

Facility Identification	Structure, Ancillary Facilities, and Process
Intermediate Pumping Station / Denitrification Filter	<p>The Intermediate Pumping Station/Denitrification Filter is a single integrated structure. The lower level of the pump station includes a wet well and drywell. Pumps pump treated sewage out of the wet well into the denitrification filters. In the event of a minor leak in the piping in the drywell, a sump pump will pump liquid into the wetwell. In the event of a major leak in the drywell, a sewage pump will pump liquid into the denitrification filter. The intermediate pump station has a roof, with rain gutters and downspouts which discharge to splash pads on the ground surface. The denitrification filter has aluminum planks covering the surface, which has drainage openings between the planks. All rain entering the top of the denitrification filter enters the filter and is processed through the filter. There is a dual containment methanol feed pipeline which rised from below ground, and runs along the outside and top of the denitrification filter and discharges methanol within the filter.</p>

General Location

The Broadwater WRF is located on Deep Cove Road in Churchton, Maryland in the southeastern portion of Anne Arundel County between West River and Herring Bay. The treatment plant is situated on a 21.8 acre site, which is surrounded by forest. The operating facilities occupy approximately 10 acres of the site and the balance, approximately 12 acres, consists of forest stands and vegetation commonly found in palustrine wetlands.

1.5 Site Description

Background

The Broadwater WRF currently treats an average of one million gallons per day (mgd). The facility has a permitted capacity of 2.0 mgd and a design peak flow of 5.7 mgd. Although the facility operates 24 hours a day, the plant is staffed only one shift per day, seven days a week. For the other two shifts, the facility is monitored remotely at the Millersville headquarters using a SCADA system. Dispatchers and on-call personnel respond to system alarms to resolve operating problems as necessary.

The current total impervious area of the site is 4.99 acres, including roads, structure roofs, and open tankage. There is partial treatment of the total impervious area, which is described in Section 3. With scheduled upgrades (to be completed within the next year), total impervious area will not change. Attachment B shows the plant layout with the upgrades and includes delineations of the drainage areas.

Site Drainage

There are six primary drainage areas as shown on Attachment B. Their size and description of stormwater flow are provided in Table 2. A significant portion of the drainage is treated as sheet flow to conservation areas.