Centredale Manor
2.2 / Doc #8901

Centredale Manor Restoration Project Fact Sheet

EPA Plans Cleanup for Areas Near the Woonasquatucket River

September 2000

The U.S. Environmental Protection Agency, Rhode Island Department of Environmental Management and Rhode Island Department of Health are working with the Woonasquatucket River Management Action Committee to address contamination at the Centredale Manor Restoration Project located in North Providence, RI.

The Cleanup Proposal...

Because contaminated soils associated with the Centredale Manor Restoration Project along portions of the shore of the Woonasquatucket River could pose a health risk, EPA proposes the following early cleanup:

- Excavate contaminated residential soils and flood-plain sediments at specific locations around Allendale and Lymansville Ponds.
- Restore the decaying Allendale Dam.
- Transport excavated soils and sediments off-site to a properly permitted facility for treatment and disposal.

More on page 5

Come learn more about the cleanup.

Find out about the proposed cleanup plan and how it compares with other cleanup options for the site at an informational public meeting on October 10, 2000. At the meeting, EPA will respond to your questions and concerns about the proposed cleanup and other site-related activities and how it may affect you. For further information, call EPA Community Involvement Coordinator, Angela Bonarrigo, at (888) 372-7341.

Open House
4:00 - 6:00 pm
Tuesday, October 10

Public Meeting
7:00 - 9:00 pm
Tuesday, October 10

Public Hearing
7:00 pm
Wednesday, November 1

All Events at:
North Providence Town Hall
2nd Floor

What do you think?

EPA wants to hear from you before selecting a final removal action.

EPA is accepting public comment on this proposal from October 3 through November 3, 2000. You do not have to be a technical expert to comment – your comments should include any concern or preference you have about the cleanup proposal.

To comment formally:

Offer oral comments during the public hearing on November 1, 2000 (see page 6 for more details)

Send written comments postmarked no later than November 3, 2000 to:

Anna Krasko, Project Manager
US Environmental Protection Agency
New England Region
1 Congress St., Suite 1100 (HBO)
Boston, MA 02114

E-mail comments by November 3, 2000 to:

krasko.anna@epa.gov

In accordance with the implementing regulations of the Comprehensive Environmental Response, Compensation, and Liability Act, the law that established the Superfund program, this document summarizes EPA's early cleanup proposal. For detailed information on the options evaluated for use at the site, see the Centredale Manor Restoration Project Engineering Evaluation/Cost Analysis. Copies are available for review at information repositories in the Salvatore Mancini Union Free Library in North Providence, RI; the Marian J. Mohr Library in Johnston, RI; and EPA's 1 Congress Street office in Boston.

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Introduction

As part of its work on the Centredale Manor Restoration Project, the Environmental Protection Agency (EPA) recently completed an Engineering Evaluation/Cost Analysis (EE/CA) for the next phase of cleanup. This phase focuses on the section of Woonasquatucket River between the source area at Route 44 and Lymansville Dam. EPA evaluated removal actions that could be conducted to reduce exposure to contaminants found in soils and sediment along the Woonasquatucket River downstream from the Centredale Manor and Brook Village properties. This fact sheet summarizes the results of the EE/CA and introduces EPA's preferred cleanup option for this portion of the project.

A Brief Overview of the Centredale Manor Restoration Project

The project is located in North Providence, Rhode Island. EPA investigations suggest that past industrial activities resulted in the release of hazardous substances to soils, waters, and sediments. Two apartment complexes for the elderly are now located on the areas where these industrial activities occurred. Ongoing soil erosion, movement of groundwater into the river, and/or past construction-related excavation may have helped to spread contamination to additional areas. Chemicals such as 2,3,7,8-tetracholorodibenzo-p-dioxin (dioxin) and polychlorinated biphenyls (PCBs), both of which have been found to cause substantial human health problems, have been found in the area.

Some contamination has been transported downstream by the Woonasquatucket River, which runs along the western edge of the former chemical facility. The river creates two ponds downstream from these properties – Allendale Pond, a 1,100 foot-long pond that ends at the decaying Allendale Dam and Lymansville Pond, which is about 3,500 feet long and ends at the Lymanville Dam. EPA investigations show that contamination from the original source area is present along portions of the banks of both of these ponds. These contaminated soils and sediments in the floodplain of the Woonasquatucket River (see map, page 4) are evaluated in EPA's EE/CA.

What is a NTCRA and why is one being conducted at the Centredale Manor Restoration Project?

The Superfund law allows EPA to implement cleanup actions under "removal" or "remedial" authorities specified in the statute. The approach EPA takes depends on many factors. Removal actions are often used to respond to emergency or time-critical situations.

A *Non-Time-Critical Removal Action*, or NTCRA is undertaken if EPA has more than six months of planning and preparation time before cleanup must begin, but prompt action is still needed to stop or substantially reduce a release or threatened release of hazardous substances. EPA uses an Engineering Evaluation/Cost Analysis (EE/CA) to develop and evaluate NTCRA alternatives. Implementing a NTCRA usually achieves more rapid risk reduction than compared with more traditional Superfund remedial cleanups.

The Woonasquatucket River areas covered by the EE/CA summarized in this fact sheet qualify for a NTCRA because hazardous chemicals have been detected in floodplain sediments and residential soils. These releases are serious enough that EPA has chosen to clean them up with the NTCRA process rather than wait for the Remedial Investigation and Feasibility Study.

Why is cleanup needed?

EPA examined what is known about the contamination around the floodplain of the Woonasquatucket River. Risks in residential areas along the eastern edge of the River and ponds are a particular concern. EPA identified nine contaminants that concern it the most. These contaminants include dioxin, chromium, arsenic, copper, polycyclic aromatic hydrocarbons (PAHs), and PCBs. While these contaminants all contribute somewhat to human health risks at the site, the primary health risks, as measured in the EE/CA risk evaluation, come from dioxin. Therefore dioxin was selected as the single Contaminant of Concern for this removal action. Sampling results were used to identify the specific area in which residents may be at risk. EPA determined that threats to human health exist at a few residential-use areas because residents may be exposed to contaminants, particularly dioxin, present in soils and sediments.

EPA used a cleanup level of 1 part per billion (ppb), for dioxins in the residential soils and sediments along the Woonasquatucket River. The removal action objectives for the project are:

- Prevent migration of contaminated aquatic sediments to downstream areas
- Eliminate or reduce the risks of human exposure to floodplain sediments containing concentrations of dioxin in excess of removal action goals (1ppb)
- Eliminate or reduce the risks of human exposure to residential-use soils containing concentrations of dioxin in excess of removal action goals (1ppb)

EPA Evaluates Cleanup Alternatives

EPA analyzed the actions and technologies that could be used to clean up areas near the Woonasquatucket River and developed four alternatives that used combinations of technologies that could achieve its cleanup objectives. These alternatives are:

- Alternative 1: Cap residential soils and flood-plain sediments and restore the Allendale dam
- Alternative 2: Cap residential soils and flood-plain sediments

- Alternative 3: Excavate residential soils and flood-plain sediments and restore the Allendale dam
- Alternative 4: Excavate residential soils and flood-plain sediments

EPA determined that alternatives 1, 3, and 4 would generate excavated soil and sediment that may be contaminated with hazardous substances, and must be safety disposed of. EPA considered three disposal options for this excavated material:

- Disposal Option 1: Consolidation and capping at a protected area on-site (probably above the existing cap at 2074 Smith Street)
- Disposal Option 2: Off-site disposal at an approved landfill
- Disposal Option 3: Off-site treatment and disposal at a properly permitted facility

EPA compared these Alternatives and Disposal Options using the criteria of *Effectiveness, Implementability,* and *Cost* (for details on these criteria, see the box below). This comparison allowed EPA to select Alternative 3, as its preferred alternative: Excavate affected residential soils and flood plain sediments, restore Allendale Dam, and provide off-site treatment and disposal of soil and sediment.

This preferred alternative is described in detail on page 5.

The Three Criteria for Choosing a Cleanup

EPA examines the *effectiveness*, *implementability*, and *cost* of each alternative considered in an EE/CA. EPA uses these criteria to balance the pros and cons of cleanup alternatives and to select a preferred cleanup option.

Effectiveness is measured by examining:

- Overall protection of human health and the environment
- Compliance with ARARs (Applicable or Relevant and Appropriate Requirements –laws and regulations that will guide the cleanup)
- Long-term effectiveness and permanence
- Reduction of toxicity, mobility, or volume of contamination through treatment
- Short-term effectiveness

Implementability is measured by examining:

- Technical feasibility
- Administrative feasibility
- Availability of services and materials
- Acceptability to the State and Community

Cost is measured by examining:

- Direct and indirect capital costs
- Post-removal site control costs
- Present worth costs

Table 1 shows an abbreviated comparison of the alternatives. More details about the comparison of alternatives are available in the EE/CA. Once EPA receives comments from the state and the community, it will select a final cleanup approach for areas around the Woonasquatucket River.

Evaluating Technologies and Developing Alternatives – Four Kinds of Cleanup

EPA looks at numerous technical approaches to determine the best way to reduce the risks presented by a Superfund site. The EPA then narrows the possibilities, keeping those approaches that would protect human health and the environment. Although reducing risks often involves combinations of highly technical processes, there are four basic options.

Take limited action:

Leave the site as it is, or just restrict access and monitor it.

Contain contamination:

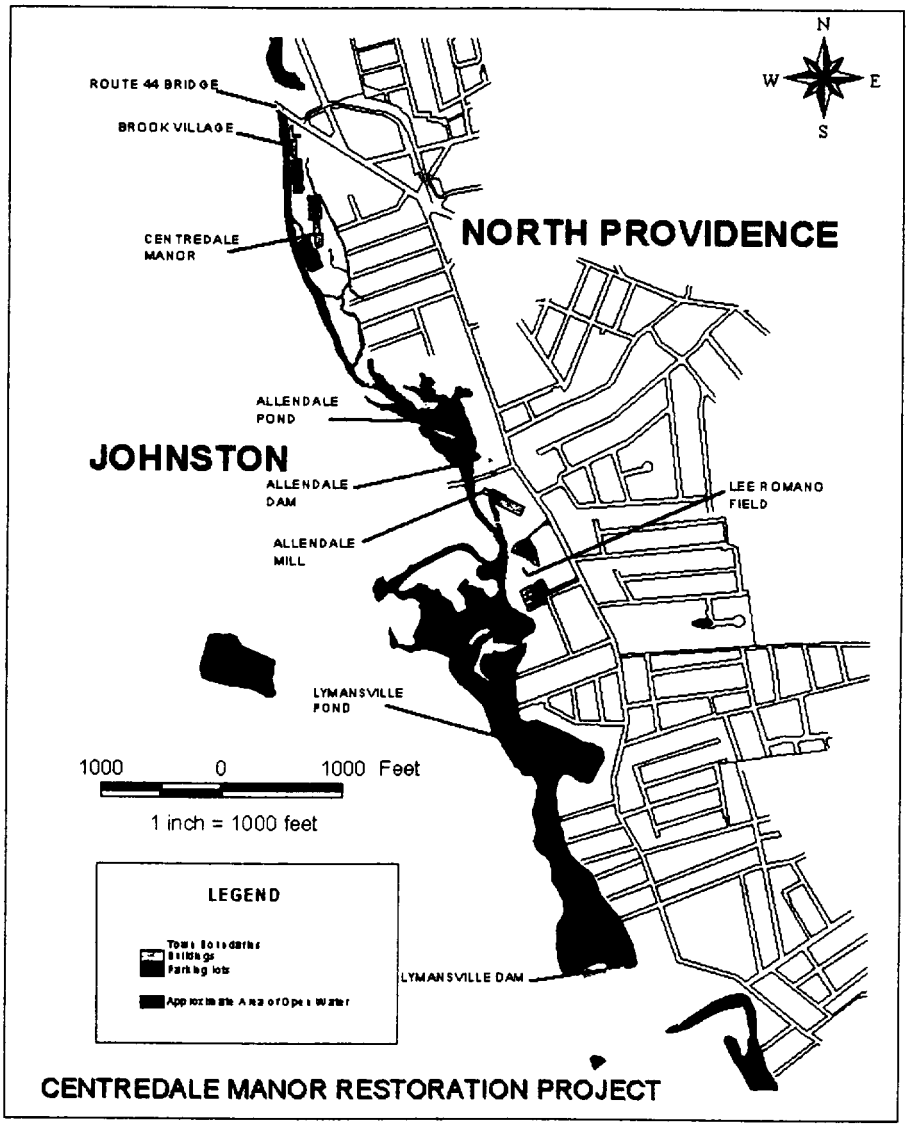
Leave contamination where it is and cover or contain it in some way to prevent exposure to, or spread of, contaminants. This method reduces risks from exposure to contamination, but does not destroy or reduce the amount of contamination.

Move contamination off site:

Remove contaminated material (sediment and residential-use soils, etc.) and dispose of it or treat it elsewhere.

Treat contamination on site:

Use a chemical or physical process on the site to destroy or remove the contaminants. Treated material can be left on site. Contaminants captured by the treatment process are disposed in an off-site hazardous waste facility.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W
E
S
ROUTE 44 BRIDGE
BROOK VILLAGE
CENTREDALE MANOR
NORTH PROVIDENCE
ALLENDALE POND
JOHNSTON
ALLENDALE DAM
ALLENDALE MILL
LEE ROMANO FIELD
LYMANSVILLE POND
1000 0 1000 Feet
1 inch = 1000 feet
LEGEND
Buildings
Parking lots
LYMANSVILLE DAM
CENTREDALE MANOR RESTORATION PROJECT

The goal of the cleanup is to protect people and the environment from potential risks associated with contaminants at the site. The preferred option accomplishes this by removing the contaminated soil and sediment and properly disposing of it off site. EPA's proposal for cleaning up areas around the Woonasquatucket River at the Centredale Manor Restoration Project includes the following elements:

Excavate contaminated residential soils and flood-plain sediments at locations around Allendale and Lymansville Ponds. EPA conducted extensive sampling to identify 10 areas that total less than one acre where contaminant levels pose the greatest concern. The preferred cleanup option will remove the contaminated soils from these areas.

Restore the decaying Allendale Dam. By repairing the Allendale Dam, EPA will remove contaminated sediments below and around the old dam and bring Allendale Pond back to its former size.

Transport excavated soils off-site to a properly permitted facility for treatment and disposal. By treating and disposing of the excavated soils and sediments, EPA is reducing risks to public health and the environment, rather than just moving them to another location.

Why Does EPA Recommend this Alternative?
EPA compared this alternative (Alternative 3 – excavate residential soils and flood-plain sediments and restore the Allendale Dam and Disposal Option 3 – off-site treatment and disposal at a properly permitted facility) to other alternatives as part of the EE/CA analysis (see Table 1 for an overview of this comparison). Although Alternative 3 is as easy to implement as other alternatives, it is somewhat more effective at meeting the removal action objectives. The cost of Alternative 3 is slightly more than some, but it offers a more effective approach and contributes to a permanent solution to contamination at the site. This alternative satisfies the statutory preference for treatment of residential-use soils and flood plain sediments, while Alternatives 1 and 2 do not. Disposal Option 3 was selected because it is the only permanent treatment option for the contaminated soils and sediments, and because the cost is not prohibitive when compared to the other options.

What impacts would the cleanup have on the local community?

- Any option that excavates contaminated soils and sediments could present short-term risks. Precautions to minimize dust will be taken during excavation and construction.
- Excavation and construction will increase local truck traffic and noise. EPA will work with the community to identify appropriate truck routes and hours of operation for the cleanup.
- Workers who implement the cleanup will be protected through the use of appropriate protective gear and the use of proper safety practices.

What Happens Next?
After EPA receives and reviews public and agency comments on its proposed removal action (see page 6 for more details about the public review and comment process), EPA will produce an Action Memorandum that describes the cleanup action it plans to take. The Action Memorandum will also contain a section that responds to formal comments received during the comment period on the EE/CA. Following the issuance of the Action Memorandum, design documents with specifications for the work will be prepared, describing specifics such as dam construction techniques, excavation work details, erosion control methods, restoration and landscaping, and detailed work schedules. EPA will meet with residents to provide all necessary information prior to start of the actual field work.

How Does the NTCRA Relate to Other Activities at the Centredale Manor Restoration Project?
Although the Non-Time-Critical Removal Action (NTCRA) will clean up much of the site, EPA is proceeding with other investigations at the Centredale Manor Restoration Project. A Remedial Investigation (RI) determines the sources, nature, and extent of contamination at a site, explains the migration of contamination, and evaluates remaining potential health and environmental risks. The Remedial Investigation for the Centredale Manor Restoration Project was begun in August 1999 and much of the soil and sediment sampling has been completed. Field studies for an ecological risk assessment at the site are currently underway. The RI, which will include additional investigations and a human health risk analysis, including fish ingestion, is scheduled for completion by early 2001. EPA will select a long-term cleanup approach following the completion of the RI and a Feasibility Study.

TABLE 1
COMPARISON OF CENTREDALE MANOR RESTORATION PROJECT
EE/CA CLEANUP ALTERNATIVES

Criterion	Alternative 1: Cap Residential Soils, Restore Dam	Alternative 2: Cap Residential Soils	Alternative 3: Excavate Residential Soils, Restore Dam	Alternative 4: Excavate Residential Soils
Effective: (Does it meet removal action objectives?)	Yes	Yes	Yes	Yes
Implementable? (Can it be done?)	Difficult to implement and enforce institutional controls on capped areas	Difficult to implement and enforce institutional controls on capped areas	Yes	Yes
Cost? (Total Present Worth)	On-site consolidation: $1.7 Million	$2.6 Million	On-site consolidation: $1.8 Million	On-site consolidation: $4.5 Million
	Off-Site Disposal: $1.7 Million		Off-Site Disposal: $2.3 Million	Off-Site Disposal $10.3 Million
	Treatment $1.8 Million		Treatment $2.6 Million	Treatment: $13.7 Million
State & Community Acceptance	To be determined after public comment period			

Wetland/Floodplain Impacts

All of the cleanup alternatives considered by EPA in the EE/CA would unavoidably impact the river floodplain and wetlands adjacent to the site. However, if implemented, EPA's preferred alternative will result in less impacts to the floodplain and wetlands than the other alternatives that EPA considered. In addition, EPA would restore and monitor wetlands areas that were adversely affected during cleanup activities. Restoration activities could include placement of additional soil and plantings of native trees and grasses. Please refer to the EE/CA for more information about potential impacts of cleanup activities to the floodplain and wetlands.

For More Information

Call EPA toll-free, (888) 372-7341 and ask for:

Anna Krasko, Project Manager
Angela Bonarrigo, Community Relations

The EE/CA and the supporting Administrative Record File will be available for review at the local information repositories listed below:

Salvatore Mancini Union Free Library
1810 Mineral Spring Ave.
North Providence, RI
(401) 353-5600
M-Th 10:00 a.m. - 8:45 p.m.
Fri-Sat. 10:00 a.m. – 5:45 p.m.

Marian J. Mohr Library
1 Memorial Ave.
Johnston, RI
(401) 231-4980
M-Wed 9:00 a.m. - 9:00 p.m.
Th-Sat. 9:00 a.m. - 5:00 p.m.

and at EPA New England's Web Site:

http://www.epa.gov/region01

EPA Invites Public Comment.

EPA is accepting public comments on this cleanup proposal, and wants to hear about your concerns or preferences before it makes a final decision. Here is how you can help.

Review the EE/CA.

EPA will hold a 30-day comment period on the EE/CA from October 3, 2000 until November 3, 2000. EPA will extend this by a minimum of 15 days if it receives an extension request within the first two weeks of the comment period. To review the EE/CA and the supporting documents, please visit an information repository.

Come to a meeting.

EPA and the Woonasquatucket River Management Action Committee will hold an open house from 4:00 to 6:00 p.m. and a public meeting at 7:00 to 9:00 p.m., both on Tuesday, October 10th. The meeting and open house will be held at North Providence Town Hall on the 2nd floor. Presenters at the meeting will summarize the EE/CA and answer any questions you have about the EE/CA or other activities for the project. EPA will also hold a more formal public hearing in the same location at 7:00 PM on November 1st to accept public comments on the proposed cleanup alternative described in this fact sheet. The hearing will be transcribed and a copy of the transcript will be made available at the Information Repositories.

Send us your comments.

You can also send written comments to EPA throughout the comment period. Your informal comments on EPAs activities are used throughout the cleanup process, but comments received during this period are considered to be "formal" comments. EPA will respond in writing (as part of its Action Memorandum) to both the verbal comments received at the hearing and written comments received during the comment period.

We'd like to Hear from You!

EPA wants your written comments on the options under consideration in the Centredale Manor Restoration Project EE/CA. You can use the form below to send written comments. If you have questions about how to comment, please call Angela Bonarrigo, EPA's Community Involvement Coordinator, toll-free at (888) 372-7341. This form is provided for your convenience. To comment on the EE/CA, please mail this form, and any additional written comments, postmarked no later than November 3, 2000, to:

Anna Krasko, Project Manager
U.S. Environmental Protection Agency
Region 1 – New England (HBO)
JFK Federal Building
Boston, MA 02203

or email your comments to: krasko.anna@epa.gov