

Record of Decision
Part 2: The Decision Summary

H. REMEDIAL ACTION OBJECTIVES

Based on preliminary information relating to types of contaminants, environmental media of concern, and potential exposure pathways, remedial action objectives (RAOs) were developed to aid in the development and screening of alternatives. These RAOs were developed to mitigate, restore and/or prevent existing and future potential threats to human health and the environment. The RAOs for the Site are:

Source Area Soil

- Prevent direct human exposure by incidental ingestion of and dermal contact with Source Area soil that contain contaminants in concentrations in excess of ARARs (e.g., RIDEM residential direct exposure criteria and TSCA requirements for PCBs) and EPA's recommended residential level for PCBs.
- Prevent direct human exposure by incidental ingestion of and dermal contact with Source Area soil that contain contaminants in concentrations that would result in a total excess lifetime cancer risk greater than the target risk range of 10^{-5} to 10^{-6} and/or a HI greater than 1.
- In addition, prevent leaching or migration of contaminants from vadose zone soil that would result in groundwater contamination in excess of ARARs (e.g., MCLs and non-zero maximum contaminant level goals [MCLGs]).

Groundwater

- Prevent migration of contaminants from groundwater within the Source Area that would result in surface water contamination in excess of ARARs (e.g., State of Rhode Island standards and federal WQC).
- Prevent migration of contaminants from groundwater that could indirectly lead to unacceptable human health risks, and/or that could result in exceedance of sediment cleanup levels.
- Prevent direct human exposure by dermal contact with or ingestion of groundwater by receptors within the Source Area that contain contamination in excess of ARARs.
- Comply with the federal drinking water standards at the Source Area.

Allendale Pond and Lyman Mill Pond Sediment

- Prevent direct human exposure by incidental ingestion of and dermal contact with sediments containing contaminants at concentrations that would result in a total excess lifetime cancer risk greater than the target risk range of 10^{-4} to 10^{-6} or an HI greater than 1.

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- Prevent human ingestion of fish and other aquatic organisms containing contaminants at concentrations that would result in a total excess lifetime cancer risk greater than the target risk range of 10^{-4} to 10^{-6} or an HI greater than 1.
- Prevent dermal contact and ingestion by ecological receptors to sediment containing contaminants at levels that would result in unacceptable impacts.
- Prevent migration of contaminants from sediment that would result in River surface water concentrations in excess of ARARs or migration of contaminants downstream that could result in exceedance of sediment cleanup levels.
- Reduce contaminant concentrations in fish and other aquatic organisms so that they no longer present an unacceptable human health risk (a total excess lifetime cancer risk greater than the target risk range of 10^{-4} to 10^{-6} or an HI greater than 1).⁸

Allendale Floodplain Soil

- Prevent direct human exposure by incidental ingestion of and dermal contact with floodplain soil containing contaminants at concentrations in excess of ARARs (e.g., RIDEM residential direct exposure criteria).
- Prevent direct human exposure by incidental ingestion of and dermal contact with floodplain soil containing contaminants that would result in a total excess lifetime cancer risk greater than the target risk range of 10^{-5} to 10^{-6} , and/or an HI greater than 1.
- For ecological receptors, prevent dermal contact and ingestion of floodplain soil containing contaminants at levels that would result in unacceptable impacts.
- Prevent migration of contaminants from floodplain soil that would result in River surface water concentrations in excess of ARARs or migration of contaminants downstream that could result in exceedance of sediment cleanup levels.

Lyman Mill Stream Sediment and Floodplain Soil (Including Oxbow)

- Prevent direct human exposure by incidental ingestion of and dermal contact with floodplain soil containing contaminants at concentrations in excess of ARARs (e.g., RIDEM residential direct exposure criteria).
- Prevent direct human exposure by incidental ingestion of and dermal contact with floodplain soil containing contaminants that would result in a total excess lifetime cancer risk greater than the target risk range of 10^{-5} to 10^{-6} , and/or an HI greater than 1.
- Prevent direct human exposure by incidental ingestion of and dermal contact with sediments containing contaminants at concentrations that would result in a total

⁸ This RAO was not explicitly identified prior to the ROD but is implicit as a significant outcome is supporting documents (i.e. FS and HHRA) for the selected remedy. It does not change any aspect of the selected remedy.

REGION 1

RECORD OF DECISION

**CENTREDALE MANOR RESTORATION PROJECT
SUPERFUND SITE
NORTH PROVIDENCE, RHODE ISLAND**

SEPTEMBER 2012



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