MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230
410-537-3000 • 1-800-633-6101 • www.mde.maryland.gov

APPLICATION FOR A STATE INDIRECT POTABLE REUSE PERMIT

APPLICABLE LAWS AND REGULATIONS

Annotated Code of Maryland, Environmental Article
Title 9, Subtitle 3: Water Pollution Control

SECTION A: FACILITY & APPLICANT INFORMATION

1. Facility Location: (name and address of the facility)

Name: Westminster PureWater Facility

Address: 1117 Old New Windsor Pike

City: Westminster County: Carroll Zip: 21158

Legislative District: 07 Council District: 007

Latitude (Deg., Min., Sec.): 39.33.28 Longitude (Deg., Min., Sec.): 77.02.21

2. Applicant Information (name and address of responsible person or organization applying for the permit)

Name: City of Westminster

Address: 45 W. Main Street

City: Westminster County: Carroll Zip: 21157

Telephone No.: 410-848-9000 Fax No.: 410-857-7476

3. Property Owner Information (name and address of property owner, if different from applicant)

Name: Mayor and Common Council of Westminster

Address: 45 W. Main Street

City: Westminster County: Carroll Zip: 21157

Telephone No.: 410-848-9000 Fax No.: 410-857-7476

MDE USE ONLY
Application Number:
Date Received:

SECTION B: SUPPLEMENTS TO THE APPLICATION FOR A STATE INDIRECT POTABLE REUSE PERMIT

After the Department receives this completed application form, a supplemental requirements package will be sent to the applicant for completion.

SECTION C: FACILITY LOCATION MAP AND PROJECT DESCRIPTION

The application, to be considered complete, must be accompanied by a U.S. Geological Survey topographic map or road map or similar map, at a sufficient scale to adequately show the exact location of the facility which discharges or may discharge, and the exact location of the area used to store the reclaimed water generated. Please also provide a brief, narrative description of the project including, but not limited to, the treatment processes, environmental buffer and the treatment goals.

SECTION D: SIGNATURE OF APPLICANT OR AGENT

The applications for a State Potable Reuse Permit must be signed by a responsible official as indicated: For corporations, by principal executive officer or authorized representative; For partnerships, by a general partner; For proprietorship, by the proprietor; or, for municipal, State or other public facility, by a principal executive officer, ranking elected official or other authorized employee.

Name and Title (please print) Mona Becker, Mayor	Phone Number 410-848-9000
Signature 	Date Signed 1-5-24

SECTION E: SUBMITTAL OF APPLICATION

Submit one signed application to:

water.supply@maryland.gov

SECTION F: NOTICES

Environment Article §9-303.2. (I) Section stipulates that a successful application for a potable reuse permit shall: (1) demonstrate to the satisfaction of the Department: (I) the ability to comply with the requirements of this section; (II) the availability of funds to construct and operate any necessary improvements; (III) the technical and administrative capacity to perform the process covered under the permit; and (IV) that all necessary planning and engineering design is complete; and (2) include: (I) a complete feasibility study; and (II) any additional information requested by the Department.

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Map Locator

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Map location pins dropped or searched for by address/place provide products within a 15 mile radius of specified location.

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January 12, 2024

Topic: Water Reuse Project Description and the effect on the NPDES Discharge Permit

The City of Westminster MD is proposing to construct and utilize an indirect potable Water Reuse facility, named Westminster PUREWater, on the site of the current Westminster WRF. The intention is to highly treat final effluent from the Denitrification Facility (DFF), prior to the addition of any disinfection chemicals, and discharge into Cranberry Reservoir. The City of Westminster's Cranberry Water Treatment Plant, utilizing UF membranes, will draw raw water from the Cranberry Reservoir and send to distribution system. The Cranberry Reservoir is a backup water supply reservoir located 2.4 miles from Westminster, in Carroll County. The reservoir area is approximately 25 acres, with a mean depth of 15 ft, a max depth of 26 ft and a total volume of 121MGal.

Once approved, the design phase, permitting, construction and acquisition of all equipment will take approximately one and a half years to two years to complete.

The plan is to develop the project in phases. Phase 1 will include construction of the building and all equipment necessary to produce 500,000 gallons per day (0.5mgd) of purified water. Sized for possible future growth, the building will be able to include all of the equipment necessary for possible expansion to the ultimate two million gallons per day (2mgd).

It is very important to note that phase 1 will only be sized for 500,000 gallons day (0.5mgd). PUREWater facility treatment equipment is provided as units. With the goal of one plus a spare, initial construction will include two-500,000 gallon per day treatment trains. Only one treatment train will be operated at a time and the redundancy would allow for regular maintenance, membrane cleaning and repairs.

Phase 2 would be for the future, to support City growth, with coordination and approval from MDE, following the City's Capacity Management plan. A third treatment train would be added to expand the facility to one million gallons plus a spare.

Phase 3 would include a fourth treatment train to allow expansion to 1.5 million gallons per day (1.5mgd). Phase 4 would expand production to two million gallons per day (2mgd) without any redundancy.

The PUREWater treatment trains will further treat the DFF effluent with a series of steps including, but not limited to, Ultra Filtration, Reverse Osmosis, Advanced Oxidization with Ultraviolet and Granular Activated carbon. These technologies are proven to meet and exceed the parameters established by the California Standards for indirect potable water reuse. Incorporated into the design would be online instrumentation such as flow, turbidity and conductivity that would not allow off-spec water to enter the PUREWater facility, but rather be discharged with the normal WRF effluent. Additional sampling locations and instrumentation will be included as required by MDE. The flow measurement would include, not only the influent and effluent of the PUREWater facility, but also the flow between different units within the treatment train. Both the permeate and the reject water from the reverse osmosis unit will be measured. The reject

water will be blended with the WRF effluent prior to chlorination and treated as normal plant effluent.

For the purposes of the NPDES Discharge Permit, the total allowable plant effluent (discharge point 101) will remain five million gallons per day (5mgd). The purified water from the PUREWater facility to augment Cranberry Reservoir (discharge point 002) will not exceed 500,000 gallons per day (0.5mgd). During Phase 1 of the project, the combined total flow of the plant effluent (001) and discharge into Cranberry Reservoir (002) will not exceed the allowable five million gallons per day (5 mgd). For example, assuming the PUREWater facility is operating at full capacity, the discharge of purified water facility to Cranberry Reservoir will be 0.5 mgd and the WRF discharge would not exceed 4.5 mgd.

In the future, the City may elect to approach MDE to expand the PUREWater facility to 1MGD and beyond. The expansion of the PUREWater facility will require adhering to the requirements of the WRF's Capacity Management Plan, which will likely be the defining impediment, as well as current MDE regulations. At that time, it may become necessary to re-evaluate discharge point 001 and possibly expand to 6-6.5MGD along with all the required adjustments to loading and sampling.