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**2013 ANNUAL REPORT  
CHERRY CREEK STREAM RECLAMATION AT  
12-MILE CHERRY CREEK STATE PARK – PHASE I  
ARAPAHOE COUNTY, COLORADO  
CORPS FILE NO. NWO-2011-2648-DEN**

*Prepared for—*

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ERO Project #4803 AC 14

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**CORPS FILE NO. NWO-2011-2648-DEN**  
**JANUARY 7, 2014**

## **Project Overview**

**Corps Permit #: NWO-2011-2648-DEN**

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**Site Visit Date:** Courtney Marne with ERO Resources Corporation (ERO) visited the site on November 12, 2013 to evaluate the status of the area (2013 site visit).

**Project Summary:** On December 14, 2011, the Cherry Creek Basin Water Quality Authority, received authorization under Nationwide Permit No. 27, File No. NWO-2011-2648-DEN (NWP) from the U.S. Army Corps of Engineers (Corps) to conduct bank stabilization and bank repair activities along Cherry Creek. The project impacted approximately 0.81 acre of waters of the U.S., which includes 0.10 acre of wetland impacts.

**Project Location:** The project area is in Cherry Creek State Park at the 12-Mile Dog Off Leash area in Arapahoe County, Colorado. The legal description of the project area is Section 18, Township 5 South, Range 66 West of the 6th Principal Meridian in Arapahoe County, Colorado (Figure1). The latitude/longitude of the project area is 39.614777°N/104.825774°W. To access the mitigation site from the Denver Corps' Regulatory Office, take Interstate 25 North to Arapahoe Road. Go east on Arapahoe Road and then go north onto South Parker Road. Turn left onto Orchard Road, then turn right onto South Entrance Road. The project area is west of the parking lot, between the 12-Mile Trail and Cherry Creek.

**Completion Dates:** Construction of the project was completed in late summer 2012. This is the first annual report following construction.

**Summary of Results:** Bank reconstruction and stabilization activities appear to be successful and have resulted in a net increase in aquatic functions and services. Wetlands are reestablishing in the breach location. Vegetation is developing in the disturbed upland areas with an average of 75 percent total vegetative cover. All of the planted trees appeared alive and healthy during the 2013 site visit.

**Recommendations:** The project activities appear successful and ERO recommends the site be cleared from further reporting requirements.

## **Introduction**

The project consisted of improvements to stabilize and repair the bank along Cherry Creek to address erosion and restore an area of bank that was breached by high flows. Project activities included reconstructing the bank by creating a 500-foot-long berm and installing a line of 36-inch boulders along the streamside toe of the berm. Fill material for the berm was to be generated by removing sediment from the small pond that filled in because of the bank breach. The project was to restore the historic alignment of Cherry Creek and restore the small pond. The disturbed areas were to be seeded with native seed mix and planted with willow stakes and ten 2-inch-diameter plains cottonwood (*Populus deltoides*) trees. A concrete trail was to be constructed to allow people and dogs to access the creek bed. The project resulted in total impacts of approximately 0.81 acre of waters of the U.S., including 0.10 square feet of wetlands. No specific compensatory mitigation was required because restoring the pond and directing flows back to their historic alignment would result in a net increase in aquatic functions and services.

## **Methods**

Courtney Marne with ERO conducted the annual site visit on November 12, 2013 (2013 site visit). During the 2013 site visit, ERO took photos to establish photo points in the project area (Photos 1 through 4). Representative photos of the site are attached and photo points are indicated on Figure 2. ERO qualitatively assessed the vegetation cover and composition in the wetland and upland areas. Hydrology, soil moisture conditions, noxious weed infestations, erosion problems, and other pertinent factors were noted, if present, and the general success of the site was evaluated.

## **Evaluation Results**

Based on project plans and field observations, it appears the project is successful and was constructed as planned. Project activities have restored the historic alignment of Cherry Creek and no erosion concerns were observed in the project area during the 2013 site visit. The small pond has been restored and wetland vegetation is reestablishing in the pond and along the edges (Photos 1 and 2). The dominant species observed in the establishing wetlands include switchgrass (*Panicum virgatum*), Baltic rush (*Juncus arcticus*), spikerush (*Eleocharis palustis*), prairie cordgrass (*Spartina pectinata*), and

broadleaf cattail (*Typha latifolia*). Sandbar willow (*Salix exigua*) shrubs were also observed resprouting around the pond edges in the project area.

As part of the project plans, 10 plains cottonwood trees were to be planted in the project area along the constructed concrete trail. At the time of the 2013 site visit, all of the planted trees appeared alive and healthy (Photo 3).

Vegetation is establishing along the constructed berm, the concrete trail, and within the disturbed upland buffer areas with the average cover of 75 percent (Photos 1, 3, and 4). A footpath has been created by people and dogs between the constructed path and boulder edging (Photo 3). It is unlikely vegetation will develop in this area because of its frequent use; however, the area appears stable. Upland vegetative species observed in the project area include blue grama (*Bouteloua gracilis*), sideoats grama (*Bouteloua curtipendula*), switchgrass, kochia (*Bassia sieversiana*), sweetclover (*Melilotus officinalis*), slender wheatgrass (*Elymus trachycaulus*), and common sunflower. No noxious weeds were observed in the project area at the time of the 2013 site visit.

## **Conclusions and Recommendations**

Overall, the project appears to be successful and has resulted in a net increase in aquatic functions and services. Both the small pond and the historic alignment of Cherry Creek have been restored. Wetland vegetation is reestablishing in the small pond and willows are resprouting along the pond edges. It is anticipated that wetlands will continue to develop in the small pond. All of the planted trees are alive and healthy. The constructed berm and disturbed upland buffer areas are establishing vegetation and no noxious weeds were observed in the project area. No remedial actions are necessary at this time. ERO recommends the site be cleared from further annual reports.

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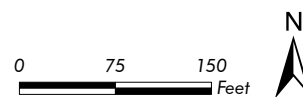




## Cherry Creek Stream Reclamation at 12-Mile Cherry Creek State Park - Phase I

➔ Photo Point

Image Source: Microsoft®, March 2012



## Figure 2 Photo Points

Prepared for: CH2MHill  
File: 4803 AC13 Figure 2 Photo Points.mxd (GS)  
December 11, 2013

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PHOTO LOG  
CHERRY CREEK STREAM RECLAMATION AT 12-MILE CHERRY CREEK STATE PARK  
ARAPAHOE COUNTY, COLORADO  
NOVEMBER 12, 2013



**Photo 1** - Overview of the restored pond with upland and wetland vegetation establishing. View is to the south.



**Photo 2** - Wetland vegetation reestablishing within the restored pond. View is to the southeast.



**PHOTO LOG**  
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**ARAPAHOE COUNTY, COLORADO**  
**NOVEMBER 12, 2013**



**Photo 3** - Installed boulder edging and planted trees along the stabilized bank. View is to the west.



**Photo 4** - Upland vegetation establishing along the constructed trail within the project area. View is to the southeast.