

Pearce Creek Dredged Material Containment Facility (DMCF)

Monitoring Approaches

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Objectives

- Review different types of monitoring:
 - Discharge
 - Groundwater
 - Exterior
- Comparison of monitoring approaches

Discharge Monitoring

- Discharge monitoring of the surface water of the Pearce Creek DMCF is a requirement of the Maryland Department of the Environment (MDE) Water Quality Certification (14-WQC-02).
- Based on the conditions of the WQC, a discharge monitoring plan must be submitted by the U.S. Army Corps of Engineers (USACE) and approved by MDE prior to the placement of dredged material in the Pearce Creek DMCF.
- The discharge monitoring plan applies to all surface water discharged from the Pearce Creek DMCF and will include key parameters such as:
 - Flow volume/discharge rate
 - Total suspended solids
 - pH
 - Dissolved oxygen
 - Nutrients
 - Metals
- Surface water discharge monitoring results will be reported to MDE on a monthly basis.



Groundwater Monitoring

- Groundwater monitoring is a requirement of the MDE WQC and includes monitoring of groundwater in the Magothy and Patapsco aquifers.



- Groundwater monitoring results will be reported to MDE on an annual basis.

- The plan must be submitted by the USACE and approved by MDE prior to the commencement of any construction and dredged material placement activities at the Pearce Creek DMCF.
- The plan will include key parameters such as:
 - Description, location, and maps of each monitoring well
 - Well ID numbers and aquifer monitored
 - Water levels and constituents

Exterior Monitoring

- The Pearce Creek Exterior Monitoring Program is a voluntary effort on behalf of the Maryland Port Administration that will be used to monitor environmental parameters in the area surrounding the Pearce Creek DMCF.



- Exterior monitoring efforts will include key parameters such as:
 - Sediment sampling
 - Water sampling
 - Benthic community sampling

- Exterior monitoring results will be shared with the Pearce Creek Implementation Committee on a semi-annual basis every year that monitoring events are conducted.



Comparison of Monitoring Approaches

Discharge Monitoring

- Requirement of MDE WQC
- Monitors surface water discharged from the Pearce Creek DMCF
- Monitoring results submitted to MDE on a monthly basis

Groundwater Monitoring

- Requirement of MDE WQC
- Monitors groundwater in the Magothy and Patapsco aquifers
- Monitoring results submitted to MDE on an annual basis

Exterior Monitoring

- Voluntary; not required by MDE WQC
- Monitors the water, sediment, and benthic community of the Pearce Creek Lake and Elk River
- Monitoring results are not required to be submitted to MDE



Questions?