



Chesapeake and Ohio Canal National Historical Park

Potomac Submerged Channel Intake Environmental Assessment

Public Meeting July 14, 2016

Potomac Submerged Channel Intake EA

Agenda



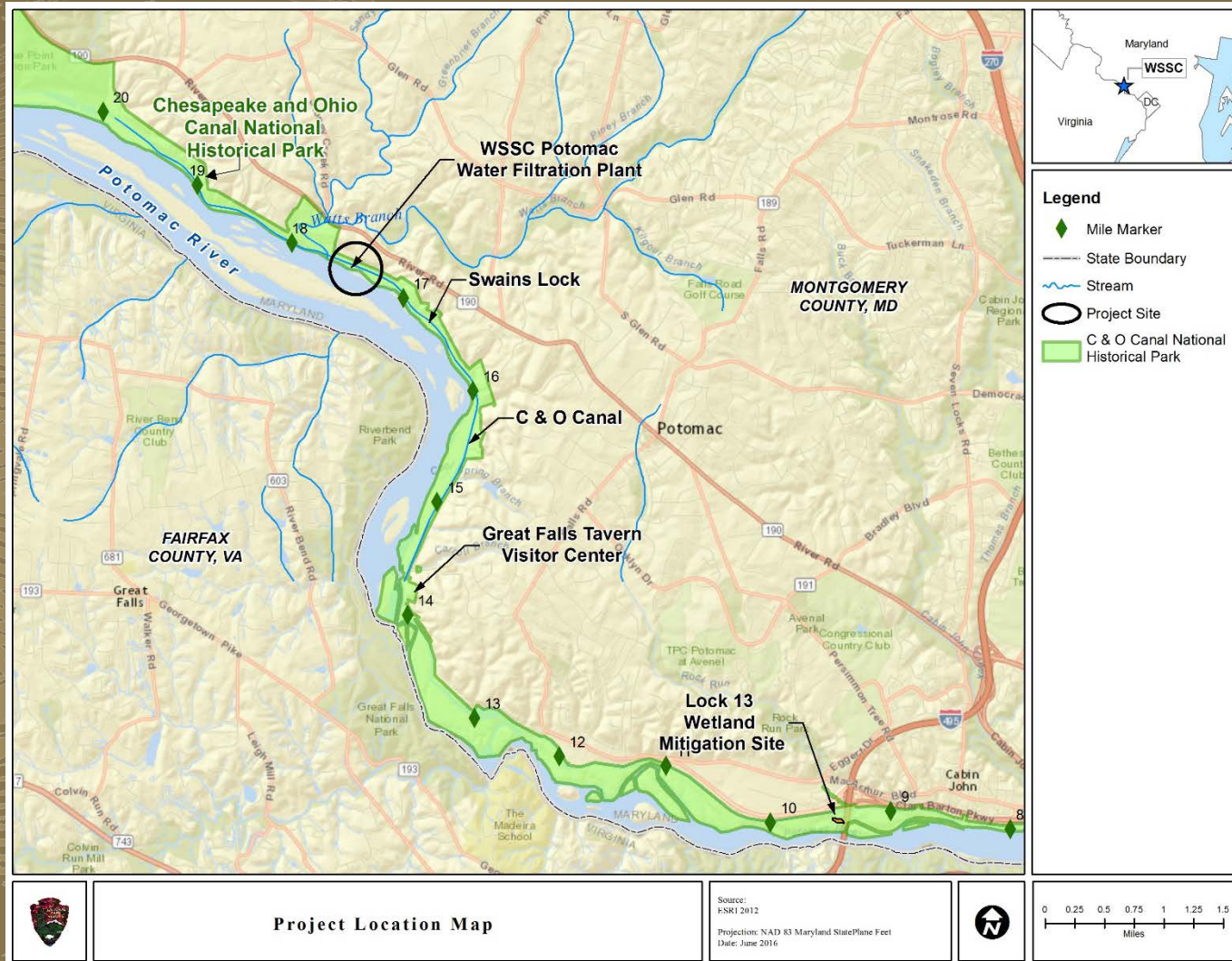
- Background
- Objectives
- Alternatives
- Impacts
- Mitigation
- Next Steps
- Schedule

Potomac Submerged Channel Intake EA

WSSC's Need for the Proposed Intake

- To provide a consistently higher-quality raw water source than can be achieved using the existing onshore intake
- Source Water Assessment (2002)
 - Specifically addressed the impacts of Watts Branch
 - Recommended that “serious consideration be given to an upgraded intake structure with flexibility to withdraw water from a submerged mid-channel location.”
 - Concluded that “flow control practices... are therefore expected to yield more immediate results than sediment runoff control practices.”

Potomac Submerged Channel Intake EA



Potomac Submerged Channel Intake EA

Purpose of and Need for the Federal Action

- The purpose of the federal action is to respond to WSSC's proposal for a submerged intake.
- The federal action by the NPS is needed because the applicant has submitted an application and preliminary plans to construct a submerged intake and supporting features in and adjacent to C&O Canal NHP.
- The park's enabling legislation recognizes the potential need for utility projects to cross the park and provides the Secretary authority to permit crossings.

Potomac Submerged Channel Intake EA

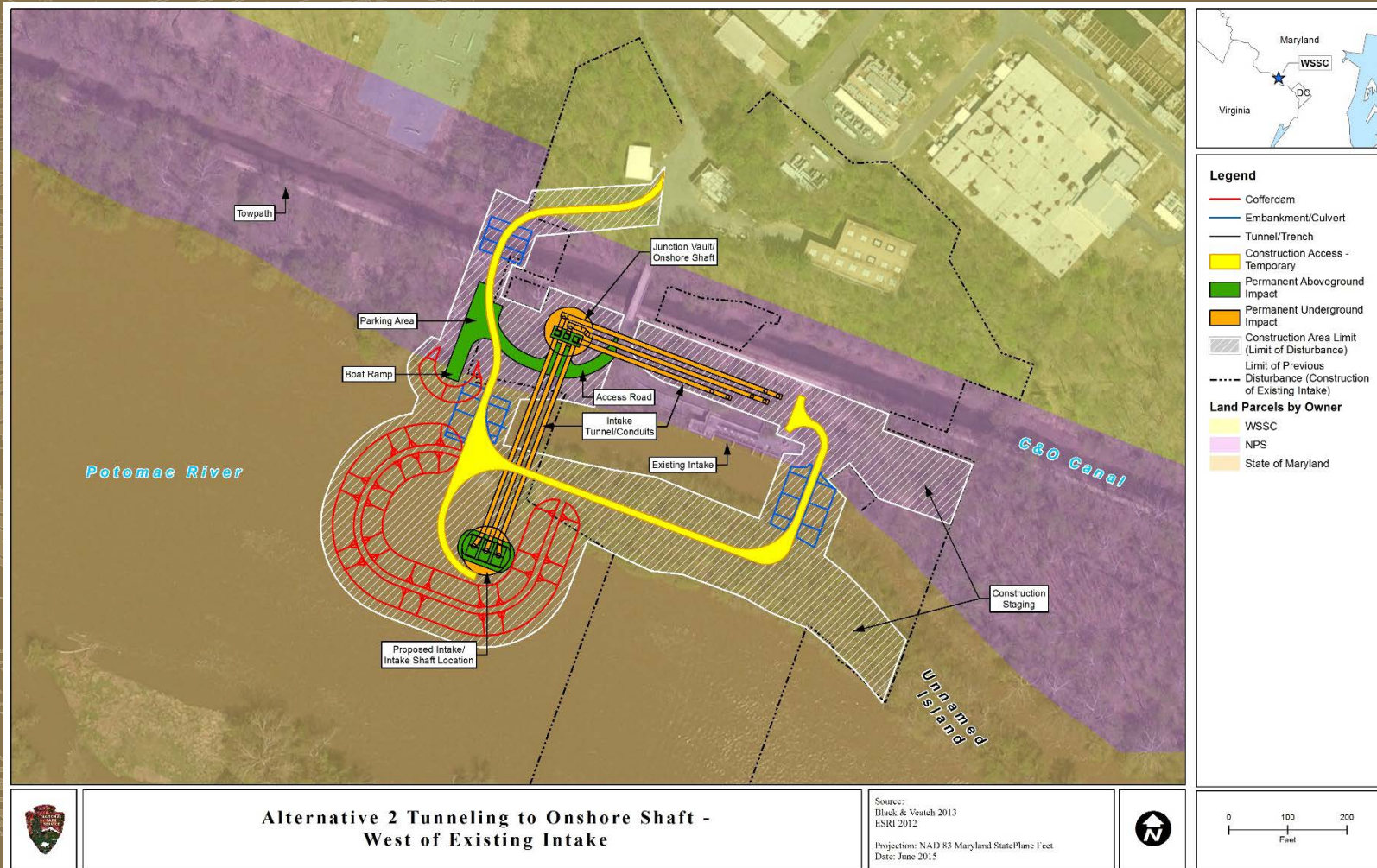
Public Scoping and Outreach to Date

- July 19, 2013: released newsletter to submit scoping comments
- August 1, 2013: one public scoping meeting held in Potomac, Maryland
- During the 30-day comment period, one correspondence was received that focused on potential sources of funding and cooperation activities to clean up the Potomac River

Potomac Submerged Channel Intake EA Alternatives

- Alternative 1: No-Action Alternative
- Alternative 2: Tunneling to Onshore Shaft – West of Existing Intake
 - This is the Preferred Alternative
- Alternative 3: Trenching / Tunneling to Onshore Shaft – West of Existing Intake
- Alternative 4: Tunneling to Onshore Shaft – East of Existing Intake

Potomac Submerged Channel Intake EA



Potomac Submerged Channel Intake EA



Potomac Submerged Channel Intake EA

Alternative 2 – Preferred Alternative

- Adverse impacts as a result of construction and operation activities:
 - Geology and Soils / Sediment
 - Approximately 250,000 cubic yards of bedrock would be removed for tunnel construction.
 - Water Resources
 - Construction and removal of the cofferdams would disturb river bottom sediment.
 - Potential sediment runoff from the upland construction areas would temporarily increase turbidity locally.

Potomac Submerged Channel Intake EA

Alternative 2 – Preferred Alternative (continued)

- Wetlands and Floodplains
 - 0.19 acre of riverine system and wetland impacts
 - 0.53 acre of floodplain impacts
- Terrestrial Vegetation and Wildlife
 - 4.7 acres of vegetation would be removed
- Special-status Plant Species
 - Permanent impacts on floating paspalum (state endangered species), halberd-leaved hibiscus (watch list species) and rough avens (watch list species) from construction of permanent features.

Potomac Submerged Channel Intake EA

Alternative 2 – Preferred Alternative (continued)

- Special-status Wildlife Species
 - Removal of vegetation *may affect, not likely to adversely affect* northern long-eared bat due to time of year restrictions on vegetation removal.
- Cultural Resources
 - Cultural resources would be affected by clearing of vegetation and introduction of new temporary and permanent features:
 - C&O Canal NHP historic district landscape
 - Archeological sites 18MO633 and 18MO719
 - Cultural landscape

Potomac Submerged Channel Intake EA

Alternative 2 – Preferred Alternative (continued)

■ Scenic Resources

- Impacts on visual resources from construction fence, construction equipment, vegetation removal, and new permanent features

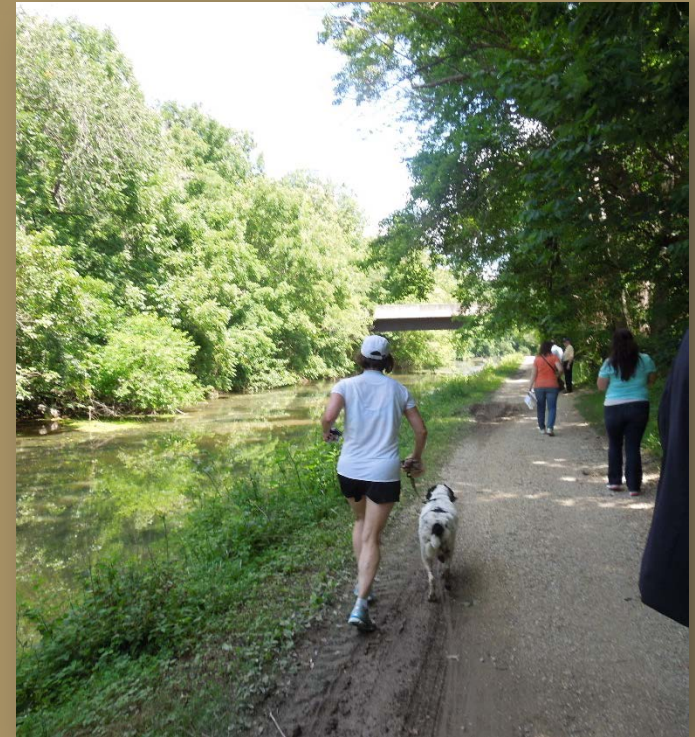
■ Visitor Use and Experience

- Construction fencing would obstruct views of towpath users; river visitors would be able to see construction activities.
- Temporary delays to towpath users, as traffic would be halted periodically for vehicle crossings and blasting and drilling operations.
- Construction noise would be heard on the towpath and on the river.

Potomac Submerged Channel Intake EA

Alternatives 3 and 4

- Impacts from alternatives 3 and 4 would be similar to those of alternative 2, except that alternative 2 has minimized impacts:
 - Alternative 3 footprint would be larger than alternative 2 and would include surface blasting associated with trenching construction.
 - Alternative 4 would required the temporary relocation of the towpath.



Potomac Submerged Channel Intake EA

Land Exchange

- The existing Potomac Water Filtration Plant intake structure was completed in 1982 but an easement was never finalized.
- The current process includes a land exchange agreement which will address current and proposed facilities.
- WSSC would purchase and provide land to NPS in exchange for a perpetual easement for the existing and proposed intake facilities.

Potomac Submerged Channel Intake EA

Mitigation – Natural Resources

- Time of year seasonal restrictions for fish, submerged aquatic vegetation, floating paspalum, northern long-eared bat, and nesting birds
- Wetland mitigation site identified on park property within the area of Lock 13 and evaluated in SOF, approved by NPS staff
- Freshwater mussel relocation and monitoring
- Reforestation of the project area, including monitoring for nonnative species
- Monitoring activities associated with submerged aquatic vegetation and floating paspalum

Potomac Submerged Channel Intake EA

Mitigation – Cultural Resources

- A protective landscape fabric barrier would be installed to protect the structural integrity of the towpath and canal prism from construction activities.
- Archeological site 18MO719:
 - No ground disturbing activities
 - Steel plates would disperse the force of the weight of the construction vehicles to prevent compaction to the deeply buried archeological deposits.
- Archeological site 18MO633 – mitigate adverse impacts through documentation and recovery.

Potomac Submerged Channel Intake EA

Mitigation Impact Fund



- WSSC hired Industrial Economics, Inc. to estimate impacts to visitor experience and ecological resources in monetary terms.
- NPS WASO Social Sciences staff helped develop the study plan and reviewed the study results.
- WSSC plans to update this study once detailed design is complete, they hope to further reduce impacts during detailed design.

Potomac Submerged Channel Intake EA

Mitigation Impact Fund (continued)

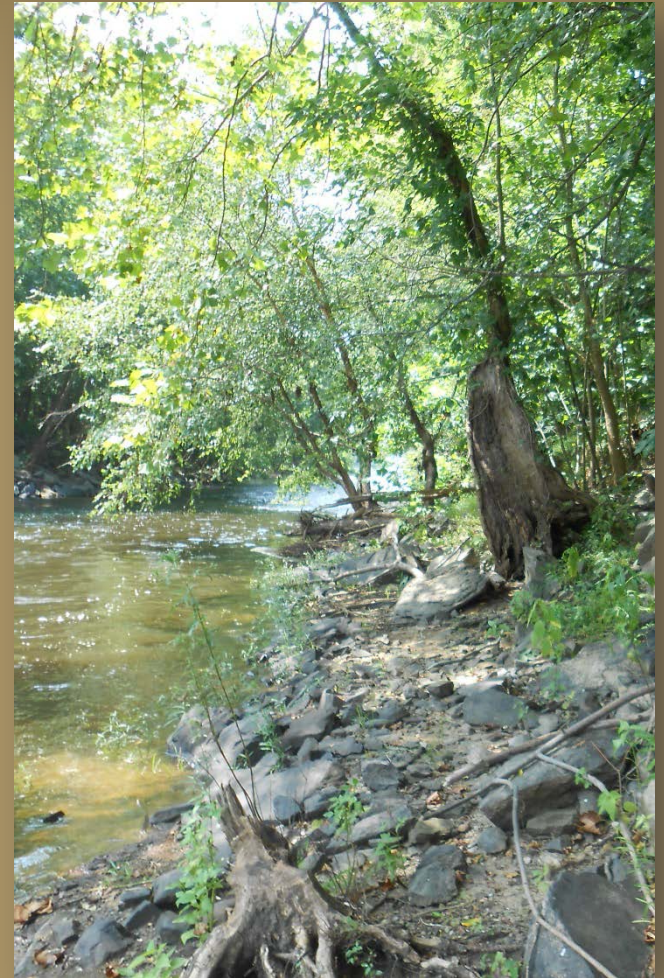
- Visitor impacts estimated using benefits transfer analysis.
 - Data inputs include park visitation, existing estimates of value of recreational activities, and information on the likely reduction in value associated with the proposed project.
- Total visitor impacts estimated at \$1.6 million per year or \$5.7 million in present value



Potomac Submerged Channel Intake EA

Mitigation Impact Fund (continued)

- Ecological impacts estimated using Habitat Equivalency Analysis (HEA).
 - Data inputs included estimates of affected acreage by habitat type and estimates of the duration and severity of the impacts.
 - Estimated cost to offset wetlands and upland forests to be \$151,300



Potomac Submerged Channel Intake EA

Section 106 Compliance

- Compliance with Section 106 is being handled through ongoing consultation with the Maryland Historical Trust (MHT).
- A formal consultation letter was sent to the MHT on December 10, 2013.
- MHT reviewed the Phase II Archeological Evaluation draft report and it was finalized and delivered to MHT on December 8, 2015.
 - The report recommended two archeology sites (18MO633 and 18MO719) located within the project site be eligible for listing on the NRHP.

Potomac Submerged Channel Intake EA

Section 106 Compliance (continued)

- MHT is currently reviewing the draft Section 106 Assessment of Effects for Historic Properties.
 - *Adverse effect* on archeological site 18M0633
 - *No adverse effect* on four properties – archeological site 18M719, C&O Canal, canal prism, and towpath
- An MOA will be prepared to guide the implementation of this project.
 - It would stipulate appropriate treatment measures to minimize or mitigate adverse effects to site 18MO633.

Potomac Submerged Channel Intake EA

Section 7 Compliance

- Consultation with the USFWS on the recently federally listed northern long-eared bat
 - On August 5, 2015, the USFWS concurred that the project *may affect, not likely to adversely affect* the northern long-eared bat with the restriction on vegetation between April 15 and August 30.
- Consultation with Maryland Department of Natural Resources Wildlife and Heritage Service
 - The Habitat Restoration Plan provides guidelines for habitat and resource restoration and mitigation.

Potomac Submerged Channel Intake EA

Next Steps

- Public review of environmental assessment and assessment of effects – ongoing thru August 14
- Complete Section 106 compliance – Fall 2016
- Public comment analysis – September 2016
- Prepare and sign the Finding of No Significant Impact, if appropriate, Fall 2016



Potomac Submerged Channel Intake EA

Questions?

