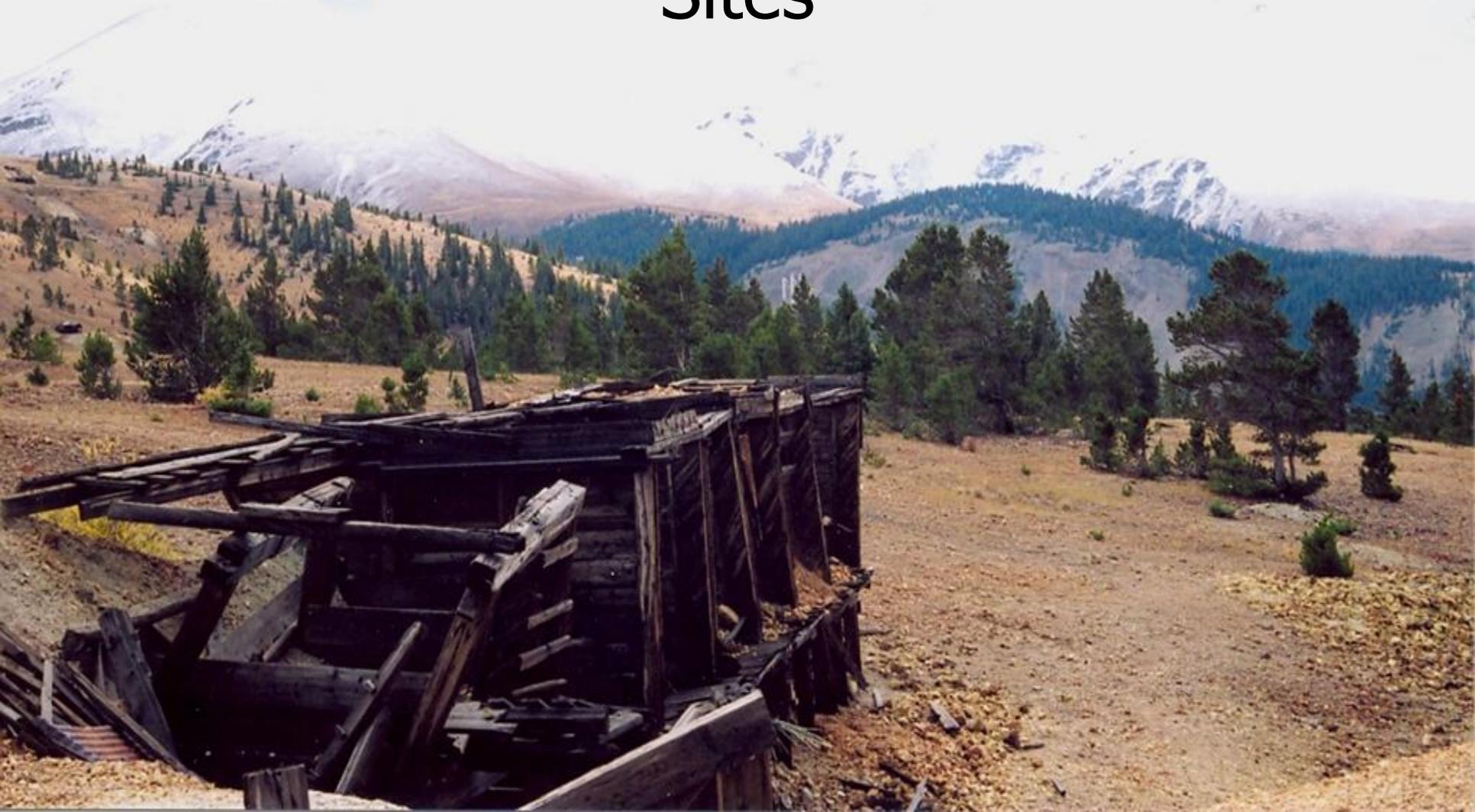


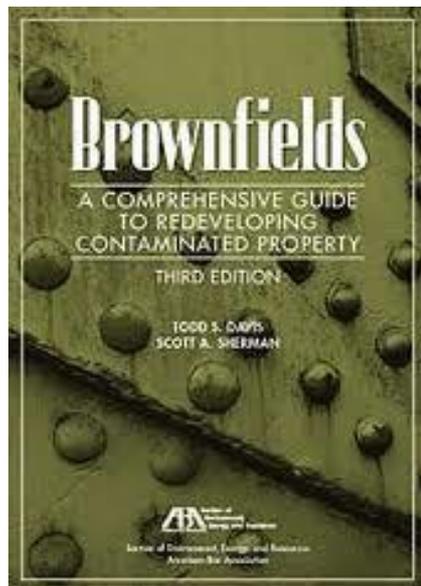
# HMWMD's Role at Abandoned Mine Sites



# What is the HMWMD?



# Remediation Program



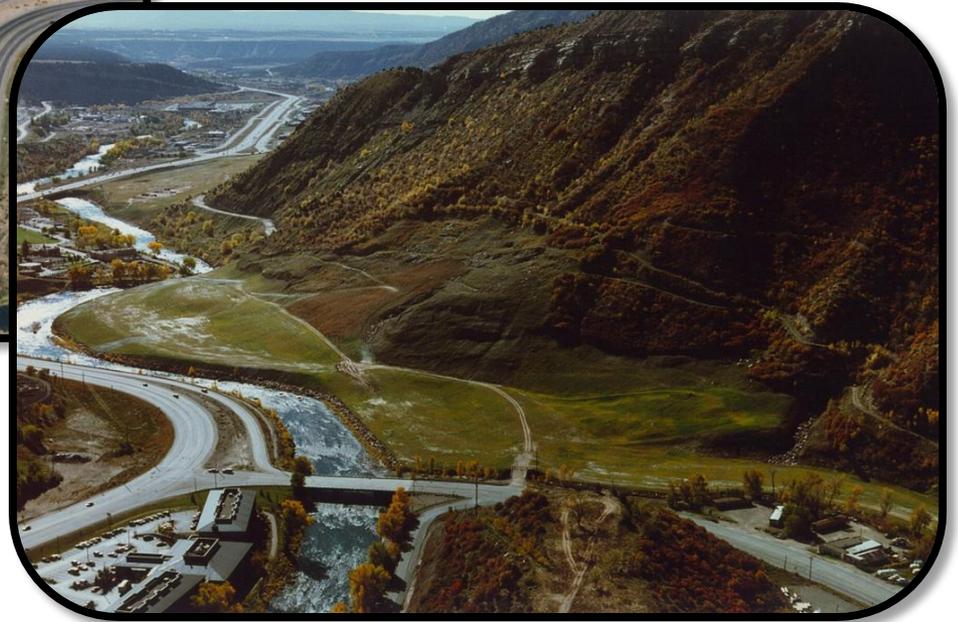
# UMTRA Program



# Uranium Mill Tailings Remediation Act



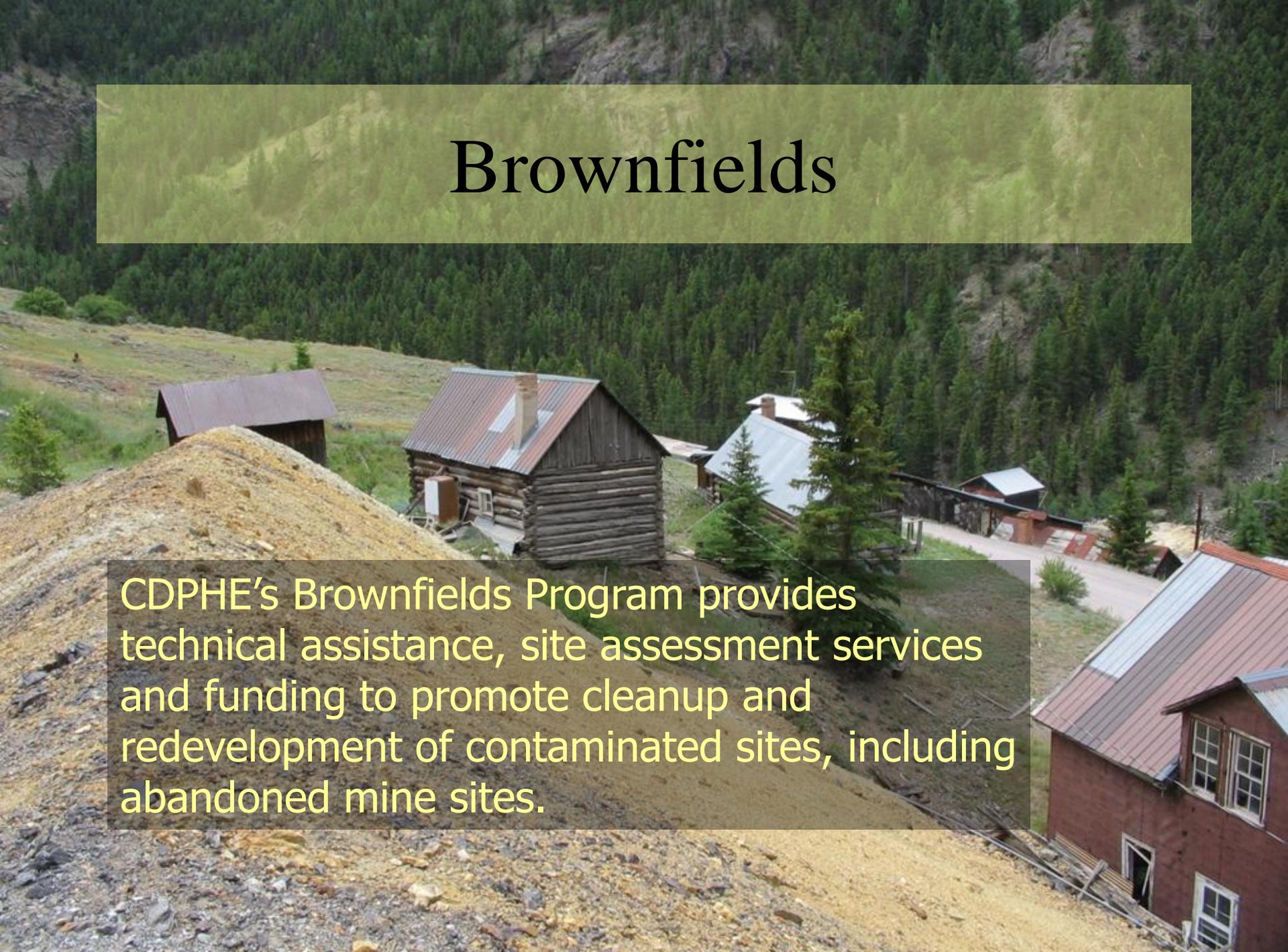
Remediation of abandoned uranium mills spread throughout Colorado's western slope



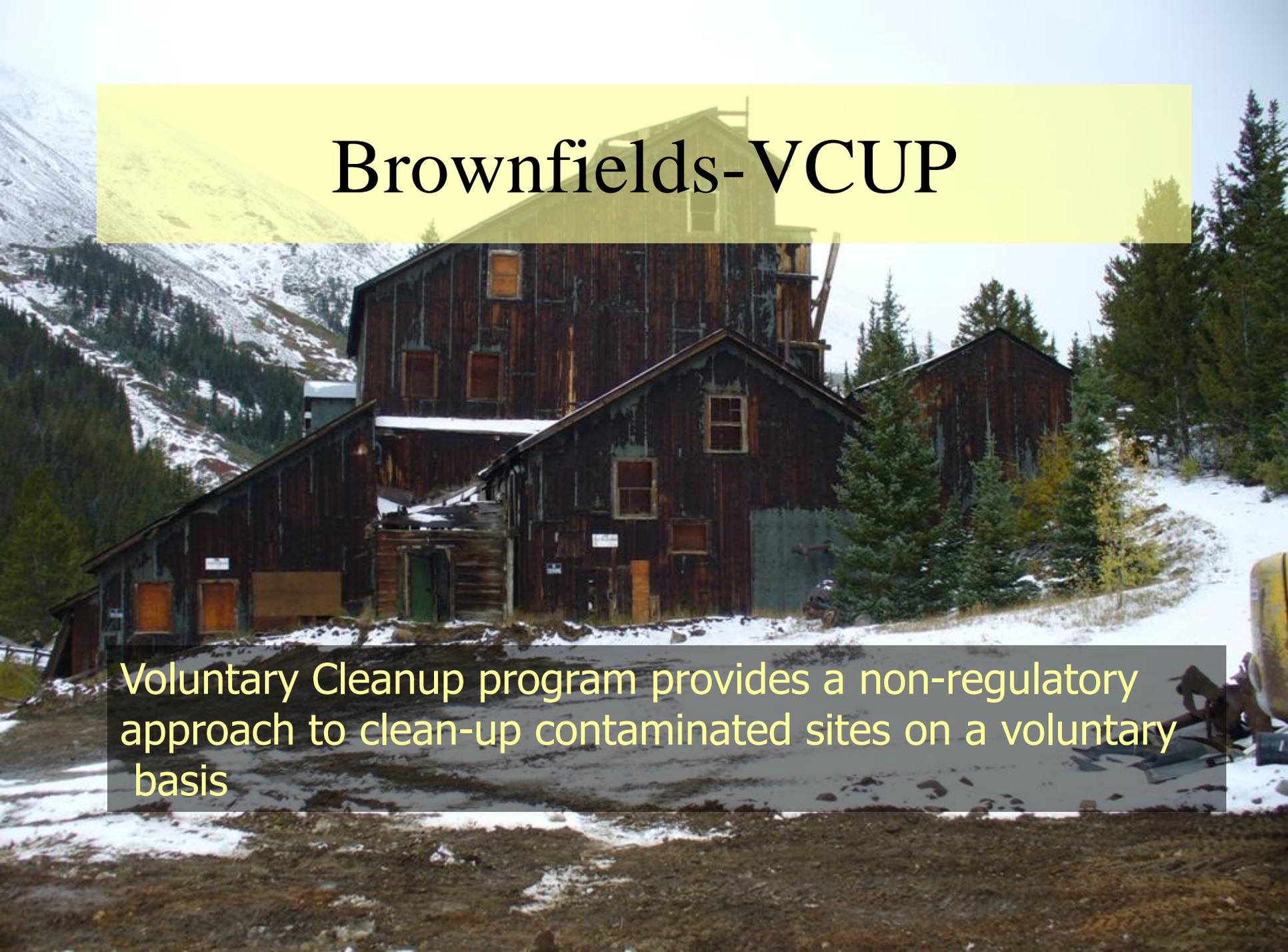
DOE was assigned  
Responsibility for cleanup  
State pays 10%

# Brownfields

CDPHE's Brownfields Program provides technical assistance, site assessment services and funding to promote cleanup and redevelopment of contaminated sites, including abandoned mine sites.



# Brownfields-VCUP



Voluntary Cleanup program provides a non-regulatory approach to clean-up contaminated sites on a voluntary basis

A photograph of a rugged, rocky mountain landscape. In the foreground, there is a green field. The middle ground shows a steep, rocky cliff face. At the base of the cliff, there is a small town with several buildings. The background shows more of the mountain range under a clear blue sky.

# Superfund

**Most of HMWMD's work on abandoned mine Sites occurs under the Superfund Program**

# Superfund Background

A photograph of a large, eroded, brownish-yellow hillside, likely a hazardous waste site. The terrain is rugged and shows signs of significant erosion. In the background, there are snow-capped mountains under a clear blue sky. A small wooden building is visible on the left side of the hill. The overall scene depicts a desolate and potentially contaminated landscape.

**Superfund was passed in 1980 to provide for clean up of uncontrolled hazardous waste sites**

# Superfund Response Actions

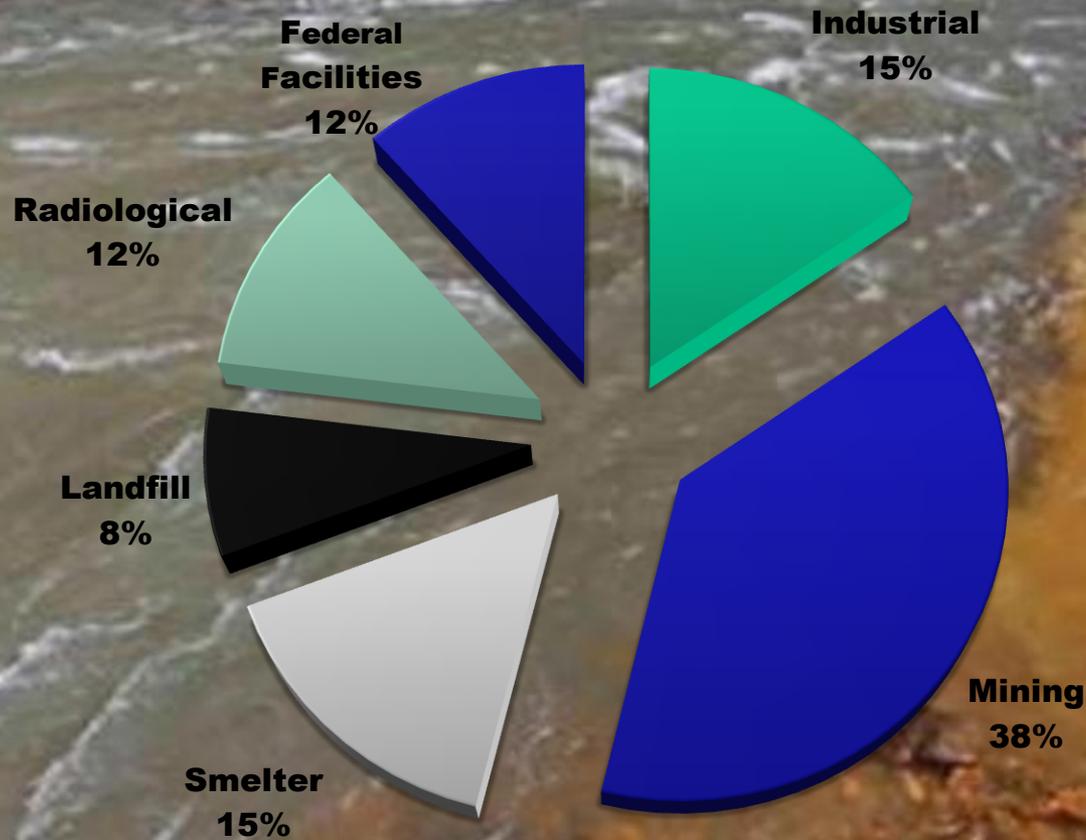


**Superfund authorized two types of response, or cleanup actions**

**Removal actions – short-term or emergency cleanup actions**

**Remedial Actions – long term, more permanent actions**

# Colorado's 25 Superfund Sites



# The Superfund Process



- **Discovery / Site Assessment**
- **Remedial Investigation / Feasibility Study**
- **Proposed Plan / Record of Decision**
- **Remedial Design / Remedial Action**
- **Monitoring / Maintenance**

A photograph of a river flowing through a landscape. In the background, a bridge spans across the river. In the foreground, there is a large, rusted metal structure, possibly a dam or a spillway, with a red marker on the ground. The river is surrounded by green vegetation and rocks.

# State Role in Superfund

- **Congress intended for the States to have meaningful involvement throughout the Superfund Process**
  - **Adding sites to the NPL**
  - **Determining appropriate clean-up actions**
  - **Identifying clean-up standards/requirements**
  - **Deleting Sites from the NPL**

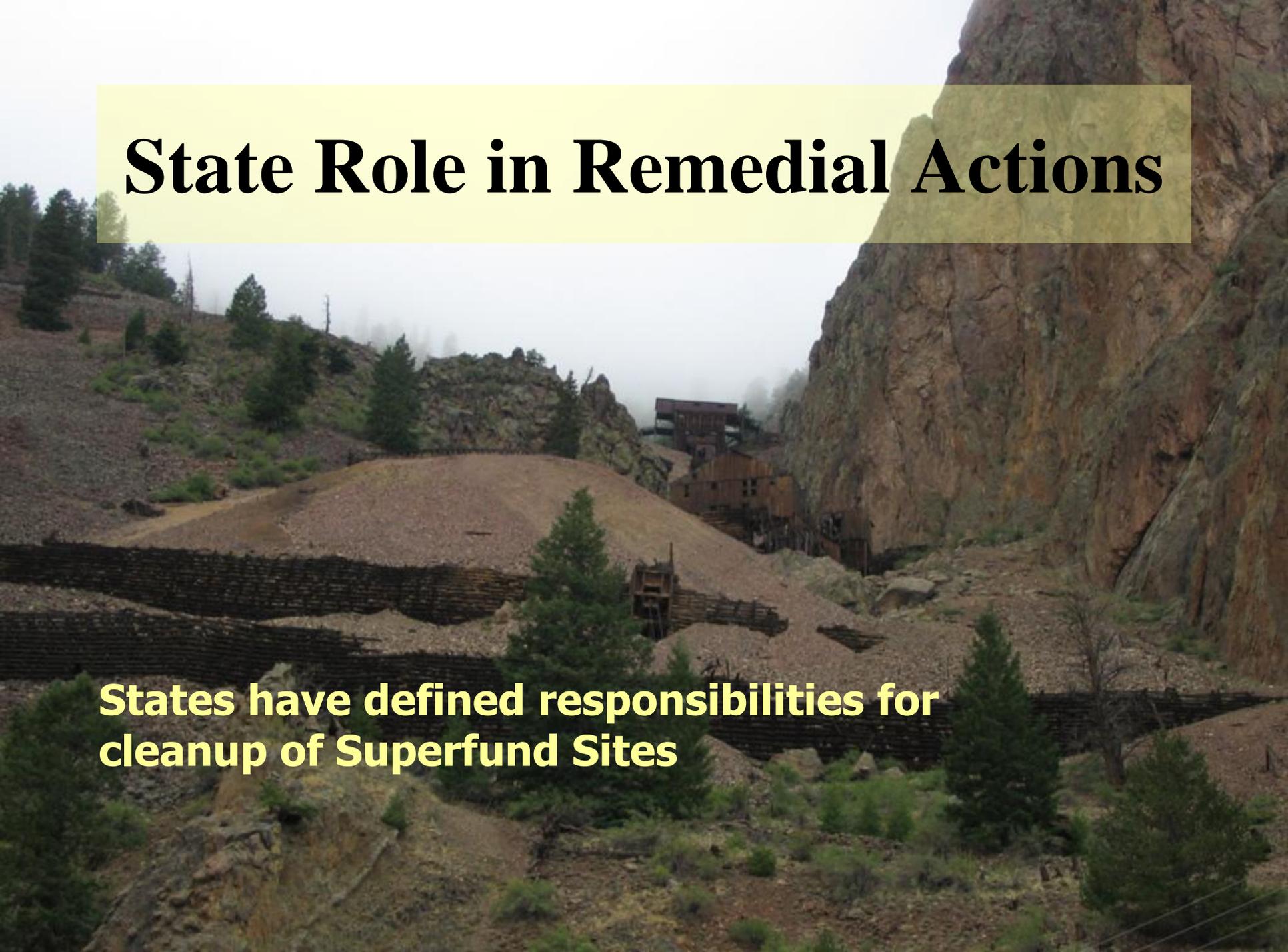
# State Role in Site Discovery and Assessment



**CDPHE Site Assessment Program  
investigates and evaluates sites  
for further action under Superfund**

00 7 12

# State Role in Remedial Actions

A photograph of a mountainous landscape. In the foreground, there is a large, conical pile of light-colored gravel or sand. To the right, a steep, rocky cliff face rises. In the middle ground, a wooden structure, possibly a mine building, is visible on a hillside. The background is hazy and foggy. The overall scene suggests a remedial site or a mining area.

**States have defined responsibilities for cleanup of Superfund Sites**



# State Responsibilities

**Pay 10% of remedial action costs and 100% of maintenance costs.**

**Acquire property interest, if property acquisition is necessary for clean-up.**

**State can, assume lead role in Superfund cleanups or act as support agency to EPA.**

# Remedies for Mine Sites



Typical remedies for mine sites include

Off-site Disposal and Removal

Surface Water Management

Water Treatment

Mine Waste Consolidation and Capping

# Removal and Disposal



# Surface Water Management



# Water Treatment



# Consolidation and Capping



# **What happens when work is completed and Sites are removed from the NPL?**

**State must concur that remedial action is complete**

**EPA reviews the site every 5 years to ensure the remedy remains protective of human health and the environment.**

**The State is responsible for maintaining the remedy, and where wastes are left in-place, and implementing and maintaining institutional controls.**



# Questions

