



United States Department of the Interior

NATIONAL PARK SERVICE

Cuyahoga Valley National Park

15610 Vaughn Road

Brecksville, Ohio 44141-3097

IN REPLY REFER TO: L7617

BOSTON MILLS HISTORIC DISTRICT SANITARY SEWER AND TREATMENT SYSTEM PROJECT SUMMARY - JULY 2009

The National Park Service (NPS) preserves outstanding representatives of the best of America's natural, cultural, and recreational resources of national significance. Historic structures including buildings and their associated outbuildings are an important component of Cuyahoga Valley National Park's (CVNP) cultural resources.

The Boston Mills Historic District is listed in the National Register of Historic Places as a significant, intact example of a 19th-century "canal village" and for its concentration of intact 19th century architecture. Maintaining occupied buildings is critical to preserving the historic character of the Boston Mills Historic District. The Historic Landscape Analysis and Design Recommendations for Boston, Ohio indicates that the village of Boston must be maintained with a balance of public and private lands, and a mix of commercial, residential, and recreational land uses to retain the community's historic integrity. Using historic buildings for residential, commercial, and recreational purposes creates a palpable, lived-in village landscape, reinforcing the cultural use pattern of the site. Consequently, occupied buildings are better maintained which furthers the historic preservation ideals of the park.

CVNP currently owns and maintains eleven structures in the District and surrounding area. An important component of preserving these structures is ensuring their continued occupancy and use by maintaining and, when necessary, updating utilities. In addition to the preservation aspect, maintaining and upgrading sanitary systems is essential to ensuring the continued improvement of water quality within the Cuyahoga River Watershed. Only four buildings have properly functioning sanitary systems. The four are Boston Store Visitor Center, Dreryzinski, Hines Hill Main House, and Stanford House. Although no existing systems have failed, several have been identified for replacement within the next five years.

In order to develop a permanent solution for providing sanitary services to the park owned structures, CVNP is undertaking an Environmental Assessment to analyze feasible alternatives. For this assessment, CVNP has identified two feasible "Action" Alternatives as well as a "No Action" Alternative to provide wastewater treatment for NPS owned structures in the Boston Mills Area. Several other alternatives, including connecting to a municipal system were evaluated and found not to be feasible.

ALTERNATIVES

Alternative 1 is the construction of a Subsurface Drip Irrigation System (SSDI). In an SSDI the initial phase of treatment, or primary treatment, would be completed in the existing septic tanks, where suspended solids and grease are separated from the wastewater. Following primary treatment, wastewater must undergo secondary treatment to achieve a reduction in Biological Oxygen Demand (BOD) and fecal coliform levels. In order to keep the SSDI system underground, a small package plant is proposed for secondary treatment.

Following secondary treatment, the water would be collected in a pump tank, where it is stored until a predetermined volume is reached. As required by Ohio guidance for wastewater reuse, sufficient storage capacity must be provided for flows generated during the months of December through March, when irrigation may not be possible. Under winter conditions, the wastewater would be directed to a storage tank prior to collection in the pump tank. When operational, water will bypass the storage tank and will be directed to the pump tank. The pump tank then delivers the wastewater through a filtering device (e.g., sand, disk or screen filter) where small suspended solids are removed prior to distribution to the irrigation system to prevent clogging of the system. Although disinfection is optional, it is highly recommended for sites with unrestricted public access. Once treatment is complete, the water is directed to the subsurface drip irrigation distribution system. Please refer to Attachment A for a schematic of the system.

Alternative 2 (Preferred) is a constructed wetland system which would consist of a combination of a subsurface wetland and a surface wetland. The primary components of the treatment system include the following:

- Existing septic tanks
- Subsurface (SSF) wetland; and
- Surface (SF) wetland

The initial phase is primary treatment of the influent. This phase of the treatment would be completed in the existing individual septic tanks to remove settling and floating solids which could potentially accumulate and clog the wetland entry zone. Once suspended solids have been separated from the wastewater, secondary treatment would be completed. This phase of the treatment would be completed in a SSF wetland which would remove BOD and other suspended solids. Upon receiving the pre-treated wastewater, settled colloidal BOD is removed through aerobic/anaerobic decomposition. The remaining colloidal and dissolved BOD is later removed as the wastewater comes in contact with microbes inhabiting the wetland. Once the desired secondary effluent standards have been achieved, treatment will proceed to the final phase. The final phase will allow for further biological treatment of the effluent in a SF wetland, as well as disposal of the effluent through evapotranspiration/infiltration. A constructed wetland treatment system schematic is presented in Attachment B.

Alternative 3 (No Action) must be evaluated and is generally considered a viable alternative. “No Action” is a continuation of the status quo which involves replacing the failing individual leach or evapotranspiration systems with similar on-site systems. On-site systems require approximately less than one-half an acre of undisturbed land and have a life span of approximately 20 years, depending on use. Due to land ownership constraints and archeology concerns several buildings would not be able to have their systems replaced.

The first two alternatives would be constructed on NPS-owned land between Interstate 271 and the Ohio Turnpike (NPS Tract #118-79 - see Aerial Photo). The field is approximately 113 acres and was identified in the CVNP Rural Landscape Management Program Environmental Impact Statement (2003) as a grassland habitat management area. This area is currently an open meadow and was intended to be kept open primarily for its habitat values and rural character.

The EA will identify and analyze potential impacts to the natural and man-made environment resulting from these alternatives. A preliminary list of issues identified to be analyzed includes:

- ☐ Geological resources- soils
- ☐ Air quality
- ☐ Water quality or quantity
- ☐ Land use
- ☐ Unique or important wildlife or wildlife habitat
- ☐ Introduce or promote non-native species
- ☐ Recreation resources
- ☐ Visitor experience/Aesthetics
- ☐ Cultural landscapes
- ☐ Long-term management of resources or land
- ☐ Public health and safety
- ☐ Historic resources including those listed on the National Register of Historic Places

The National Park Service intends to be the lead agency for this project in accordance with Section 1501.6 of the Council on Environmental Quality (CEQ) regulations.

REQUEST FOR PUBLIC INPUT

As part of the process for determining the scope of issues to be addressed in the EA, and for identifying the important issues related to the proposed action, we request your comments on these issues and any other issues that you can identify as pertinent. We intend to use your comments to:

- Identify the range of alternatives and impacts and the important issues to be addressed in the EA;

- Identify and eliminate from detailed study the issues which are not important or which have been covered by prior environmental review; and
- Identify other environmental review and consultation requirements.

Comments can be made online at **<http://parkplanning.nps.gov/cuva>** by clicking on the project name, and then clicking “Open for Public Comments.” We prefer that comments be submitted via the PEPC system, however comments may also be mailed to:

Janet Popielski, P.E.
Civil Engineer
Cuyahoga Valley National Park
15610 Vaughn Road
Brecksville, OH 44141

Comments will be accepted through **August 20, 2009**.

We also invite your attendance at a **public open house on August 11, 2009 from 7pm to 9pm at Boston Store** located at 1548 Boston Mills Road, Boston Township, Ohio.

We look forward to your comments and response to this request. If you have any questions or would like to discuss in more detail the project, please contact Janet Popielski, P.E. at (440) 546-5979.