

## EXECUTIVE SUMMARY

### **Introduction**

Frederick County is pursuing multiple projects to improve system operations, address existing system deficiencies, and increase water and wastewater service levels to meet the demands of projected population forecasts and services within identified growth areas. The proposed New Design Raw Water Main will provide water to the New Design Water Treatment Plant (WTP) that in turn serves Frederick County and City of Frederick service areas. The proposed McKinney Treated Effluent Outfall project will provide additional treated wastewater disposal capacity for the Frederick County and City service areas. The project will include approximately 0.5 miles (3,000 feet) of raw water transmission pipeline extending from the existing Potomac River intake to the existing New Design WTP, electrical and communications ductbanks for systems control and data acquisition (SCADA), and approximately 0.8 miles (4,500 feet) of treated effluent pipeline extending from the proposed McKinney WWTP outfall at Tuscarora Road to the existing Eastalco Potomac River Diffuser.

The National Environmental Policy Act (Public L. 91-90, 42 U.S.C. 4321-4347, July 1, 1970) (NEPA) applies to all federal activities that affect the environment and requires that all federal agencies disclose and consider the environmental implications of proposed actions. The National Park Service (NPS) is responding to a request by the Frederick County Division of Utilities and Solid Waste Management (DUSWM) to construct portions of proposed underground utility improvements on NPS lands. The proposed improvements are entirely funded with County and City of Frederick monies; no State or Federal funding is involved. The purpose of this document is to provide the necessary information for NPS to render a determination whether the proposed action will result in a significant adverse impact upon national parklands.

### **Purpose & Need**

The purpose of the proposed project and the demonstrated public need for the public benefits are discussed in detail in Section 2.0 of this report. The existing County water distribution system is insufficient to provide adequate water to meet predicted future demands. Frederick County must expand the existing water distribution system to meet predicted demands. Several important elements of the Frederick County water/wastewater system are located within the C&O Canal NHP. To meet the County's needs to expand capacity of the existing public infrastructure, construction through the C&O Canal National Historical Park is unavoidable. The following public infrastructure is located within the C&O Canal NHP near Nolands Ferry:

- The existing Potomac River raw water intake and raw water transmission main, supplying raw water to the New Design Water Treatment Plant (WTP).
- An underground communications duct bank providing control and communications with the existing Potomac River Raw Water Intake structure.
- Above ground and underground electrical service to the Potomac River Raw Water Intake.
- The existing Eastalco treated effluent main pipeline to the diffuser.
- The existing Eastalco Potomac River treated effluent outfall diffuser

The system requirements for the McKinney WWTP Treated Effluent Outfall and New Design Raw Water Transmission Main project are based on the evaluations outlined in the following documents:

- *McKinney Wastewater Treatment Plant Treated Effluent Outfall / New Design Water Transmission Main Corridor Alignment Report*, Whitman, Requardt & Associates (WR&A), November 2001
- *McKinney Wastewater Treatment Plant Treated Effluent Conveyance System Study Initial Alternatives Analysis*, WR&A, November 20, 1996
- *McKinney Wastewater Treatment Plant Alternatives Analysis Treated Effluent Conveyance System*, WR&A, March 1999

The existing Frederick County water withdrawal permit allows a maximum per day withdrawal of 16 million gallons per day (MGD). However, the existing Potomac River raw water intake and associated raw water transmission main have a transmission capacity of 10 MGD. Based on existing Frederick County development and growth patterns, projected near-term water demands are approximately 13.0 MGD. Frederick County is currently expanding the existing New Design WTP and increasing system capacity.

### **Alternatives**

The proposed New Design raw water transmission main will provide water to the New Design WTP that in turn serves Frederick County and City of Frederick service areas. The Alternatives are discussed in detail in Section 3.0 of this report. The project will include approximately 0.5 miles (3,000 feet) of raw water transmission pipeline extending from the existing Potomac River intake to the existing New Design WTP, electrical and communications ductbanks for systems control and delivery analysis (SCADA), and approximately 0.8 miles (4,500 feet) of treated effluent pipeline extending from the proposed McKinney WWTP outfall at Tuscarora Road to the existing Eastalco Potomac River Diffuser. The project does not include improvements to the existing Eastalco diffuser or external improvements to the existing Potomac River intake.

#### **Alternative 1 – No Build Alternative**

The Ballenger Creek WWTP and the New Design WTP are existing water dependent facilities that must release into and draw from the Potomac River. The existing Frederick County Potomac River raw water intake is located in the C&O Canal NHP. The existing Eastalco wastewater effluent diffuser is also located in the C&O Canal NHP. The C&O Canal NHP parallels the Potomac River and is located between the Plants and River. The only means to avoid the C&O Canal NHP is to not construct the project. Failure to construct the project will not satisfy the demonstrated need for water/wastewater system improvements. Alternative 1, the No Build Alternative, is not a feasible alternative.

#### **Alternative 2 – Selected Alternative**

The New Design Raw Water Main and McKinney Treated Effluent Outfall Alternative 2 provides infrastructure to support proposed expansions in the Frederick County water and wastewater infrastructure [e.g., expansion of New Design WTP and construction of the McKinney WWTP]. Alternative 2 involves approximately 17,110 LF of underground utility construction, including a 42-inch raw water main, a 42-inch outfall, and a power and communications duct bank. The proposed raw water main and electrical/communications duct bank will parallel the existing 24-inch main, to the southeast of the towpath. The proposed 42-inch outfall pipe will parallel the existing 18-inch outfall and stops before crossing the Canal. Included in the alignment is a crossing of Tuscarora Creek, B&O/CSX Railroad, the C&O Canal and the Canal Towpath.

Because Alternative 2 is contained almost entirely within the existing right-of-way, meets the project needs, and poses little to no impacts to park resources, no other options were required. Alternative 2 is the Environmentally Preferred Alternative.

#### **Alternative 3 – CSX Alternative**

The New Design Raw Water Main and McKinney Treated Effluent Outfall Alternative 3 is functionally identical to Alternative 2. Alternative 3 is a response to potential concerns of CSX railroad regarding proximity to the existing railroad crossing abutments. Alternative 3 involves approximately 17,240 LF of underground utility construction. Alternative 3 is identical to Alternative 2 extending from the Potomac River to approximately 200 feet from the CSX railroad crossing. At approximately 200 feet from the CSX railroad crossing, both 42" mains diverge from New Design Road and extend on parallel alignments to perpendicular crossings of the CSX rail line.

### **Summary of Impacts**

The Affected Environment of the C&O Canal NHP in this location is discussed in Section 4.0. The Environmental Consequences of the proposed project upon the resources of the C&O Canal NHP are discussed in detail in Section 5.0. The No Build Alternative (Alternative 1) fails to satisfy the project purpose and is not feasible. Alternatives 2 and 3 maximize the use of existing Frederick County underground sewer utility permanent easements through the C&O Canal NHP. The existing permanent County utility easement through the C&O Canal NHP encompasses approximately 1.6 acres over a length of 1,210 feet. Alternative 2, the preferred alternative, requires an additional County easement of 0.01 acres on NPS land. Alternative 2 will result in a new total permanent county easement totaling 1.61 acres. Alternative 3, the CSX Alternative, requires an additional County easement of 0.14 acres on NPS land. Alternative 3 will result in a new total permanent county easement totaling 1.74 acres.

Additional areas of temporary construction easements located outside the existing ROW on NPS land total 0.18 acres for Alternative 2 and 0.03 acres for Alternative 3. Areas impacted by construction would be restored to pre-existing conditions upon completion of construction. The Park access road will remain open at all times when the Park is open. Temporary closures would occur only at night. Construction will not affect parking areas. Construction within the Park should last approximately 8 weeks. Alternatives 2 and 3 will have no long-term impact upon C&O Canal NHP operations. The proposed preferred alternative (Alternative 2) shall not result in significant impacts to the environment or the C&O Canal NHP.

The environmental impacts within the C&O Canal NHP are summarized below:

**C&O Canal National Historical Park Environmental Impact Summary Table**

<b>Environmental Feature</b>	<b>Alternative 2–Preferred Alternative</b>	<b>Alternative 3-CSX Alternative</b>
Wetlands	No short-term or long-term impact	No short-term or long-term impact
Waterways	Moderate short-term impact, Negligible long-term impact	Moderate short-term impact, Negligible long-term impact
Floodplains	Minor short-term impact, No long-term impact	Minor short-term impact, No long-term impact
Wildlife/Habitat	Minor short-term impact, Negligible long-term impact	Minor short-term impact, Negligible long-term impact
Rare, Threatened and Endangered Species	Negligible short-term impact, No long-term impact	Negligible short-term impact, No long-term impact
Forests	Negligible short-term impact, No long-term impact	Negligible short-term impact, No long-term impact
Right-of-Ways	Minor short-term impact, No long-term impact	Minor short-term impact, No long-term impact
Historic Structures	No short-term or long-term impact	No short-term or long-term impact
Archeological Resources	No short-term or long-term impact	No short-term or long-term impact
Cultural Landscapes	Minor short-term impact, No long-term impact	Minor short-term impact, No long-term impact
Indian Trust Resources	No short-term or long-term impact	No short-term or long-term impact
Ethnographic Resources	No short-term or long-term impact	No short-term or long-term impact
Air Quality	No short-term or long-term impact	No short-term or long-term impact
Aesthetics and Visual Resources	Moderate short-term impact, No long-term impact	Moderate short-term impact, No long-term impact
Socioeconomic Environment	No short-term or long-term impact	No short-term or long-term impact
Land Use	No short-term or long-term impact	No short-term or long-term impact
Community Facilities and Services	No short-term or long-term impact	No short-term or long-term impact
Environmental Justice	No short-term or long-term impact	No short-term or long-term impact
Agricultural Land	No short-term or long-term impact	No short-term or long-term impact
Soils, Geology, Topography	Minor short-term impact, No long-term impact	Minor short-term impact, No long-term impact

Environmental Feature	Alternative 2–Preferred Alternative	Alternative 3-CSX Alternative
Green Infrastructure	No short-term or long-term impact	No short-term or long-term impact
Cumulative Impacts	No short-term or long-term impact	No short-term or long-term impact
Visitor Use and Experience	Minor short-term impact, No long-term impact	Minor short-term impact, No long-term impact
Park Operations	Minor short-term impact, Negligible long-term impact	Minor short-term impact, Negligible long-term impact

### Public Involvement

Agencies and the public are encouraged to review and comment on the contents of this EA. As identified in the Notice of Availability announcing the release of the EA for public comments, the EA is available electronically at the *Planning, Environment, and Public Comment (PEPC)* website: <http://parkplanning.nps.gov/choh>.

Written comments must be submitted during the official comment period through the website identified above, transmitted via fax, or mailed to the following address:

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