Superfund and NRDA Working Together: Mine Waste to Healthy Habitat

Tribal Lands and Environment Forum - August 2012

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Lead Smelter, 1917

Long history of mining

100s of mine and mill sites
Mainstem Coeur d'Alene River
May 22, 2008
Basin-Wide Impacts

- **Direct human contact** to lead-contaminated soil, sediment and dust

- **Significant ecological impacts** to surface water, groundwater and soil/sediments
  - Fish and other aquatics significantly impacted from elevated Zn and Cd
  - Reduced species diversity/density and habitat fragmentation
  - Waterfowl mortalities due to ingestion of lead-contaminated sediment reported for decades
One goal: to reduce sediment toxicity and waterfowl mortality:

“Increase feeding area with lead <530 mg/kg ... by an additional 1,500 acres through conversion of agricultural land”

(USEPA, 2002)
The Coeur d’Alene Basin Natural Resource Trustees

Authorized Officials
USDA    DOI    CDA Tribe    State of Idaho

Trustee Council
USDA    DOI    CDA Tribe    State of Idaho

Restoration Team
CDA Tribe – Co-Coordinator
BLM – Co-Coordinator
FS
FWS
IDF&G
IDEQ
What Natural Resources were found injured?

• SW, GW, riparian resources, benthic macros, phytoplankton, fish (CTT), birds (tundra swans) soils, and sediments.

• AETF was set-up in order to compensate the Trustees in the interim for restoration activities.
GOAL:
Restore, rehabilitate, replace, or acquire the equivalent of injured natural resources.

“WATER IS THE LIFE OF ALL OF US.”
—Felix Aripa, Coeur d’Alene Tribal Elder
Natural Resource Trustees’ Interim Restoration Plan (April 2007)

- Increase tundra swan production through protection and management of breeding areas
- Reduce exposure by providing clean feeding habitat within basin
“The committee encourages EPA’s efforts to secure agricultural lands, converting them to high-quality feeding grounds …reestablishing wetland in these areas is a laudable effort…” (NRC 2005, p. 381)
Project Objective

Create clean feeding habitat for waterfowl in an area with extensive mine waste
Wetland Project Partnership

Environmental Contaminants

Willing Private Property Owner

U.S. Forest Service

USDA

U.S. Department of the Interior

Coeur d’Alene Tribe

Environmental Protection Agency

Ducks Unlimited

Idaho Department of Environmental Quality
CONSERVATION EASEMENT

FROM
MICHAEL R. SCHLEPP & BRENDA L. SCHLEPP
TO
THE UNITED STATES OF AMERICA

SHEET 1 OF 2

LEGEND

1/4 SECTIONS

SECTIONS

PROPOSED CONSERVATION EASEMENT

PARCELS OWNED BY SCHLEPP

NOTES

SEE LEGAL DESCRIPTION NO 001897.

THE GRAND TOTAL OF THE PROPOSED EASEMENT IS 369.2 ACRES WHICH EXCLUDES ABOUT 26.8 ACRES WITHIN THE RIGHT-OF-WAY OF THE OREGON-WASHINGTON RAILROAD AND NAVIGATION COMPANY.

U.S. ARMY CORPS OF ENGINEERS
SEATTLE DISTRICT
REAL ESTATE DIVISION
CADASTRAL
OCT 28, 2005
EPA Remedial Design

• Design process involved EPA, design contractor, property owner and Natural Resource Trustees, DU

• All parties at the “technical table” to help ensure smooth transition from remediation to restoration
EPA Remedial Action

• Remediation of elevated soil lead

• Abandonment of linear drainage ditches and creation of sinuous drainage swales

• Rehabilitation of parts of levee between field and creeks

• Construction of water control structures
National Historic Preservation Act – Section 106

• Cooperative Agreement with Coeur d'Alene Tribe - project area is within ancestral ceded territory

• Cultural resource survey by Tribe archeologist

• Coordination with Tribe and State

• Monitoring by Tribe during construction – no artifacts found
EAST FIELD BEFORE RECONVERSION TO WETLAND HABITAT
PROVIDING SAFE FEEDING PLACE
FOR WATERFOWL
FARMLAND TO WETLAND
REMEDIATION AND RESTORATION PROJECT
PRIVATE PROPERTY NOT OPEN TO PUBLIC
Construction and cleanup to convert agricultural land to clean waterfowl wetland habitat
2007 East Field Remedial Action
2009 – 2010 West Field Remediation
At conclusion of EPA Cleanup...

- Soil lead contamination remediated
- Sinuous drainage channels created
- Portions of levee reconstructed
- Water control structures in-place

➡️ Ready for restoration by the CDA Basin Natural Resource Trustees
Restoration Highlights

• Work performed by Natural Resource Trustees and Ducks Unlimited

• Reed canary grass control

• Plantings
  – Native upland and meadow grasses
  – Shrubs, forbs
  – Wild rice
Waterfowl and Wildlife Use

• High waterfowl use, feeding and diversity

• Other wildlife use
  – Bald eagles
  – Prairie falcon
  – Elk
  – Bear
  – Moose
Ready for the next migration…
“Where we are at today”

• Settled with ASARCO post bankruptcy and settled with Hecla Mining Company through a mediated negotiation process.

• To date approximately $147 million has been awarded to the Trustees for “restoration of injured natural resources in the Coeur d’Alene Basin”.

Next steps

• Developing Sub-basin assessments for the PEIS

• Public Scoping process

• Develop Restoration Alternatives

• Issue ROD

• Implement Restoration Projects while working hand in hand with EPA’s remedy
Take home points

• Collaborative partnership amongst willing private landowner, EPA and NRDA Trustees

• NHPA Section 106 cultural resource work conducted by Coeur d’Alene Tribe

• Cleanup goals achieved by EPA → NRDA Trustees followed with restoration & long-term management

• EPA and the Trustees jointly created clean wetland feeding area with high usage, feeding and diversity!!
For more information

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Questions?