

Clear Creek Watershed Foundation



Annual Report 2015

Clear Creek Watershed Foundation
2060 Miner Street, Idaho Springs, CO 80452
www.clearcreekwater.org
info@clearcreekwater.org
303-567-2699

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Prepared by: J. David Holm, Executive Director

Board of Directors

Our Mission

Incorporated in 1997, the Clear Creek Watershed Foundation (CCWF) is a non-profit organization dedicated to improving the conditions in the Clear Creek Watershed by maintaining, preserving, restoring and improving its ecological, aesthetic and recreational conditions. We believe that promoting, coordinating and implementing projects such as abandoned mine remediation, stream habitat improvement, and water conservation and reuse will make Clear Creek and its communities a more sustainable watershed.

Ben Moline, P. E. President of the Board, CCWF; Manager, Water Resources & Environmental Compliance, Molson Coors Brewing Company

Carl Norbeck Secretary/Treasurer, CCWF; Audubon Society of Greater Denver, Board of Directors; Clear Creek Watershed Forum Coordinator 1995-2003, co-founder of the Clear Creek Watershed Foundation

Max Dodson, Assistant Regional Administrator, Office of Ecosystems Protection and Remediation, Environmental Protection Agency Region 8 (retired); co-creator of the Clear Creek Watershed Forum

Glen Edwards, West Denver Trout Unlimited/Clear Creek Projects Manager; Colorado School of Mines Professor Emeritus

Bryce Romig Environmental Manager, Climax Molybdenum Company; co-creator of the Clear Creek Watershed Forum

Peggy Stokstad Director, Clear Creek Economic Development Corporation

Fabyan Watrous, Clear Creek County Planning Commissioner; Clear Creek County Historic Public Lands Commissioner; President, Jack Pine Mining Company

Director's Report

It's been a pleasure and a privilege to serve another year as Director of the Clear Creek Watershed Foundation. Many of our recent activities and accomplishments are highlighted in this annual report. We have been working toward having a balanced portfolio of projects and activities in particular focus areas as shown below. We are making progress.

Looking back a full year I remember an entire set of projects finally coming to fruition after a long period of development efforts. During the winter we finished the final four fishing access stairways for our Fishing-is-Fun Project. We then constructed two tributary basins for controlling metals and sediment through CDOT's right-of-way, one near the mouth of Hoosac Gulch and the other just east of Dumont in Clear Creek County. By March, we were working on the restoration of North Clear Creek about 1 mile upstream of its confluence with Clear Creek in Gilpin County. The Flood of September 2013 had carried 3,000 cu. yds. of crusher fines from the Frei Quarry down a side tributary, pushing North Clear Creek eastward and out of its historic channel. By the end of April we had completely removed all of the sediment and returned the stream to its original channel. All of the disturbed areas were revegetated.

We put significant effort into preparing the final reports for the Upper North Empire Creek Restoration Project, Tributary Basin Sediment Control and Removal Project and the Fishing-is-Fun Clear Creek Access Project. These reports can be obtained electronically by visiting our new website at www.clearcreekwater.org. The reports are housed on our Projects page within Target Stream Segment groupings. Links to all CCWF project information including the Final Project Reports since 2004 are now able to be accessed on-line. Please see project numbers 4, 9 and 24 respectively for the final project reports completed this year.

I've had the pleasure of becoming involved in the Clear Creek Watershed Wildfire Task Force over the past year in addition to a number of other local watershed planning efforts. Some of the most beneficial possible watershed protection projects may come from this involvement. For example, the North Empire Creek area where we have been conducting a great deal of restoration work could become a key linkage area in a watershed scale fire mitigation effort.

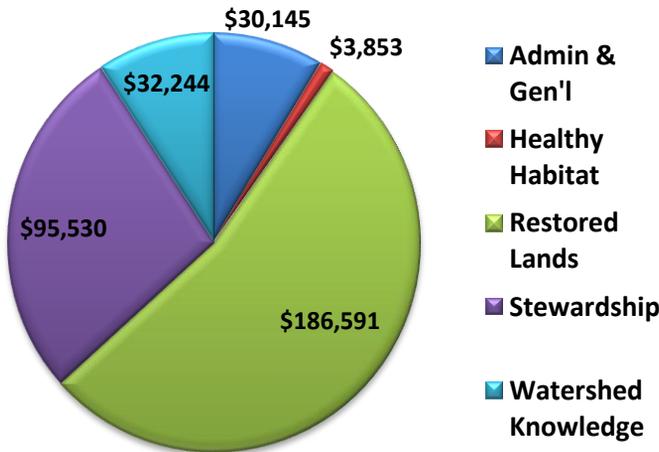
We are pleased with the progress toward meaningful community engagement and project development efforts within the lower Clear Creek Corridor, particularly with the Adams County Parks and Open Space Department. We are a sub-grantee on Adams County's Community-wide Brownfields Assessment Grant, which is targeting an industrialized area along Clear Creek between Federal and Pecos Streets. We applied for an Urban Waters Small Grant to conduct a Lower Clear Creek Corridor Stream Assessment Project. Our partners include Adams County, Colorado Department of Public Health and Environment, Colorado School of Mines, River Watch and Colorado Parks and Wildlife. We have also applied for a National Fish and Wildlife Foundation Five Star Grant to conduct the Clear Creek Bottomlands Habitat Restoration Project in Kalcevic Gulch. Finally, we are involved in a partnership effort between Adams County and the Colorado Department of Transportation to potentially develop a mitigation wetlands feature in the Lafayette Park area where State Highway 270 crosses Clear Creek.

I am proud of our accomplishments over the past year.

J. David Holm

Financial Performance

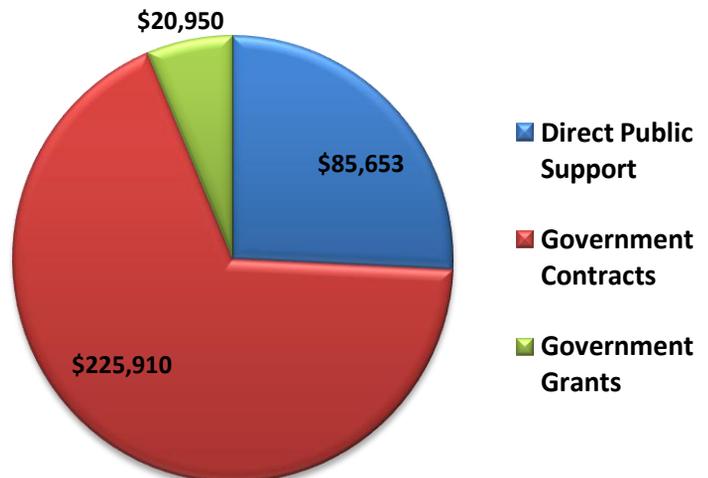
CCWF 2015 EXPENSES



CCWF is a lean organization that can respond to opportunities related to watershed health and the needs of individual watershed stakeholders or stakeholder collaborations. During relatively inactive periods, CCWF can deflate and remain viable with low overhead costs. There is a central core of contractors including the Executive Director, Fiscal Coordinator and Project Manager that have had ongoing roles with CCWF. CCWF's human resources are deployed on a project-specific basis and paid through grants, donations, or by contracting agencies.

CCWF fulfills the needs of project sponsors with project teams consisting of specialized individuals brought together at the behest of project sponsors and directed by a project specific leadership team. In this way, project sponsors can maintain a high degree of control over projects without having to house them internally within their own organizations. CCWF provides a range of services from project hosting, fiscal agency, and procurement to full project management, depending on the needs of sponsors.

CCWF 2015 INCOME



2015 Completed Projects

Project	Location	Cost	Date Complete
Phase I: Upper North Empire Creek Stream Corridor Restoration Project	Empire, CO	\$536,000	11/30/2014 Final Report 2015
North Clear Creek Flood Recovery Sediment Removal Project	Hwy. 119, Gilpin County, CO	\$25,000	4/17/2015
Clear Creek Tributaries Sediment Control & Metal Removal Project	Dumont & Hoosac Gulch, Clear Creek County, CO	\$204,135	3/18/2015
Clear Creek Fishing-is-Fun Access Project	17 Mile Reach, Upper Clear Creek Watershed, 11 Project Sites	\$115,000	4/1/2015
Clear Creek Watershed Festival 2015	Courtney-Ryley-Cooper Park, Idaho Springs, CO	\$12,000	9/19/2015
CCWF New Website	Internet	\$6,000	Launch Ready

2015 PROJECTS



Phase I: Upper North Empire Creek Stream Corridor Restoration Project

Phase I restoration began in the summer of 2014 and involved removing mine waste from within the stream corridor and re-establishing a healthy riparian buffer area on both sides of North Empire Creek.

This project has resulted in significant reductions in toxic metal concentrations, including aluminum, copper and zinc as well as a reduction of acidity with a corresponding increase in pH. Given the importance of Clear Creek as a water supply and recreational resource, these are considered public health and source water protection benefits. Environmental benefits resulted from removing mine waste from the natural stream channel and its flood plain in order to establish a healthy riparian buffer area and a stable drainage channel with improved water quality.

2015 PROJECTS



North Clear Creek Flood Recovery Sediment Removal Project

On September 13, during the historic flood of 2013, sediment was released from the spill containment system that was constructed for a crusher fines repository located in the headwaters area of an unnamed tributary to the North Fork of Clear Creek. The flood waters caused significant erosion of a crusher fines pile, which were carried down toward the North Fork of Clear Creek. A debris fan comprised of this residual mining material was deposited at the mouth of the affected unnamed tributary. The volume of this deposition was estimated to be 3,000 cu yds. This project involved the complete removal of the sediment from the debris fan near the mouth of the unnamed tributary to a redesigned and flood proofed repository. This project also consisted of restoring the affected area.

2015 PROJECTS



Clear Creek Tributaries Sediment Control & Metal Removal Project

This project was a partnership effort between the Colorado Department of Transportation and the Clear Creek Watershed Foundation. The primary goal of this Project was to significantly reduce the loading of particulate metals, including the TMDL target metals cadmium, copper and zinc, from reaching Clear Creek. It consisted of construction of two sediment basins designed to capture metal laden sediments and particulate phosphorous in order to prevent these contaminants from reaching Clear Creek. The detention basins were designed to facilitate efficient maintenance operations to allow the captured sediment to be removed entirely from the drainage area and properly contained.

2015 PROJECTS



Clear Creek Fishing-is-Fun Access Project

This project was designed to improve access to Clear Creek for fishing and other forms of recreation at 11 access points along Clear Creek between Silver Plume to the west and Tunnel 5, on U.S. Highway 6.

This project supports local community and State efforts to make sportfishing more accessible by improving fisheries and increasing recreational fishing opportunities.



2015 PROJECTS



7th Annual Clear Creek Watershed Festival

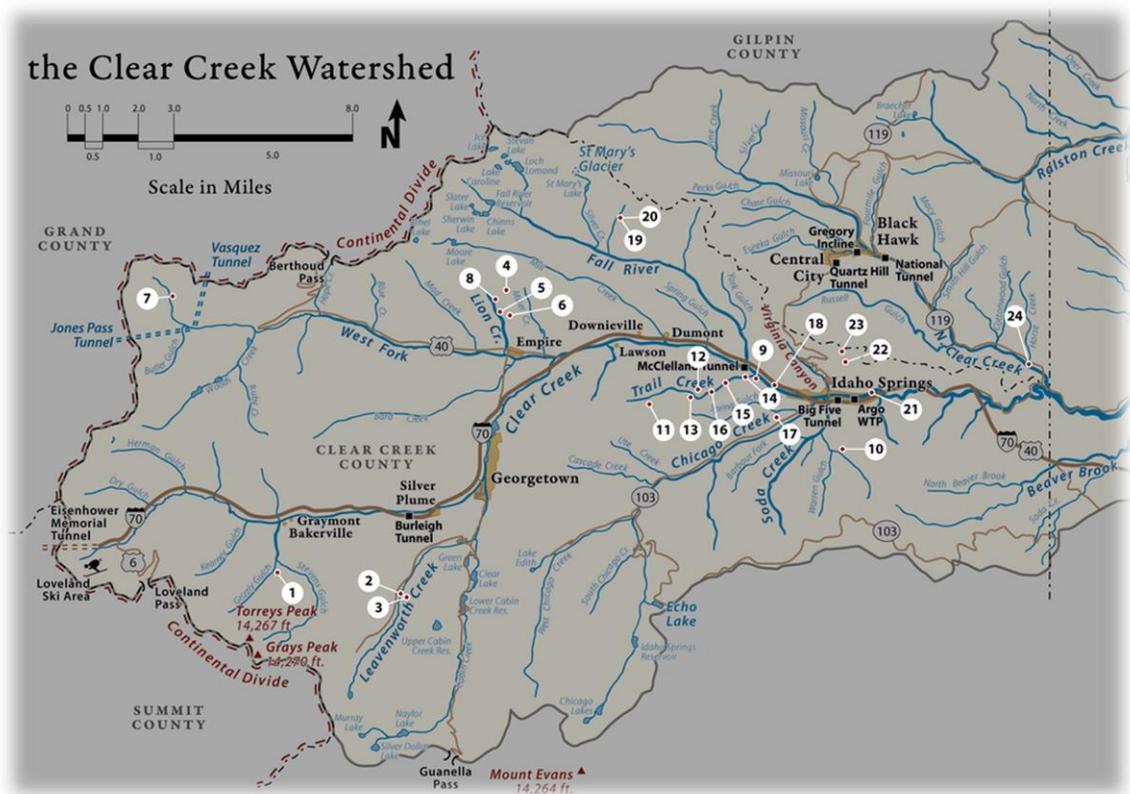
Courtney-Ryley-Cooper Park,
Idaho Springs, CO

This event and creekside venue provides a wonderful opportunity for watershed stakeholder organizations to share their message and educate participants as to the valuable natural resources, recreational activities, sustainable living opportunities, and the important balance between them all in the Clear Creek Watershed.

2015 PROJECTS

New Clear Creek Watershed Website

In keeping with the CCWF practice of transcending the boundaries of any one agency, community, industry, or organization within the watershed, our new website is designed to bring people together from throughout the watershed to share knowledge, attitudes and values and thus develop cooperative water quality improvements strategies and projects, thus creating a watershed-wide “culture of cooperation.” (Launch March 2016)



** Project numbers 4, 9 and 24 were completed this year.*

2016 Project Initiatives

- **Middle North Empire Creek** (\$335,209) - Nonpoint Source Proposal Submitted
- **Lower North Empire Creek** (\$427,127) - Nonpoint Source Proposal Submitted
- **Adams County Clear Creek Corridor Stream Assessment Project** (\$75,000) - Urban Small Waters Grant Proposal Submitted
- **Clear Creek Bottomlands Nuisance Species Eradication and Habitat Restoration Project** (\$142,315) - National Fish & Wildlife Foundation 5 Star Grant Proposal Submitted
- **Adams County Community-Wide Brownfield Assessment** Federal Boulevard to Pecos Street along Clear Creek \$199,720* (*\$23,000 is associated with CCWF activities)
- **Lafayette Park Wetlands Creation & Enhancement** - Adams County / Colorado Department of Transportation

North Empire Creek

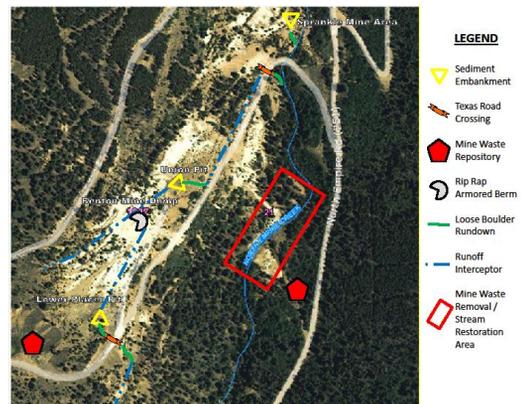
Middle North Empire Creek Gold Dirt to Equator Mine Dump

The creek flows directly along the base of four piles (N-S and E-W), which have contributed major amounts of sediment to North Empire Creek. The impoundment is completely full of mine waste/sediment such that North Empire Creek flows across the top of the pile, thus maintaining it in a saturated state. This is functionally a mine waste leaching cell set directly in the stream channel.



Lower North Empire Creek Equator Mine Dump to Empire Landfill

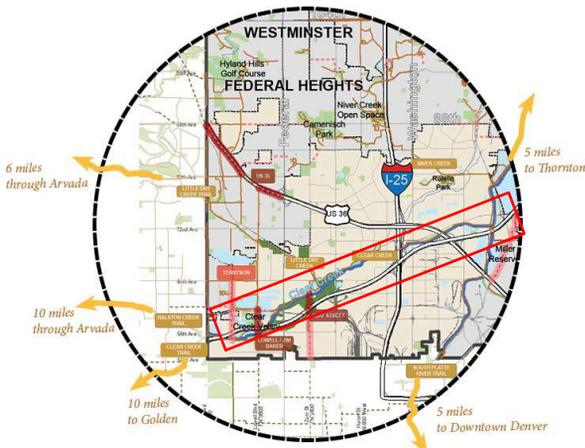
A major focus of the Lower North Empire Creek Project is controlling runoff from severely impacted, virtually un-reclaimable, upland mined lands to the west of the creek. This, in addition to sediment containment, will aid in minimizing erosion and sediment yield from steep mining impacted slopes. There will also be removal of mine waste from the stream channel.



Lower Clear Creek

Adams County Clear Creek Corridor Stream Assessment Project

In the past century, the landscape along Clear Creek in Adams County deteriorated rapidly as rich gravel deposits in the floodplain were mined and then backfilled with the Denver Metro area's accumulated solid waste, and a network of highways, rail lines, and freight yards crisscrossed the corridor. The area remains blighted and scarred in some areas along the channel. This assessment will be to determine if water quality has been significantly impaired and where natural hydrologic and ecologic functions have been lost.



Clear Creek Bottomlands Nuisance Species Eradication and Habitat Restoration Project

This project is aimed at restoring 30 acres of land owned by Adams County, Colorado in Kalcevic Gulch. There is very little environmental information available regarding this blighted area of Clear Creek. The vision is to restore and create a wildlife conservation area where the local community may enjoy habitat viewing while being educated via interpretive signage about the native fish, bird, and wildlife species in the area. This project will support next phase Open Space Planning and Implementation efforts that aim to connect Twin Lakes Park with Kalcevic Gulch.



Lower Clear Creek

Adams County Community-Wide Brownfield Assessment

CCWF is working with Adams County to address issues associated with the brownfields and begin the process of restoring water quality, riparian habitat and the beneficial uses of the stream corridor, all of which benefit the local communities and ecosystems. We are committed to participating in the entire Clear Creek Valley Assessment program by providing technical support. We are offering contract services and in-kind support for stakeholder outreach efforts and public meetings; document review; contactor procurement and selection, onsite environmental assessments; and site cleanup planning.



Lafayette Park Wetlands Creation & Enhancement

Community input has identified this mixed-use area as lacking clarity and predictability in terms of what is envisioned and permissible in terms of existing and future land uses. The older nature of the area has left infrastructure in aged condition. There are opportunities to address some of these deficiencies as future development and redevelopment occurs, and in doing so, also allows for enhanced environmental features including wetland enhancement and development.



Community Engagement: Local Watershed Planning

Upper Clear Creek

- Hazard Mitigation Plans for Clear Creek and Gilpin Counties
- Georgetown Source Water Protection Plan
- Black Hawk Source Water Protection Plan
- Clear Creek County Master Plan Community Survey
- Upper Clear Creek Watershed Assoc.
- Wildfire Task Force

Lower Clear Creek

- Metro Roundtable
- Adams County Open Space
- National Park Service
- River Watch
- Adams STEM* Launch School

**Science, Technology, Engineering and Math*

2015 Partners

- Adams County
- Clear Creek County
- Gilpin County
- The Town of Empire
- Colorado Watershed Assembly
- Upper Clear Creek Watershed Association
- Miller Coors
- Frei Walstrum Quarry
- Freeport MacMoRan | Henderson Mine
- Colorado School of Mines
- Adams STEM Launch School
- River Watch

A Special Thank You to our Supporting Agencies:

- U.S. Environmental Protection Agency
- Colorado Department of Public Health & Environment | Nonpoint Source Program
- Colorado Department of Transportation
- Colorado Division of Reclamation, Mining & Safety

Clear Creek (mainstem, tributaries, and groundwater) constitutes the primary drinking water supply for 9,000 upper basin citizens and 350,000 lower basin citizens in Golden and the northwest Denver suburbs of Arvada, Northglenn, Thornton, and Westminster. In addition to irrigation uses, Clear Creek serves industries including Loveland Ski Area, Henderson Mine, and Molson Coors Brewing Company. The Clear Creek Watershed is also one of the most valuable recreational and ecological resources along Colorado's front range, offering countless individuals from the Denver-metropolitan area and beyond with an accessible opportunity to experience nature by fishing, rafting, kayaking, hiking, biking, picnicking, wildlife viewing, or simply driving through. **We welcome your support in helping CCWF in our efforts to make Clear Creek a premier sustainable watershed!**

The Clear Creek Watershed Foundation has been performing watershed improvement projects since it was incorporated in 1997. Just since 2004, the Foundation has completed 25 projects valued at \$3.8 Million.