

Natural Resource Damages Restoration Planning Nyanza Superfund Site



Nyanza NRD Trustee Council November 5, 2008

U.S. Fish and Wildlife Service

Massachusetts Executive Office of Energy and Environmental Affairs

National Oceanic and Atmospheric Administration

TOPICS



- Overview of Natural Resource Damages and Restoration
- Update on EPA Remedial Activities
- Overview of restoration project ideas received from the public
 - Trustee evaluation
- Overview of restoration planning
 - What to expect in an NRD Restoration Plan
- Implementing restoration projects
 - Mechanisms available to Trustees

Natural Resource Damages Assessment and Restoration



➤ Trustees

- Appointed to serve as Trustees of natural resources on behalf of the public
 - U.S. Fish and Wildlife Service
 - MA Executive Office of Energy and Environmental Affairs
 - National Oceanic and Atmospheric Administration

➤ NRD Process

- Assess injuries to natural resources resulting from release of hazardous substance or oil
- Seek damages from responsible parties to compensate the public
- Develop & implement plans to restore, replace, or acquire the equivalent of injured natural resources

Nyanza NRD Restoration Plan



NRD Trust Funds available:

- \$3.9 million
 - to be expended jointly by State & Federal Trustees

- \$237,000
 - to be expended by EEA for injuries to groundwater



Trustee Restoration Planning Process:

- Interagency consultation
- Informal public solicitation
- Evaluate & select restoration projects
- Prepare Draft Restoration Plan/Environmental Assessment (RP/EA)
- Solicit Public Comment
- Prepare Final RP/EA
- Implement Restoration Plan

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Injured Resources

- Aquatic habitat
 - Sudbury River, floodplain, wetlands
- Biological Resources
 - Fish, amphibians, reptiles, benthic aquatic organisms, birds and mammals
- Recreational fishing
- Groundwater

Restoration Goals

- Restore or enhance habitat
- Improve health of biota
- Enhance public access
- Protect groundwater quantity and quality

How is NRD different than cleanup?



A release of oil or hazardous materials...

Cleanup

EPA, MA DEP, U.S. Coast Guard

- Assess extent of contamination
- Control source
- Reduce risk to human health & environment



NRD

Trustees: EEA, USFWS & NOAA

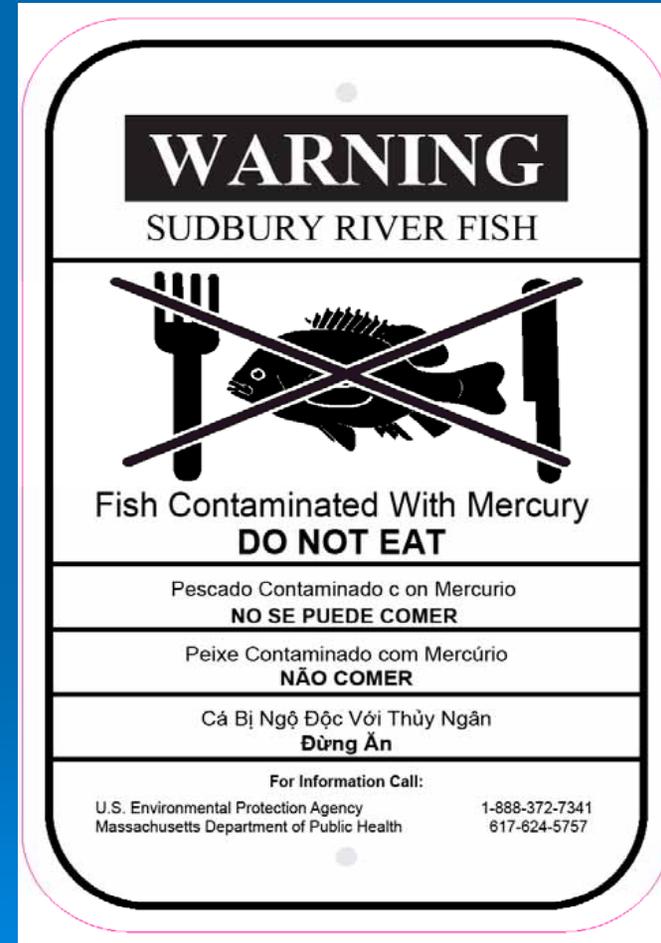
- Assess extent of injuries
- Restore resource
- Compensate public for loss of resource



EPA Update

Sudbury River warning signs

- September – November 2008
 - EPA Contractors installed and/or replaced warning signs
 - Old signs either broken, faded or missing
 - Maintenance function
- 46 total signs installed to date
 - 30 new locations
 - 16 signs replaced
- Final Product – Interactive Map



EPA Update

Ecological Assessment

- 2008 Ecological Risk Assessment (a.k.a. BERA) complete (in production)
 - Unprecedented amount of data collected
 - 228 ecological endpoints were evaluated (e.g., species /media)
 - Data compared to literature-based values (No effects and Low effects levels)
 - Approximately 200 were **below** both the no effects and low effect benchmarks
 - Remaining endpoints typical between the no effects, but below the low effect benchmark
- For EPA, “Actionable” Ecological Risk must be “population-level” risk
- Summary conclusion: **No population-level ecological risk**
- Will be available on the web within then next 2 – 3 weeks.

EPA Update

Human Health Assessment

- Since the 1992 Remedial Investigation there have been multiple Human Health Assessment (1992, 1999, and 2006).
- Adverse health effects from incidental contact with or ingestion of Surface Water are unlikely(1999).
- Adverse health effects from incidental contact with or ingestion of sediment are unlikely (1999).
- Adverse health effects **were** attributed to the consumption of contaminated fish (2006).
- Highest risk for adverse health effects from consumption of fish caught from Reach 3 (Reservoir 2).

EPA Update

Feasibility Study

- EPA contractors currently preparing the Feasibility Study
- The study will evaluate different remedial alternatives (depending on level of risk). Remedial alternatives = Cleanup options
- Typical remedial alternatives evaluated at other sediment sites include:
 - No Action (required), Limited Action, Monitored Natural Recovery, Capping, and Dredging
 - Combinations of the above
- EPA will issue a Proposed Plan describing EPA's preferred remedy.
- Proposed Plan will be available for Public Comment and subject of a Public Hearing (tentatively to be held in 2009).

Nyanza NRD Restoration Plan



➤ 49 Project ideas submitted by the public:

- Invasive species control (12)
- Freshwater restoration (6)
- Anadromous fisheries restoration (6)
- Land acquisition (3)
- Groundwater restoration (3)
- Education and stewardship (8)
- Recreation and public access (5)
- Stormwater management (4)
- Resource management and protection (2)

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Invasive species control

- Purple loosestrife in Great Meadows NWR and Towns of Ashland and Southborough
- Water chestnut in Great Meadows NWR, Concord and Assabet Rivers, Heard Pond, Fairhaven Bay, Carding Mill Pond in Sudbury and Fiske Pond in Natick
- Biological control of water chestnut
- Milfoil in Lake Cochituate
- Multiple aquatic and terrestrial species in Lincoln and Concord
- SuAsCo Cooperative Weed Management Area



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Freshwater restoration

- Jackstraw Brook Restoration and Culvert Replacement (\$300,000)
- Restoration of cold-water fish in the Sudbury River Basin (\$500,000 to \$1.5M)
- Coordinated dam management in the Upper Sudbury River
- Greenways North Field Restoration
- Sudbury River Riparian Buffer Restoration
- Stearns and Brackett Reservoirs Wildlife Preserve (\$900,000)



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Anadromous fisheries restoration

- Monitoring and stewardship (Concord and Sudbury)
- Fish passage restoration (Concord and Sudbury)
- Fisheries Resources Protection and Restoration (Concord and Assabet)
- GIS-based map of Sudbury River Fish Communities and Impediments to Fish Passage
- Hydrologic and water quality support for fisheries restoration in Sudbury River reaches
- Environmental history of fish runs and wetland meadows



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Land acquisition

- Raytheon land acquisition (Wayland) (donation with acquisition costs e.g. due diligence)
- Reach 8 wildlife habitat acquisitions (5 sites within Sudbury and Wayland) (\$500,000 to \$1M per site)
- 79 Lincoln Lane (Sudbury) (\$400,000)



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Groundwater restoration

- Shore Road wellfield (Ashland) (\$237,000)
- Model water conservation education program



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Education and Stewardship

- Protection through Education
- Public Information Kiosks (Ashland)
- Educational and Interpretive Signage (Concord)
- Sudbury River NRD Projects Web-Based Information Center
- Come Enjoy the Sudbury River: Outreach and Education Campaign
- Sudbury River Environmental Education Program/Institute
- Lake Cochituate Visitors Center (\$500,000)

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Recreation and Public Access

- Canoe launch at Fountain Street (Ashland) (\$15,000)
- Sudbury River Access Improvements (Wayland)
- Wayland River Room and Path to River
- Red Maple Trail Boardwalk and Wildlife Observation Platform at Great Meadows NWR
- Upper Sudbury River Public Access for Fishing and Trails
- Riverwalk Bridge at Millpond (Ashland)



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Stormwater Management

- Framingham stormwater Improvements (\$360,000)
- Chemical Brook drainline (Ashland) (\$1.89M)
- Public awareness campaign and LID demonstration projects for Stormwater Utility
- Stormwater management improvements (Concord)

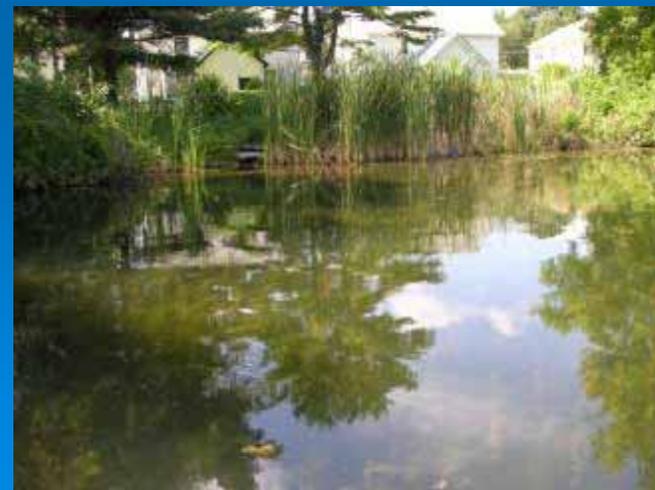


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Resource management and restoration

- Creation of Sudbury River Overlay District
- Wastewater ground discharge in the Indian Brook subwatershed (\$250,000)



Nyanza NRD Restoration Plan



- **Trustees evaluating project ideas (see handout for criteria)**
- **Eligibility** – Projects must meet Eligibility Criteria in order to be further considered and evaluated by the Trustees
- **Evaluation** – Eligible restoration projects will be prioritized by the Trustees through a qualitative assessment of their value and feasibility

Nyanza NRD Restoration Plan



➤ Trustees evaluating project ideas

- **Site Visits**

- August 4, September 12, October 10, October 28

- **Ongoing consultation**

- Follow-up questions to proponents and agencies

- **Review of existing plans developed with public input**

- Watershed needs and benefits

Nyanza NRD Restoration Plan



➤ Nyanza NRD Restoration Plan

- Typical contents:
 - Introduction
 - Affected Environment
 - Restoration Criteria and Evaluation of Alternatives
 - Preferred Alternatives
 - Non-Selected Projects
 - Compliance with Other Authorities
 - Consultation and Public Comments

Nyanza NRD Restoration Plan



➤ **Implementing Nyanza NRD Restoration Projects**

- Funding mechanisms available to Trustees
 - Competitive procurement
 - Request for Response (RFR) thru EEA
 - Inter-governmental agreements
 - Joint Funding Agreements thru EEA and FWS
 - Directed grants
 - Grant agreements and Cooperative agreements through FWS
 - State or Nationwide Contracts
 - Through EEA and NOAA

Nyanza NRD Restoration

Plan Target Schedule



- June 11, 08: Trustees invited public to submit project ideas over 90-day period
- Sept 9, 08: Restoration project ideas submitted to Trustees
- Sept. – Dec. 08: Trustees screen potential project ideas & gather additional information
- Nov 5, 08: Trustees provide overview of project ideas
- March 09: Draft Restoration Plan released for public comment
 - Unique process for land acquisition/protection
 - Trustees hold Public Meeting
- Aug. 09: Final Restoration Plan released to public
- Sept. 09: Begin issuing RFRs, Intergovernmental Agreements, Grant Agreements, and Contracts by EEA, NOAA, FWS
- 2009 – 2010: Restoration Projects underway

Nyanza NRD Trustees

Agencies & Points of Contact

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