

Blacks Creek Maintenance Pond

Operation, Maintenance, & Replacement Plan

The Blacks Creek Maintenance Pond (Maintenance Pond) is the latest addition to the Slippery Rock Watershed Coalition Comprehensive Operation and Maintenance Plan for Watershed Restoration Projects, March 2007 (Comprehensive Plan). Additional information regarding the broader operation and maintenance of the treatment systems within the Slippery Rock Creek Watershed that may utilize the Maintenance Pond can be found within the Comprehensive Plan. The information described within this Operation, Maintenance, and Replacement Plan (OM&R Plan) pertains to the Maintenance Pond and other appurtenances funded by the EPA Section 319 Project #1819.

Overview – The Blacks Creek Maintenance Pond Project is located in Marion Township, Butler County, Pennsylvania. The construction of the Maintenance Pond is to facilitate maintenance activities at the nearby McIntire passive treatment system (McIntire), the BC19/19B passive treatment system (BC19/19B), and the BC16 passive treatment system (BC16), in accordance with the Comprehensive Plan. Additionally, various other treatment systems covered in the Comprehensive Plan may benefit from the Maintenance Pond.

Over the lifetime of a passive treatment system, the accumulation of vegetation and sludge materials will reduce the treatment capacity of a passive system. These materials can be pumped from the nearby systems and into the Maintenance Pond to dewater and be stored. As this pumped material dewateres, liquids will exit via a drain line that discharges to the existing BC16 which drains to an unnamed tributary to Blacks Creek.

Components – Maintenance Pond, Pumping Pipeline, Overflow Pipe, Drain Line with perforated riser and valve.

Maintenance Pond – The Maintenance Pond is approximately 10'-12' deep and slopes to the western corner to facilitate dewatering via the Drain Line. The volume of the pond measured from the bottom to the invert of the overflow pipe is approximately 7,100 cubic yards. Any erosion on the embankments should be immediately repaired and stabilized. Due to the existing upgradient stormwater diversion and pond design, water is not anticipated to be held within the pond other than during pumping events. Water being held within the pond could be a maintenance indicator associated with the Drain Line described below.

Pumping Pipeline – The Pumping Pipeline consists of a 6" DR17 HDPE pipe, buried within the embankment of the Maintenance Pond at an elevation above the invert of the Overflow Pipe. It extends approximately 600' towards BC19/19B. A 6" flange and Camlock fitting is affixed to the end of the pipeline for ease of attaching hoses during future maintenance events. An access point (tee with blind flange) was installed near the inlet of the BC16 setting pond. During maintenance of BC16, this blind flange is swapped with the hose connection currently located at the BC19/19B end of the pipeline. The pipeline should be checked during each pumping event for leaks.

Overflow pipe – The Overflow Pipe is an 8" Type-S HDPE (N-12) pipe located on the southern corner of the pond. It is installed through the embankment and drains to the BC16 wetland. This pipe should be

checked at least annually and prior to any pumping event. The pipe should be kept clear and vegetation and debris.

Drain Line with Perforated Riser and Valve – The Perforated Drain Line consists of a perforated SDR35 riser pipe approximately 8' tall. The vertical riser is affixed to a 90-degree elbow connected to a 6" SCH40 PVC pipe that extends through the embankment and then downgradient to the BC16 wetland. A 6" Valterra valve housed within a vertical N-12 culvert pipe with lid is located immediately upgradient of the outlet of the Drain Line pipe. This valve can be used to control water flow rates from the maintenance pond to increase retention time and allow for an increase in the retention of solids. The Drain Line should be checked at least annually. Any blockages should be removed and the inlet and outlet should be kept clear of excessive vegetation. The 6" Valterra valve should be exercised (opened and closed) at least annually. The Drain Line valve should be left open when the pond is not in use.

Replacement – The dewatering and storage space utilization within the Blacks Creek Maintenance Pond will be determined by future maintenance needs of the BC19/19B, BC16, McIntire, and any other systems included in the Comprehensive Plan. Therefore, no specific lifespan can be projected for this facility. Upon exhausting all space within the 7,100 cubic yard pond, the material within the pond may either be excavated and disposed of in accordance with local, state, and federal regulations, or the pond may be closed by spreading onsite material over the dried material and revegetated.