



The numbered arrows correspond to the photographs on Figure 4-2



1 *Sedimentation:* Traction sand storage area at Herman Gulch.



2 *Sedimentation:* CDOT sediment retention ponds at Herman Gulch.



3 *Sedimentation:* CDOT sediment retention ponds at Herman Gulch.



4 *Downcutting:* Wood's Mountain Flood Wash downcutting

FIGURE 4-2
I-70 PEIS SWEEP
Stream Segment 2
Clear Creek County

4.1 Water Resource-related Categories – Existing Conditions

SS 2 begins near Dry Gulch and flows easterly for approximately 4 miles to Bakerville. Clear Creek flows adjacent to and south of I-70 throughout the entire length of the SS.

4.1.1 Water Quality

In the fall of 2000, CDOT initiated a water-quality monitoring program (J.F. Sato and Associates (JFSA) 2000), which included three locations on lower Clear Creek. A fourth location was established on upper Clear Creek immediately downstream from Herman Gulch in the spring of 2001 within this SS. The objective of this program, in light of the limited highway runoff data available, is to provide baseline information on potential contributions of minerals (e.g., suspended solids, metals, phosphorus, chloride, sodium, and magnesium) originating from the road surface and rights-of-way to streams in the Corridor during storm events. The *Data Summary Report—2000, I-70 PEIS Storm Water Quality Monitoring* (2001) contains preliminary results from storm-water runoff samples collected during the fall of 2000. CDOT continues to collect and analyze samples from Clear Creek to ascertain storm water quality conditions during and after precipitation events. UCCWA has established water quality monitoring sites at the Loveland WWTP and on Clear Creek at Bakerville.

CDOT currently operates and maintains a road sand storage facility immediately downstream from Herman Gulch on the north side of I-70. Sediment control measures have been implemented at this facility and CDOT has established a series of sediment control ponds immediately downgradient. Additional sediment control ponds have been established on the south side of I-70.

A large natural landslide area is located on the north side of I-70 below Herman Gulch (near MP 219). This landslide area is not related to I-70, however, the cutslope created by I-70 has locally increased the channel gradient resulting in channel erosion. During intense precipitation events, several drainages (e.g., Wood's Mountain flood wash) in this area contribute total suspended solids and sediment to Clear Creek.

Based on water quality analysis conducted by the Upper Clear Creek Watershed Association, ambient water quality criteria for zinc have been exceeded in this SS near Bakerville. However, water quality data are sparse for this SS and sources cannot be quantified.

The geology in the entire Clear Creek drainage is characterized as mineral-laden (metals) to varying richness. Disturbance of these areas through mining for mineral-rich ores or excavation activities not associated with mining may expose minerals to both oxidation and transport to receiving streams.