwater Fisheries	7553	2.67%	0%	16.98	20.61
2020	McCoole	McCoole	MDDNR Freshwater Fisheries	8829	2.63%	0%	17.63	20.84

*Water temperature logger data assessed from June 1st to August 31st. The "Daily Max" represents the maximum temperature from June 1st to August 31st.

** Temperature data does not meet the proper collection protocol standards (at least 20-minute intervals of continuous monitoring throughout the June 1 – August 31st season) for Maryland's temperature assessment methodologies. These statistics are included for historical reference but will not be used for existing use determinations.

Biological Data

Table 7. Benthic Cold Water Obligates Data for the North Branch Potomac River mainstem from the confluence with UT North Branch Potomac River to the confluence with New Creek.

Date	Station	Stream	Data Submitter	Species	Count	Maturity
April 20, 2023	McCoole FMA	North Branch Potomac	MDDNR Freshwater Fisheries	*Tallaperla*	2	-

Existing Use Determination & Rationale for the North Branch Potomac River from the confluence with UT North Branch Potomac River to the confluence with New Creek

Current Use Class: Class I-P

Existing Use Determination: The North Branch Potomac River, from the confluence with the unnamed tributary to the North Branch Potomac River [39.4527207 °N , -78.9901090 °W] downstream to the confluence with New Creek [39.4390660° N, -78.9661628° W] supports the cold-water benthic macroinvertebrate, *Tallaperla*, an actively stocked and managed recreational trout fishery, and water temperatures that have a 90th percentile below 20 °C, an average daily mean below 19°C, and daily maximum below 22°C.

Is this Existing Use Determination Consistent with the Current (June 2024) Designated Use Class? **No.** The existing use of this segment of the North Branch Potomac River described above requires that water temperatures remain significantly colder than the water quality criterion established to protect the current use class (Class I-P) designation. The existing use of this segment of the North Branch Potomac River requires protection to maintain the cold-water temperatures that support the cold-water obligate benthic macroinvertebrate found here. The protections necessary for this existing use are therefore different from those provided by the segment's current Use Class designation of I-P.

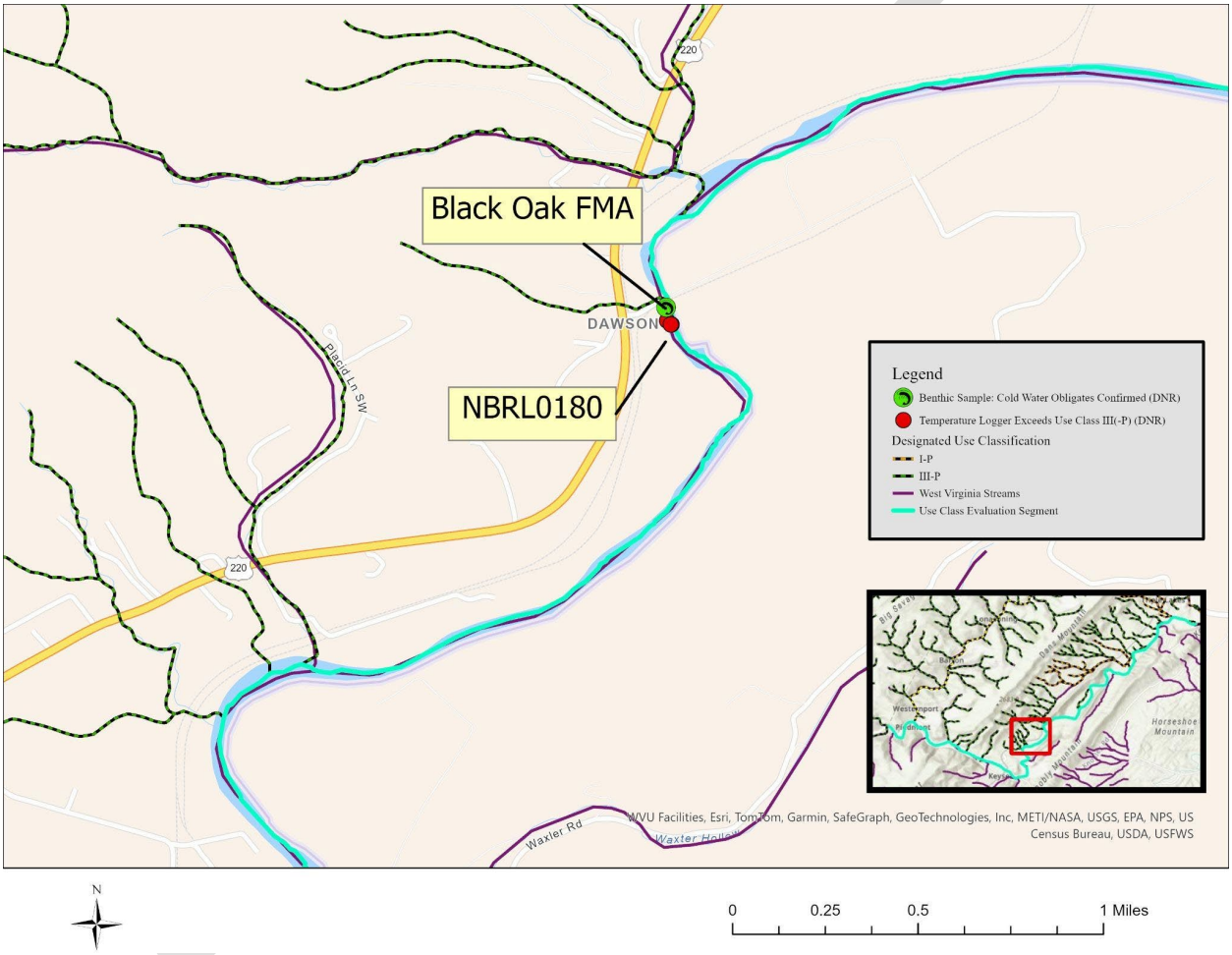
Changes Proposed to the Currently Designated Use Class: As shown in Figure 9, the Department recommends that the portion of the North Branch Potomac River, from the confluence with the unnamed tributary to the North Branch Potomac River [39.4527207 °N , -78.9901090 °W] downstream to the confluence with New Creek [39.4390660° N, -78.9661628° W], be redesignated to Class III-P.

Rationale for the Existing Use Determination: This segment of the North Branch Potomac River supports the coldwater obligate benthic macroinvertebrate, *Tallaperla*. Recent temperature data (2019-2023), recorded after the closure of the Luke Papermill Plant in Spring of 2019, demonstrates that water temperatures have repeatedly achieved Class III(-P) temperature criteria. Class III(-P) temperature criteria were achieved for three consecutive years in 2019-2021 with

only a 10.11% exceedance of the 20°C threshold in 2022. Recorded temperatures in 2023 met Class III-P criteria. Due to consistent achievement (4 out of 5 years of monitoring) of the Class III-P temperature criteria in conjunction with the presence of cold-water obligate benthic macroinvertebrates, the Department has determined that this stream segment has an existing use consistent with Use Class III-P.

Existing Use Determination for the North Branch Potomac River from the confluence with an unnamed tributary near Pleasant View Lane to the confluence with another unnamed tributary near Black Oak Road

Figure 7. Temperature & Biological Data for the North Branch Potomac River from the confluence with an unnamed tributary near Pleasant View Lane to the confluence with another unnamed tributary near Black Oak Road



Temperature Data Summary

Water temperature data were collected during multiple sampling events from 2007 to 2023 by Maryland DNR Freshwater Fisheries. Of historical note for the temperature dataset, a major discharger to the North Branch Potomac River, the Luke Mill Paper Plant (approximate coordinates: 39.471643 °N, -79.056809 °W), closed in Spring 2019.

Table 8. Temperature Data Summary for the North Branch Potomac River from the confluence with an unnamed tributary near Pleasant View Lane to the confluence with another unnamed tributary near Black Oak Road.

Date	Station ID	Station Name	Data Submitter	# Temp Readings	Percent>20°C	Percent>24°C	Avg Daily Mean (°C)	Daily Max (°C)
2007	NBRL0180-2007	Black Oak	MDDNR Freshwater Fisheries	2004**	83.68%	10.73%	21.78	26.59
2012	NBRL0180-2012	Black Oak	MDDNR Freshwater Fisheries	2072**	90.88%	29.63%	22.84	27.37
2015	NBRL0180-2015	Black Oak	MDDNR Freshwater Fisheries	6300	47.37%	0.63%	19.57	24.90
2017	NBRL0180-2017	Black Oak	MDDNR Freshwater Fisheries	5616	54.97%	1.62%	19.96	25.11
2021	NBRL0180-2021	Black Oak	MDDNR Freshwater Fisheries	6624	24.62%	0%	18.76	23.18
2022	NBRL0180-2022	Black Oak	MDDNR Freshwater Fisheries	6624	34.90%	0%	19.29	23.52
2023	NBRL0180-2023	Black Oak	MDDNR Freshwater Fisheries	6624	28.59%	0%	18.94	23.4

*Water temperature logger data assessed from June 1st to August 31st. The "Daily Max" represents the maximum temperature from June 1st to August 31st.

** Temperature data does not meet the proper collection protocol standards (at least 20-minute intervals of continuous monitoring throughout the June 1 – August 31st season) for Maryland's temperature assessment methodologies. These statistics are included for historical reference but will not be used for existing use determinations.

Biological Data

Table 9. Biological Data Summary for the North Branch Potomac River from the confluence with an unnamed tributary near Pleasant View Lane to the confluence with another unnamed tributary near Black Oak Road.

Date	Station	Stream	Data Submitter	Species	Count	Maturity
April 20, 2023	Black Oak FMA	North Branch Potomac	MDDNR Freshwater Fisheries	*Sweltsa*	1	-

Existing Use Determination & Rationale for the North Branch Potomac River from the confluence with an unnamed tributary near Pleasant View Lane to the confluence with another unnamed tributary near Black Oak Road

Current Use Class: Class I-P

Existing Use Determination: The upper North Branch Potomac River, from the confluence with the second order unnamed tributary to the North Branch Potomac River near Pleasant View Lane [39.4643122° N, -78.9564304 ° W] downstream to the confluence with the unnamed tributary to the North Branch Potomac River near Black Oak Rd [39.4785295° N, -78.9422151° W] supports an actively stocked and managed recreational trout fishery and the cold-water benthic macroinvertebrate (*Sweltsa*). This segment also supports water temperatures that have an average daily mean below 20°C, remain below 20 °C at least 65% of the time, and have a daily maximum below 23.9°C.

Is this Existing Use Determination Consistent with the Current (June 2024) Designated Use Class? **No.** The existing use described above requires that water temperatures remain significantly colder than the water quality criterion established to protect the current use class (Class I-P) designation. Therefore, the existing use of this stream segment of the upper North Branch Potomac River requires protection to maintain the cold-water temperatures, cold-water obligate macroinvertebrate, and recreational trout fishery found here. This level of protection is different from that provided by the segment's current Use Class designation of I-P.

Changes Proposed to the Currently Designated Use Class: Current temperature data do not support the re-designation of this section of the North Branch Potomac River to Class III-P without conducting a use attainability analysis (UAA). However, since this segment meets the Class IV-P water temperature criteria, it has been managed consistently as a recreational stocked trout fishery for over 20 years, and to protect the coldwater obligate benthic macroinvertebrate found here, the Department proposes to re-designate this section of the NBPR as Class IV-P.

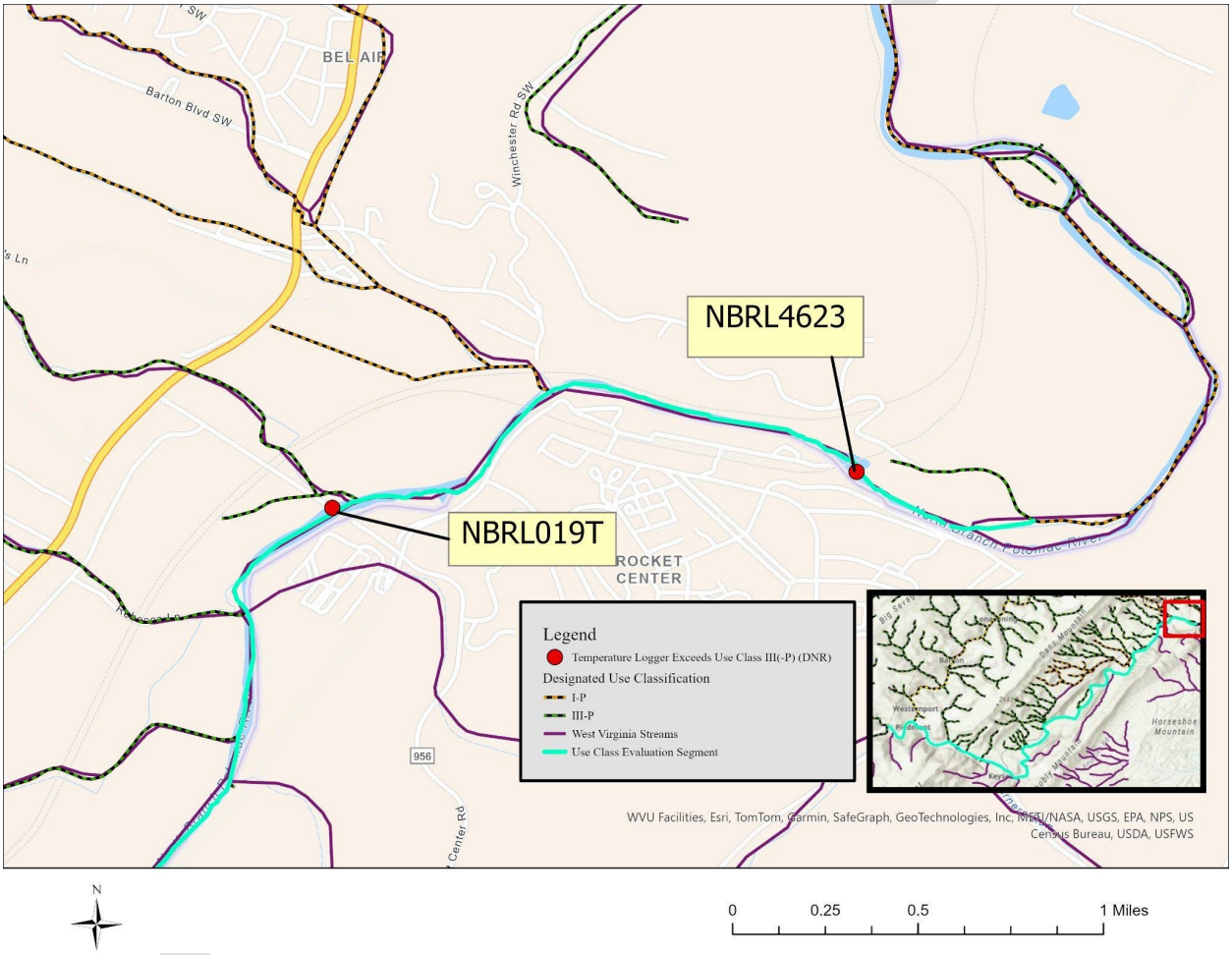
Rationale for the Existing Use Determination: This segment of the North Branch Potomac River has supported an actively stocked and managed trout fishery for over 20 years. It also supports the cold-water obligate benthic macroinvertebrate, *Sweltsa*. Water temperatures were monitored at this stream segment both prior to and after the closure of the Luke Paper Mill Plant, a major

discharger to the North Branch Potomac River. For this existing use determination, data collected after the closure of the Plant was used to characterize the current thermal regime (data from 2021-2023). The current water temperatures measured show temperatures that are consistently colder than the water temperature criterion specified for a Class I-P waterbody. However, the 2021-2023 water temperature data collected in this stream section does not meet the Class III(-P) temperature criterion. At this time, the State cannot justify redesignating this portion of the North Branch Potomac River to Class III-P without further improvements in water temperature or conducting a UAA.

The most recent water temperature data collected in the stream segment does meet the temperature criterion for Class IV(-P): Recreational Trout Waters. The temperature criterion for Class IV-P waters, not to exceed a maximum of 23.9 °C, is consistent with the thermal regime demonstrated from 2021-2023 and would be protective of the stream's current use and biological characteristics. Therefore, following the rationale discussed in the "Class IV-P Justification" section of this report, the Department proposes to re-designate this segment as Use Class IV-P, see Figure 9.

Existing Use Determination & Rationale for the North Branch Potomac River from the confluence with an unnamed tributary near Rebecca Lane to the confluence with another unnamed tributary near McKenzie Tower Road SW in Pinto, MD

Figure 8. Temperature & Biological Data for the North Branch Potomac River from the confluence with an unnamed tributary near Rebecca Lane to the confluence with another unnamed tributary near McKenzie Tower Road SW in Pinto, MD



Temperature Data Summary

Water temperature data were collected during multiple sampling events from 2007 to 2022 by Maryland DNR Freshwater Fisheries.

Table 10. Temperature Data Summary for the North Branch Potomac River from the confluence with an unnamed tributary near Rebecca Lane to the confluence with another unnamed tributary near McKenzie Tower Road SW in Pinto, MD.

Date	Station ID	Station Name	Data Submitter	# Temp Readings	Percent>20°C	Percent>24°C	Avg Daily Mean (°C)	Daily Max (°C)
2021	NBRL019T-2021	Pinto	MDDNR Freshwater Fisheries	6624	46.91%	0%	19.32	21.75
2022	NBRL019T-2022	Pinto	MDDNR Freshwater Fisheries	6624	73.08%	1.19%	20.92	24.77
2007	NBRL4623-2007	Pinto (downstream)	MDDNR Freshwater Fisheries	2004**	90.47%	22.90%	22.58	27.65
2012	NBRL4623-2012	Pinto (downstream)	MDDNR Freshwater Fisheries	2074**	95.71%	45.71%	23.67	29.55
2017	NBRL4623-2017	Pinto (downstream)	MDDNR Freshwater Fisheries	5616	63.89%	7.14%	20.90	26.13

*Water temperature logger data assessed from June 1st to August 31st. The "Daily Max" represents the maximum temperature from June 1st to August 31st.

** Temperature data does not meet the proper collection protocol standards (at least 20-minute intervals of continuous monitoring throughout the June 1 – August 31st season) for Maryland's temperature assessment methodologies. These statistics are included for historical reference but will not be used for existing use determinations.

Existing Use Determination & Rationale for the North Branch Potomac River from the confluence with an unnamed tributary near Rebecca Lane to the confluence with another unnamed tributary near McKenzie Tower Road SW in Pinto, MD

Current Use Class: Class I-P

Existing Use Determination: The existing use of the section of North Branch Potomac River mainstem near Pinto, MD is no different than its currently designated use class of I-P.

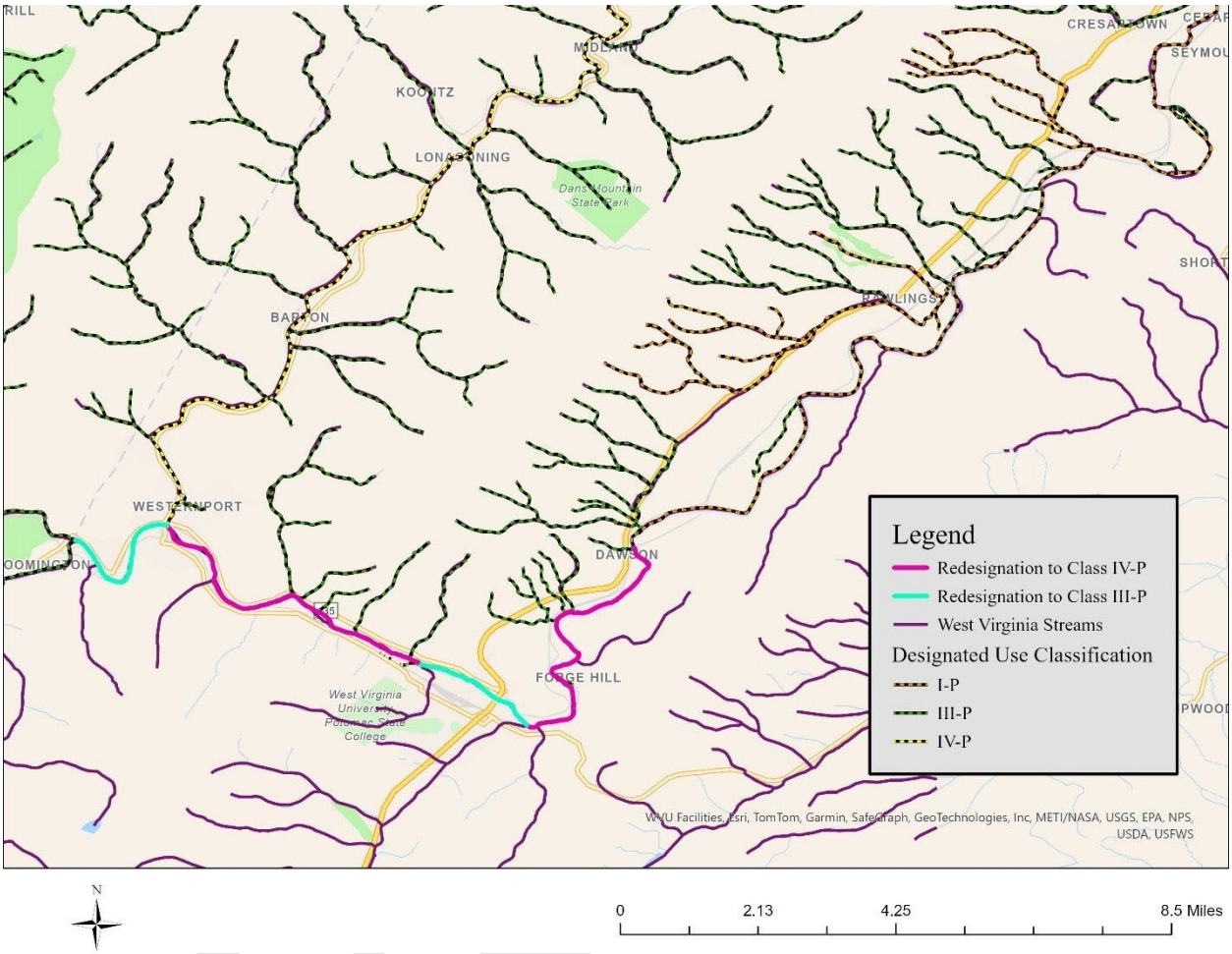
Is this Existing Use Determination Consistent with the Current (June 2024) Designated Use Class? **Yes.** Sampling for cold-water obligate macroinvertebrates has not been attempted within

this segment. This area of the NBPR is included within the Zero Creel trout management area by MD DNR. However, current temperatures do not meet the criteria for Class IV-P: Recreational Trout Waters. The existing use of the section of North Branch Potomac River in Pinto, MD does not require a different level of protection than that afforded by the current use class designation of I-P.

Changes Proposed to the Currently Designated Use Class: No changes are currently proposed to the designated use of this stream segment.

Rationale for the Existing Use Determination: Natural, self-sustaining trout populations are unable to be determined due to recent history of trout stocking within the North Branch Potomac River watershed. Additionally, cold-water obligate macroinvertebrate species have not yet been sampled and confirmed within this section of the North Branch Potomac River mainstem. While this section of the mainstem is within the Zero Creel trout management area for MD DNR, temperatures do not meet the criteria of Class IV-P: Recreational Trout Waters. At this time, the Department does not recognize this section of the North Branch Potomac River as having an existing use associated with self-sustaining cold-water obligate populations or otherwise different from Use Class I-P.

Figure 9. Existing Use Determinations for North Branch Potomac River



Public Review Process: This existing use determination was proposed in the September 6, 2024 edition of the Maryland Register. The public review and comment period was from September 6, 2024 - December 9, 2024, and a public hearing was held December 2, 2024.

Status of Existing Use Determination: The Department has not made a final determination on this existing use at this time, and the document is provided for public reference. Please see the Department's Comment Response Document[8] posted April 17, 2026 for more information.

[8]https://mde.maryland.gov/programs/water/TMDL/WaterQualityStandards/Documents/EU_Comment_Response_Document_4-17-26.pdf