

FINDING OF NO SIGNIFICANT IMPACT

LONG TERM ODOR REMEDY PROGRAM FOR THE POTOMAC INTERCEPTOR CHESAPEAKE & OHIO CANAL NATIONAL HISTORICAL PARK GEORGE WASHINGTON MEMORIAL PARKWAY

The National Park Service is proposing to authorize the installation of a sewer odor abatement system by the District of Columbia Water and Sewer Authority (DCWASA) for the Potomac Interceptor (PI) sewer system. The odor abatement system would be installed in the lower 12-mile segment of the PI along the C&O Canal Historical Park (C&O Canal NHP) and the George Washington Memorial Parkway's (GWMP) Clara Barton Parkway units of the National Park Service (NPS). The purposes of the proposed action are to provide long-term control of odors in specific areas of the PI; maintain the integrity of the reinforced concrete sewer pipes by limiting the formation of corrosive conditions; protect the public health by protecting the condition of the PI to provide long-term sewage conveyance; and improve the restroom facilities currently located at Angler's Inn and Fletcher's Boathouse for the benefit of C&O Canal NHP visitors.

The PI sanitary sewer system currently conveys approximately 50 million gallons per day (MGD) of wastewater by gravity from several service areas starting near the Washington Dulles International Airport (Dulles), along the Potomac River to the Potomac Pumping Station (PS) in Washington, DC. Flows from the Potomac PS are sent to the Blue Plains Advanced Wastewater Treatment Plant (AWTP) in southwestern Washington, DC for treatment before discharge into the Potomac River. Several jurisdictions discharge into the PI system including Loudoun County and Fairfax County in Virginia, Montgomery County in Maryland, and the District of Columbia. The National Park Service, Metropolitan Washington Airports Authority (Dulles Airport), Town of Herndon, Town of Vienna, and Arlington County also contribute wastewater flows to the PI.

The PI was built as a result of the enactment of Public Law 86-515 (the Act), by the 86th Congress, on June 12, 1960. The Act authorized the District of Columbia to plan, construct, operate, and maintain a sanitary sewer to connect Dulles to the Washington, DC sewer system. The intent was to safeguard the Potomac River against wastewater discharges from designated sewersheds not already connected to adequate sewage disposal facilities. The Act stipulated that the sewer should be of sufficient capacity to provide service for Dulles and for the expected growth and development in the adjacent areas in Virginia and Maryland.

The PI system consists of four primary interceptor segments including the PI main trunk (PI), the Upper Potomac Interceptor (UPI), the Upper Potomac Interceptor Relief Sewer (UPIRS), and the Maryland Upper Potomac Interceptor (MUPI). The DCWASA is charged with the operation and maintenance of the PI system with the exception of the MUPI, which is operated and maintained by the Washington Suburban Sanitary Commission (WSSC).

When the PI was constructed in the 1960's, the selected alignment was located mainly in undeveloped areas with the exception of the C&O Canal area, which is a National Register of Historic Places historic district of national significance. In subsequent years, encroaching residential developments and recreational areas have occasionally been affected by odorous air exhausting from the PI. In public use areas, such as the C&O Canal NHP and the Clara Barton Parkway, intermittent odorous air is exhausted from the PI due to several dynamic hydraulic changes in the PI pipe. Sewer odors emitted from the PI lead to a law suit, resulting in DCWASA conducting an odor study in 1999, followed by the implementation of interim odor controls, and the development of the long-term odor abatement program for several areas of the PI. An Environmental Assessment was prepared as part of the National Park Service approval process for the facilities that would be located on Park property. A public comment

period was conducted during the Fall of 2002, and input from the public has been incorporated into the design criteria for the long-term odor system.

PREFERRED ALTERNATIVE

The Preferred Alternative presents the NPS's proposed action and defines the rationale for the action in terms of resource protection and management, visitor and operational use, costs, and other applicable factors. Under the Preferred Alternative, the NPS would authorize DCWASA to construct a system of odor controls consisting of active blower treatment units, sealed vents and intake-only vents fitted with passive carbon filters to effectively mitigate odor problems along the PI system. Two blower treatment buildings would be constructed in the C&O Canal NHP (referred to as Sites 27 and 1995, located at Angler's Inn and Fletcher's Boathouse, respectively) and two would be constructed along the Clara Barton Parkway (referred to as Sites 17 and 4, located near I-495 and adjacent to the Little Falls Pump Station, respectively). Additional work would be implemented to seal a number of the vented manholes throughout the two NPS units.

The four blower treatment buildings would be constructed to enclose mechanical odor treatment equipment including suction and discharge piping, a blower, a mist eliminator, a dual deep-bed reactor carbon odor treatment unit and other components. The buildings would be designed and constructed to minimize impacts to the scenic environment in the Park property, and the architectural and other features have been carefully planned and reviewed by National Capital Regional Office, C&O Canal NHP and GWMP as well as State Historical Preservation Officer representatives. Heating, ventilation, electrical service and telephone service would be provided for each facility, and space would be provided for equipment access and maintenance in the treatment and electrical rooms, and space would be provided for carbon removal and loading. The two C&O Canal NHP facilities would also include men and women's public restrooms, and the buildings would be designed to include "green" building features.

The two C&O Canal NHP buildings are being designed to resemble lock houses, and each would be constructed on a low stone foundation, with walls constructed of a mixture of red/brown brick with color variations, and with the roof pitch and form similar to the lock houses found throughout the C&O Canal NHP. The two Clara Barton Parkway facilities are being designed to blend in with their respective surroundings. The building near I-495 is being designed to resemble a stone retaining wall similar to others present along the Parkway, and the building adjacent to the Little Falls Pump Station is being designed to replicate the existing electrical substation, which it would adjoin. DCWASA will work with NPS to develop a Memorandum of Understanding for the construction and maintenance of the odor control facilities within the NPS land.

In addition to the construction of the four odor treatment buildings, passive odor controls would be installed at numerous PI structures located throughout the C&O Canal NHP and the Clara Barton Parkway. At these locations, modifications are required to the existing vent structures and other facilities to prevent odors in those locations. Many of the existing vent pipes and vented manhole covers would be sealed, and air exhauster structures would be replaced with manhole covers. In some locations, vent structures would be replaced with passive carbon intake and filters to allow fresh air intake and sewer gas treatment through passive units. The purpose of these modifications is to allow the majority of the gases in the sewer system within the C&O Canal NHP and Clara Barton Parkway to be treated through the four active odor treatment units instead of localized discharge.

ALTERNATIVES CONSIDERED

The Environmental Assessment prepared for this project analyzed the No-Action Alternative, the Preferred Alternative (described above) and one other alternative:

- Alternative 1: No-Action Alternative - Under the No-Action Alternative, NPS would not issue a permit to DCWASA for construction of the four active blower treatment units. The PI system would continue to exhaust foul-smelling sewer air at the vented locations including the exhaust of occasional odorous compounds. Based on available data, the continued operation of the PI system as designed without the addition of the active blower treatment units would not significantly impact the current estimated design life of the concrete sewer pipes. DCWASA would continue to operate and maintain the PI system based on current and future standard operating procedures.
- Alternative 2: Odor Treatment Units at PI Sites 27, 17, 4, and 1995 (Preferred Alternative) - See above.
- Alternative 3: Odor Treatment Units at PI Sites 27, 15, 4, and 1995 - Under Alternative 3, the NPS would amend the existing right-of-way permit to DCWASA for the construction. An operations and management (O&M) agreement will be enacted for the four active filter blower treatment units along the PI at Sites 27, 15, 4, and 1995. The proposed blower buildings and improvements indicated in Alternative 2 for each of the other recommended sites would remain the same, with the exception of one of the proposed blower buildings being located at Site 15 instead of Site 17. Site 15 is located along the Clara Barton Parkway on the west side of the C&O Canal Lock 10 access area, approximately 2,000 feet to the south of Site 17.

In addition, a number of other options were studied but rejected. Sixteen sites were initially evaluated for the proposed construction of four odor control units. Each site was evaluated with respect to engineering requirements, accessibility, NPS coordination, and public acceptance. Engineering and accessibility factors were determined by DCWASA and their technical consultant, while the NPS comments were developed after meetings with representatives of the C&O Canal NHP, GWMP and the National Capital Regional Office. Public comments were developed after a series of public meetings and site visits with community leaders and citizens from the Cabin John, Glen Echo and Brookmont communities. The five sites presented in Alternatives 2 (27, 17, 4, 1995) and 3 (15 instead of 17) were determined to be the most favorable in terms of the factors listed above.

In addition, eighteen technologies were considered for controlling odors along the PI system. The eighteen odor control technologies evaluated were classified into three groups: Passive, Active, and Chemical. Passive (e.g., installed carbon filter) and active (e.g., forced-air carbon treatment unit) odor controls refer to the treatment of odorous compounds in the vapor, or air phase. Chemical odor controls relate to treating potentially odor-causing compounds, primarily dissolved sulfide compounds, in the liquid phase. Chemical controls were eliminated from further consideration due to potential environmental and community impacts related to chemical transportation and storage as well as engineering considerations. Alternatives 2 and 3 described above employ a combination of some of the active and passive odor treatment methods that were initially evaluated.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

In accordance with *Director's Order #12*, the National Park Service is required to identify the "environmentally preferred alternative" in all environmental documents, including environmental assessments. The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969, as amended, which is guided by the Council on Environmental Quality. The Council on Environmental Quality provides direction that "[t]he environmentally preferable alternative is the alternative that would promote the national environmental policy as expressed in Section 101 of National Environmental Policy Act, which considers:

- Fulfilling the responsibilities of each generation as trustee of the environment for succeeding generations;

- Assuring for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings;
- Attaining the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
- Preserving important historic, cultural and natural aspects of our national heritage and maintaining, wherever possible, an environment that supports diversity and variety of individual choice;
- Achieving a balance between population and resource use that would permit high standards of living and a wide sharing of life's amenities; and
- Enhancing the quality of renewable resources and approaching the maximum attainable recycling of depletable resources (National Environmental Policy Act, section 101)."

The No-Action Alternative (Alternative 1) does not meet the criteria for the environmentally preferred alternative because it would allow continued intermittent release of odors in areas of the C&O Canal NHP and along the Clara Barton Parkway. Alternative 2 provides a more beneficial environmental and cultural approach than the other alternatives, because it would:

- Provide long-term control of odors in specific areas of the PI;
- Maintain the integrity of the reinforced concrete sewer pipes by limiting the formation of corrosive conditions;
- Protect the public health by protecting the condition of the PI to provide long-term sewage conveyance;
- Provide enhanced opportunities of park users by abating odors and by improving the restroom facilities currently located at Angler's Inn and Fletcher's Boathouse;
- Minimize impacts to the environment and to cultural resources through careful planning and design.

Alternative 3 would provide the same benefits as Alternative 2, but Alternative 2 has a higher level of public acceptance and is therefore the Environmentally Preferred Alternative. The Preferred Alternative best ensures the preservation of park resources and values by preventing the release of odors from the sewer system, by providing a treatment method that is protective of the integrity of the sewer pipes, and by providing a method that is acceptable to the nearby communities and other representatives of the public. Alternative 2 would minimize impacts to the cultural and natural resources through careful planning and design and would enhance Park use by providing improved public restroom facilities.

WHY THE PREFERRED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT

As defined in 40 CFR §1508.27, significance is determined by examining the following criteria:

Impacts that may be beneficial and adverse: Under the Preferred Alternative, the National Park Service would issue a permit and MOU to DCWASA for the construction of the four odor treatment units along the PI at Sites 27, 17, 4, and 1995. There are no known documented sites of archeological significance near the proposed area of impact at Sites 27, 17, and 1995. Native tree and other plant species providing

cover and forage habitat for common animals would be disturbed to complete construction under this alternative, but no known state listed rare, threatened or endangered species would be impacted by the proposed project. Replacing lost vegetation would offset the loss of vegetative cover and habitat following construction activities. Soil stabilization and erosion control measures would be implemented during construction, and the disturbed areas would be replanted with native species. No permanent impacts to Forest Interior Dwelling Species (FIDS) are expected, and long-term indirect effects to vegetation and wildlife are not expected under this alternative.

The visual quality for users of the Clara Barton Parkway and C&O Canal NHP would be impacted under this alternative by the proposed odor treatment buildings. In an effort to mitigate the impact on visual quality, the roof and building façades will be designed to complement the historic and cultural values of the area. The planting of trees and other types of vegetation appropriate to the landscape and/or indigenous to the area would minimize the visual impact of the proposed structures. The placement of vegetative screening around the structure may minimize the visual impact on a year-round basis.

As the proposed odor treatment units would operate on a continuous basis, increased noise levels generated by the blowers are a concern. To reduce the impacts of noise on the nearby residents and park visitors, several noise controls will be employed to reduce sound levels to existing background levels.

Degree of effect on public health or safety: The Preferred Alternative would have a minor, long-term beneficial impact on health and safety because it would treat the gases exhausting from the sewers, and provide protection for the concrete sewage conveyance pipes, which would help maintain safe conveyance of wastewater through the NPS lands.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetland, wild and scenic rivers, or ecologically critical areas:

In accordance with Section 106 of the National Historic Preservation Act, implementation of the Preferred Alternative would have *no adverse effect* on historic properties. In a letter dated August 8, 2003, the Maryland Historical Trust indicated approval of the design concepts for the proposed odor abatement structures. In addition, the District of Columbia State Historic Preservation Office indicated in a transmittal that they also approved the design concept for the proposed structure in the District of Columbia.

The proposed odor treatment buildings will not have significant impacts to floodplains, although small amounts of construction may be required within the 100-year floodplain, depending on the final design of the facilities. If such construction were necessary, the Preferred Alternative would have a very minor, adverse impact on floodplains because of the construction.

A number of areas within or adjacent to the project areas are designated as wetland habitats. The Preferred Alternative is likely to have minor, adverse impacts to wetlands due to construction activities, depending on the final design of the facilities. There would be no long-term impacts because the permanent structures are not proposed for construction within the wetland areas. The wetland functions or values would not be substantially affected.

The Preferred Alternative would have permanent impacts to park land. The beneficial impacts would be improved recreation use due to alleviation of current odor problems, and due to improved restroom facilities within the C&O Canal NHP. The adverse impacts would be addition of odor treatment structures and removal of some existing vegetation, but these impacts would be mitigated through careful planning and design of the facilities, and landscape screening.

Degree to which effects on the quality of the human environment are likely to be highly controversial: There were no highly controversial effects identified during either preparation of the environmental assessment or during the public review period. The public response has generally been supportive of the Preferred Alternative.

Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks: There were no highly uncertain, unique, or unknown risks identified during either preparation of the environmental assessment or during the public review period.

Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration: The preferred alternative neither establishes a National Park Service precedent for future actions with significant effects nor represents a decision in principle about a future consideration.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts: The proposed actions under the Preferred Alternative for the Potomac Interceptor odor abatement program are expected to have very localized, and minor adverse impacts as well as beneficial impacts. When added to other past, present, and reasonably foreseeable projects, the Preferred Alternative would not have a significant cumulative impact.

Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources: As described in the environmental assessment, proposed undertakings would not adversely affect historic properties or archeological resources. Implementation of the Preferred Alternative would have *no adverse effect* on historic properties.

Degree to which the action may adversely affect an endangered or threatened species or its critical habitat: There are no known threatened, endangered, or candidate species of special concern in the vicinity of the project areas proposed in the Preferred Alternative.

Whether the action threatens a violation of federal, state, or local environmental protection law: The Preferred Alternative does not violate federal, state, or local environmental protection laws.

IMPAIRMENT OF PARK RESOURCES OR VALUES

In addition to reviewing the list of significance criteria, the Superintendents of the C&O Canal NHP and GWMP determined that implementation of the Preferred Alternative will not constitute an impairment of the park's resources or values. This conclusion is based on a thorough analysis of the impacts described in the Environmental Assessment, the agency and public comments received, and the professional judgment of the decision-makers in accordance with the National Park Service's *Management Policies, 2001* (December, 2000). Implementation of the Preferred Alternative will not result in major, adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the C&O Canal NHP or GWMP, (2) key to the natural or cultural integrity of the parks; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document.

PUBLIC INVOLVEMENT

The environmental assessment was made available for public review and comment during the months of September and October 2002. The Environmental Assessment was announced in the Federal Register on September 11, 2002 and an electronic copy was placed on the website www.potomacinterceptor.com. The document was made available for public review at the NPS Georgetown Visitor Center and the Great

Falls Tavern, in addition to several local libraries, and copies were sent to various civic organizations and private citizens for their review and comment.

An Open House for the community was held on October 3, 2002 at 7:00 p.m. at Rockwood Terrace, MacArthur Boulevard, Potomac, Maryland. Visual graphics were provided to depict the proposed alternatives for the odor abatement system. Mr. John Trypus, Project Manager for DCWASA, presented an overview of the project. After his presentation, Mr. Trypus and National Park Service employees were on hand to answer any questions posed by attendees. Approximately 23 people attended the Open House, consisting of civic organizations, newspaper reporters, and other interested individuals.


Questions posed were related to how the odor control system will work, why active controls are preferable over passive controls, and what if anything could be done to address the interim odor problem. The written comments received over the public comment period were similar in nature to the concerns expressed at the public meeting. Of the approximately 12 comments received, all were in favor of the Preferred Alternative, including strong support from The Cabin John Citizens Association (CJCA) and the Bannockburn Civic Association (BCA), and opposed to the placement of an odor treatment unit at Site 15 (Alternative 3). The need for effective noise control measures and designs for the buildings that fit in with surroundings was emphasized.

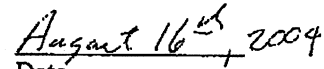
CONCLUSION

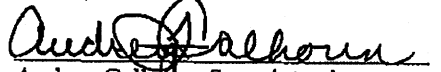
The Preferred Alternative does not constitute an action that normally requires preparation of an Environmental Impact Statement. The Preferred Alternative will not have a major significant effect on the human environment. Adverse environmental impacts that could occur are negligible or minor in intensity. There are no significant adverse impacts on public health, public safety, threatened or endangered species, historic properties either listed in or eligible for listing in the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law.

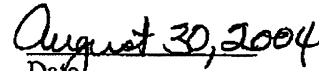
Based on the foregoing, it has been determined that an Environmental Impact Statement is not required for this project and thus will not be prepared.

Recommended:

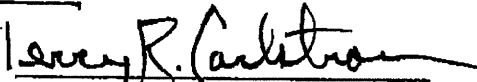

Kevin Brandt, Superintendent
Chesapeake & Ohio Canal NHP

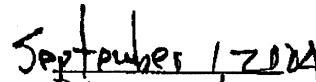

Date


Audrey Callahan, Superintendent
George Washington Memorial Parkway


Date

Approved:


Terry Carlstrom, Director
National Capital Region, NPS


Date