

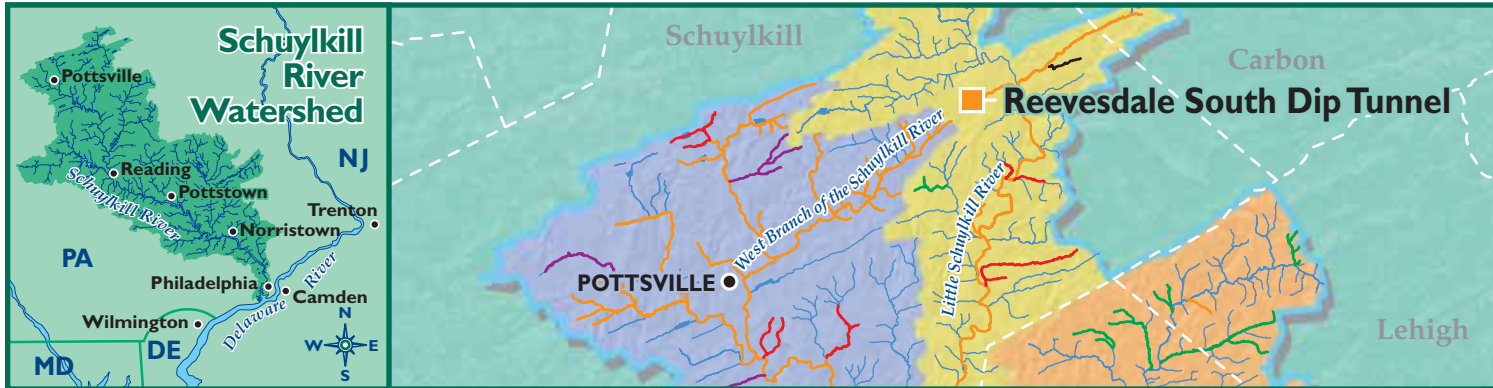
ABANDONED MINE DRAINAGE

Reevesdale South Dip Tunnel

The Oxidizing Limestone Drain (OLD) system installed at the Reevesdale South Dip Tunnel treats approximately 900-gallons per minute of Abandoned Mine Drainage (AMD) that would otherwise flow directly into Wabash Creek, a tributary of the Little Schuylkill River in Schuylkill County. The OLD, along with two wetland ponds installed by the Schuylkill Headwaters Association and funded by the Schuylkill Watershed Initiative Grant, reduces aluminum, iron, manganese, and acidity in these waters.

OLD's are buried limestone ditches into which oxygen-rich AMD waters are directed. AMD water flows into the OLD and dissolves limestone, which increases the alkalinity and pH levels of the water. Oxygen in the AMD water causes iron hydroxides to form and clog the system, therefore, OLD systems need to be flushed regularly. Water flushed from the drain is held in the wetland retention ponds until metals collect at the bottom for subsequent removal.





Despite the installation of a flush pipe network, effectiveness of the Reevesdale South Dip Tunnel project began to decrease not long after its installation due to accumulations of metals in the limestone bed. In the disastrous floods of 2006, the overwhelmed system failed completely, requiring extensive repairs in 2008. The repaired system will include a reconfigured water-flow path to increase exposure to the limestone surface and decrease the clogging potential. AMD treatment systems are a new technology that requires tailoring to individual site characteristics. The lessons learned from the Reevesdale system provide important information for future AMD design and installation.

Sections of the Schuylkill headwaters are designated cold-water fisheries, meaning improved water quality in smaller tributaries such as Wabash Creek creates a healthier ecosystem to support stocked and natural trout populations. Healthy waterways encourage a robust aquatic recreational tourism industry, and improve overall quality of life in the region.



The Schuylkill Watershed Initiative Grant is a targeted watershed grant awarded by the U.S. Environmental Protection Agency for the completion of a suite of water quality improvement demonstration projects in the Schuylkill River Watershed. The Reevesdale South Dip Tunnel project is one of more than 40 projects that received funding from this source, in addition to other funds and/or support. The grant is administered by the Partnership for the Delaware Estuary and the Philadelphia Water Department.