

10.0 CLEAR CREEK STREAM SEGMENT 8: TWIN TUNNELS TO FLOYD HILL

SS 8 begins just west of the Twin Tunnels (MP 242.1) and extends eastward for 2.3 miles to the western base of Floyd Hill (MP 244.4) (Figure 10-1). The following issues and potential receptors have been identified for SS 8:

Water Quality

- Historical Mining (Mineral) Influences
- Adjacent Land Uses
- Highway-related Construction, Operation and Maintenance Activities
- Sedimentation

Hydrology/Hydraulics/Stream Morphology/Floodplains

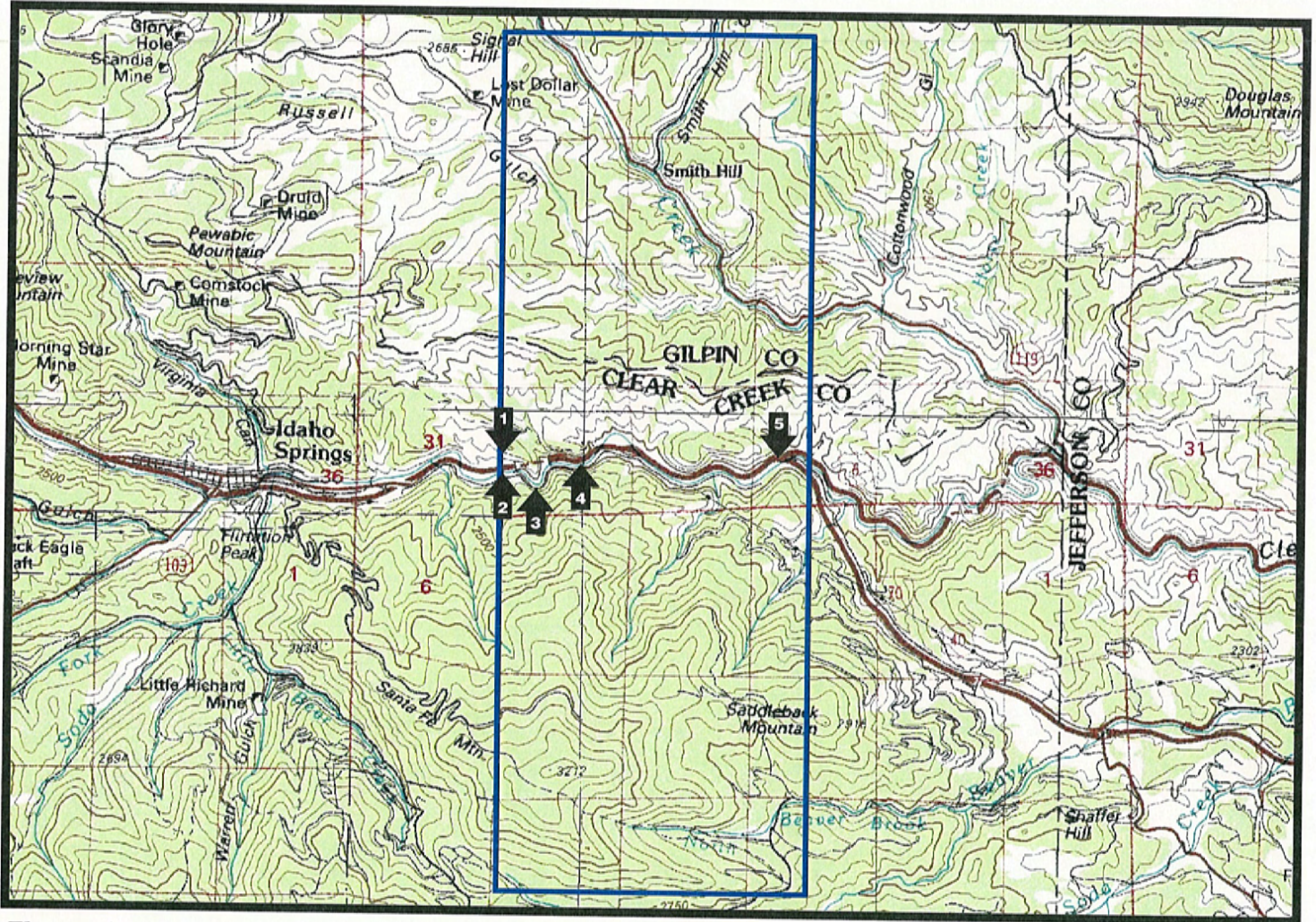
- Channelization

Wetland and Riparian Ecosystems

- Habitat Reduction and Fragmentation

Aquatic-dependent Communities

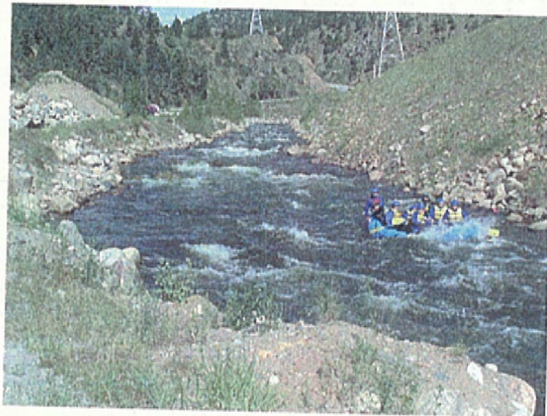
- Channelization
- Water-based Recreation



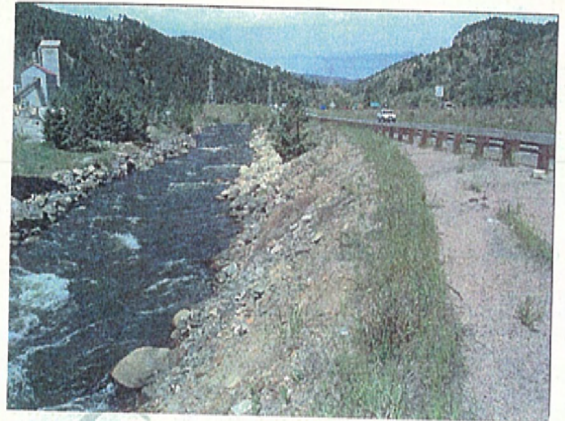
The numbered arrows correspond to the photographs on Figure 10-2

**An Inventory of I-70 Mountain Corridor
Water Resource-Related Issues
Clear Creek Stream Segment 8**

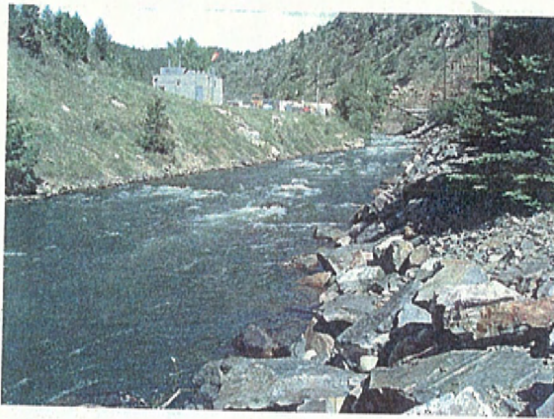
Figure 10-1



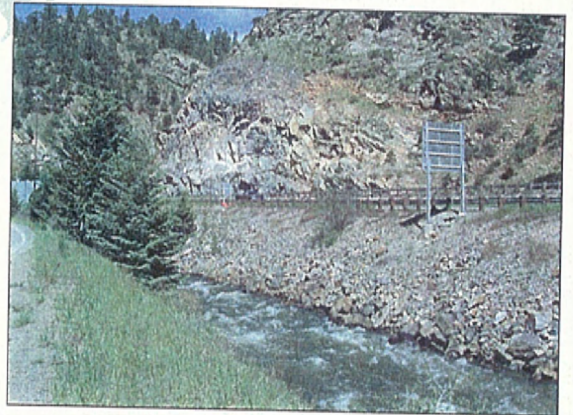
1 *Channelization/Rafting/Kayaking.* Clear Creek downstream from Idaho Springs.



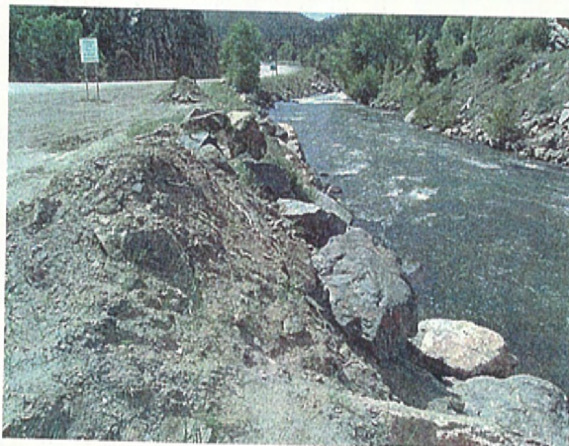
2 *Channelization/Sedimentation.* Clear Creek downstream from Idaho Springs.



3 *Channelization.* Clear Creek downstream from Idaho Springs.



4 *Channelization.* Clear Creek downstream from the Twin Tunnels.



5 *Sedimentation/Erosion.* Clear Creek near Floyd Hill.

FIGURE 10-2
I-70 PEIS SWEEP
Stream Segment 8
Clear Creek County

10.1 Water Resource-related Categories- Existing Conditions

A majority of this SS is within a canyon constrained on the north by I-70 and on the south by U.S. 6/40. The Twin Tunnels are located at the upstream portion of this SS.

10.1.1 Water Quality

SS 8 is influenced by numerous point and nonpoint sources. These sources are primarily associated with highway maintenance facilities and operations and rural and commercial development. The Idaho Springs WWTP is located within this SS. This plant has a maximum capacity of 800,000 gallons per day and meets current and anticipated needs (City of Idaho Springs, 2001). CDOT currently operates a maintenance facility in this SS. The facility is located at Hidden Valley and serves as a maintenance yard and storage area for road sand and chemical deicers.

Based on water quality analysis conducted by CDOT and CDOW, ambient water quality criteria for zinc, cadmium, and copper have periodically been exceeded in this SS. These metals are attributable to historic mining activities (CDOW, 1998). Historically, mine tailings have been deposited at Hidden Valley. UCCWA has also established a water quality monitoring site at the Idaho Springs WWTP outfall.

10.1.2 Hydrology/Hydraulics/Stream Morphology/Floodplains

Within SS 8, Clear Creek flows in an easterly direction at a gradient of approximately 3 percent. No perennial streams enter Clear Creek in this SS. The City of Black Hawk has established a municipal water supply diversion on Clear Creek at the north side of Hidden Valley.

10.1.3 Wetland and Riparian Ecosystems

Palustrine scrub/shrub wetlands occur infrequently in this SS, and only adjacent to Clear Creek. Approximately 0.4 mile of wetlands (less than 50 feet in width) occur sporadically adjacent to Clear Creek. Riparian areas are limited in this SS primarily as a result of channelization associated with highway and commercial development.

10.1.4 Aquatic-dependent Communities

According to CDOW fish population investigations conducted at one location approximately 0.5 mile upstream from SS 8 (below the Argo Tunnel discharge) and one location downstream from SS 8 (near the I-70/U.S. 6 interchange) from 1988 to 1998, brown trout is the dominant fish species in this SS. It is assumed, for purposes of this document, that the fish communities within SS 8 are similar to those at the two CDOW