

Cherry Creek at 12-Mile Park – Phase 1

Performance after June 6, 2012 Storm Event

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Introduction

This technical memorandum presents the performance of the recently completed construction along Cherry Creek at the 12-Mile Dog Park (Phase 1) after the storm events of June 6, 2012. CH2M HILL was on site on June 8, 2012 after the flood flows in Cherry Creek had receded allowing an evaluation of the entire project area. This Technical Memorandum is in addition to the *Cherry Creek Basin Water Quality Authority Preliminary Report on the June 6, 2012 Flood Event on Recent Completed PRFs in Cherry Creek State Park* written by Bill Ruzzo.

Boulder Edging

A scour hole developed immediately upstream of the sidewalk constructed as part of Phase 1. This scour hole is shown in the image to the right. The scour hole developed in the transition location between the Phase 1 construction and the Phase 2 construction (construction anticipated late fall to winter 2012) where no soil riprap or other protection was placed. The jetty, boulder wall, and concrete sidewalk were not damaged during the storm event.

Adjacent to the concrete sidewalk, some of the crusher fines material was washed away during the storm event. This can be seen in the images to the right. The boulder wall and concrete sidewalk were not damaged when the crusher fines material washed away.

CH2M HILL Recommendation:

Fill the scour hole with native material [WPR1]. This area will be hardened as part of the Phase 2 construction (likely a continuation of the concrete sidewalk). If there is another large storm event prior to hardening during Phase 2 construction it is possible that the scour hole will redevelop.



At this time, do not replace the crusher fines. The crusher fines or other material can be replaced as part of the Phase 2 construction.

Breakout Flow Path

Erosion was observed along the breakout flow path where the Phase 1 construction grading tied into existing grade. The erosion is shown in the images to the right. It appears the water in Cherry Creek overtopped the north bank downstream of the limits of the Phase 1 construction flowing back towards the breakout flow path. The sediment from this erosion was deposited along the breakout flow path with some of the sediment reaching the upstream most portion of the open water restoration area.



CH2M HILL Recommendation:

The eroded area at the interface where the Phase 1 construction grading tied into the existing grade of the breakout flow path should be repaired to prevent [WPR2] further erosion and deposition of sediment in the open water restoration area. CH2M HILL recommends repairing this area as part of the construction for Phase 2.



Debris Line

A high flow debris line was visible throughout the length of the Phase 1 construction area. The images below show the debris line. The debris line was surveyed on June 8, 2012 for both the Phase 1 and Phase 2 areas and will be used to determine the peak flows in Cherry Creek at the project area as a result of the storm.

