



# Midvale Slag Superfund Site Jordan River Riparian Project

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## Introduction

Located 12 miles south of Salt Lake City in Midvale, Utah, the 446-acre Midvale Slag Superfund Site is a former mine waste smelting facility adjacent to the Jordan River. Five separate smelters operated on or near the site at various times from 1871 to 1958. A nearby mill operated until 1971. These activities contaminated the soil and groundwater with heavy metals.

In 1991, the U.S. Environmental Protection Agency (EPA) placed the site on its National Priorities List, a list of some of the nation's most contaminated places known as Superfund Sites. Today, EPA and the Utah Department of Environmental Quality (UDEQ) have nearly completed the remediation required at the site. One of the final elements of the cleanup is to address the nearly 7,000 feet of riparian corridor where the Jordan River flows next to the site.

In October 2008, EPA will begin the Jordan River Riparian Project along the Jordan

River between 6400 South and 7800 South. The project will ensure that the Jordan River does not erode its bank adjacent to the Midvale Slag Superfund Site and, potentially, release contaminants from the site into the river. This will be accomplished by installing structures that will slow the river flows and redirect them, and by stabilizing the riverbank.

The project includes three elements: 1) stabilization of the old sheet pile dam and installation of a new grade control structure to stabilize the riverbed slope and prevent potential channel degradation; 2) bank stabilization to prevent erosion; and 3) installation of a spur dike field to deflect flows away from the bank to the center of the channel.

*The primary goals of this riparian project are:*

- *Maintain the current river grade*
- *Ensure the project is visually pleasing*
- *Reduce the potential for riverbank erosion*



*Sheet Pile Dam in Jordan River along Midvale Slag Superfund Site*

*The secondary goals for this riparian project are:*

- *Improve the river channel for boaters*
- *Improve the fish habitat*
- *Use new, innovative recycled products*

## **In-Stream Improvements**

There is a damaged sheet pile dam across the Jordan River, adjacent to the Midvale Slag Superfund Site. The dam is a relic from the site's smelting past, probably put in place to capture and use water for smelter operations. The walls of the dam are still standing along both banks but the center section has buckled. Although the dam appears to be stable, it could fail in the future, possibly causing erosion of the bank. This could release site contaminants into the river.

EPA contracted with JE Hurley Construction, Inc. to stabilize the sheet pile dam which restricts water flow in the Jordan River. The contractor will reshape the sheet pile dam and incorporate it into a new structure. The new structure will be a steel-reinforced boulder structure downstream of the sheet pile dam, perpendicular to the stream flow. This is intended to meet the goals of the project by creating a sound, aesthetically pleasing structure that maintains the current river grade and reduces the potential for riverbank erosion.

In addition, two options for canoeists and kayakers will be built into the design. A low-flow boat passage will be constructed, identified by signal boulders. Also, a portage passage will be improved to allow boaters to bypass the structure, if preferred.

## **Bank Stabilization and Revegetation**

In its natural state, a healthy river meanders. The river channel contains a meander in the vicinity of the sheet pile dam. If the channel continues to meander, it will migrate into the Midvale Slag site, exposing buried smelter waste and potentially releasing heavy metals into the river.

EPA awarded a grant to the Salt Lake County Division of Water Resources to prevent the channel from meandering and eroding the soil cover and underlying mine waste. The County will construct

an emergent bench which is designed to reduce erosion, stabilize the bank and allow for river widening.

The County will remove invasive species, construct a sideslope, and place a biodegradable textile of coconut shell fibers covered with topsoil. The County will then place rock armor on top of the textile along the lower portion of 7000 feet of riverbank along the Midvale side of the Jordan River, as well as along 1000 feet of riverbank in areas upstream of the Midvale Slag Site. The county will plant native plants and trees along the disturbed riverbank and place a vegetated soil cover over the rock armoring for aesthetic purposes.

## **Spur Dike Installation**

Spur dikes are flow-control structures that are designed to alter the flow direction in a river. Up to five dikes will be installed downstream of the new grade control structure to deflect water flow away from the riverbank to the center of the channel.

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**Or, please visit the following Website:**  
[www.epa.gov/region8/superfund/ut/midvale](http://www.epa.gov/region8/superfund/ut/midvale)

