



**United States Section
International Boundary and Water
Commission**

**American Dam/Carlos Marin
Field Office
REMEDIATION PROJECTS**

**Rio Grande Citizens Forum
March 23, 2010**

Remediation

- Remediation is defined as:
the removal of pollution or contaminants from the environment that have affected the soil, groundwater or surface water, for the general protection of human health and the environment

Effects of Metals Present

- Arsenic: human carcinogen
- Lead: neurological damage
- Risks to health from soil exposure are low, but increase significantly when the contamination moves into the water supply

Remediation Methods

- Remediation method depends on:
 - site characteristics
 - concentration
 - types of pollutants to be removed
 - the end use of site or medium
- Five general approaches may include:
 - isolation, immobilization, toxicity reduction, physical separation and extraction

Remediation Methods

- **Isolation:** prevent transport by containing within designated area (capping or subsurface barriers)
- **Immobilization:** designed to reduce mobility by changing the physical characteristics of contaminated matrix (solidification/stabilization)
- **Toxicity Reduction:** chemical or biological processes to alter the form of metal contaminants

Remediation Methods

- **Physical Separation:** separate the contaminated material from the rest of the soil matrix (screening)
- **Extraction:** designed to extract the contaminated fraction from the rest of the soil (on-site or off-site) by “washing” with extracting agents

USIBWC Remediation Projects

- American Dam/Carlos Marin Field Office Complex (5.56 acre site)
 - Approximately 4,147 cubic yards soil remediation
- American Dam Island
 - Approximately 12,874 cubic yards soil remediation
- Remediation method has not been determined

American Dam/Carlos Marin Field Office







American Canal Remediation

- 3 Open Channel Segments (~2 miles total length)
- Will require soil remediation along construction footprint
- Groundwater removal and remediation also along construction footprint
- Remediation method has not been determined

American Canal Reconstruction

- 2 Open Trapezoidal Channel Segments
- 1 Closed Conduit Segment -12' x 12'
double pre-cast concrete closed culverts
- Anticipate 3 Construction Phases
 - During non-irrigation season (October to February)
 - No work anticipated on the closed conduits under Paisano Drive

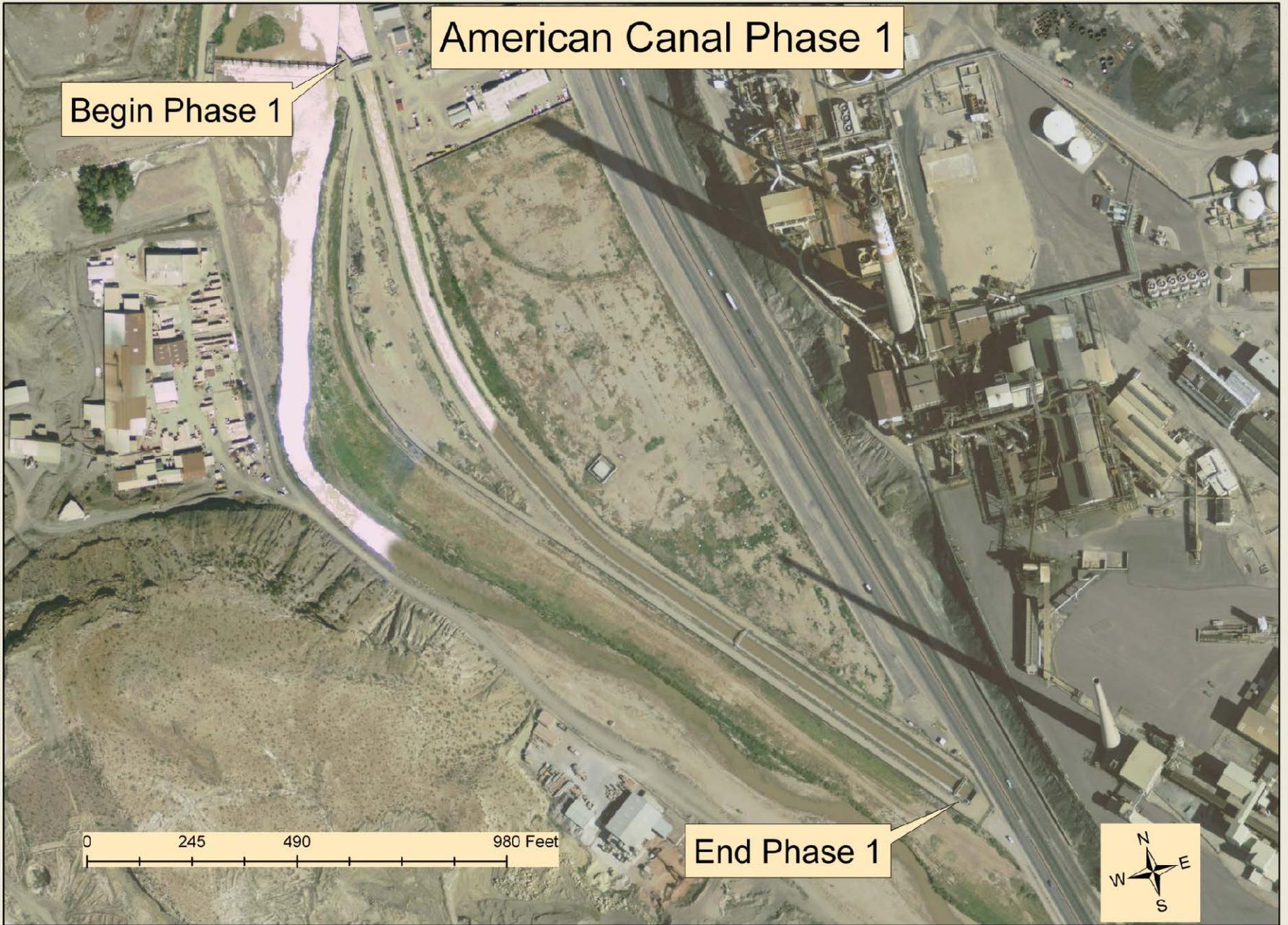
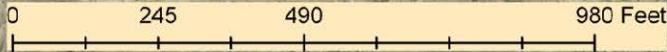
American Canal Segments

- Phase 1- Canal reach from American Dam to Paisano Drive
- Phase 2- Canal reach adjacent to ASARCO (north side of Paisano)
- Phase 3- Canal reach from double gates to near La Hacienda Restaurant beginning of RGACE

American Canal Phase 1

Begin Phase 1

End Phase 1





American Canal Phase 2

Begin Phase 2

End Phase 2

0 295 590 1,180 Feet



American Canal Phase 3

Begin Phase 3

End Phase 3

0 295 590 1,180 Feet





Questions

