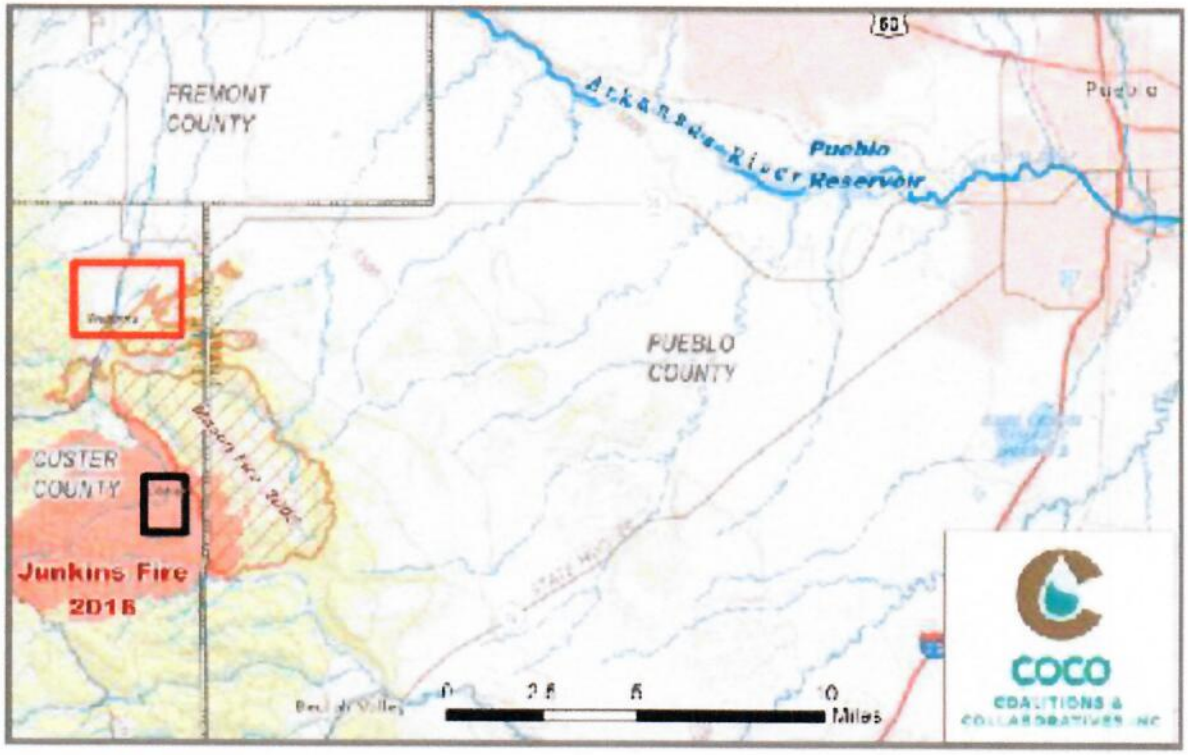
Junkins Fire, Final Report Coalition and Collaboratives

Prepared for Colorado Restoration Restoration program.

PREPARED FOR LAVWCD, CWCB (PO # POGG1 PDAA 201700000986)

Steep burned slope

Recovery team Jason Moore and Theresa Springer



Junkins Fire Location

Task 1 Heavy Equipment: channel restoration and floodplain stabilization (aka Donley Project —see map below)

Method/Procedure

The grant called for:

1. An onsite project manager with considerable experience in implementing similar fire and flood restoration projects will supervise contractor(s).
2. Contractor(s) will restore one reach of channel to disperse debris flows utilizing natural materials including on site boulders and logs; installation of a log wing wall and/or cross vanes or various grade control structures to disperse stream flow.
3. Rehabilitate all staging areas and equipment disturbance areas.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Implementation: Theresa Springer was the onsite manager; the contractor was Mallet construction from Woodland Park, who had experience with this work in Waldo and Hayman. COCO was supported by a team the Army Corp of

Engineers out of New Mexico and Mississippi. The Corp measured the stream grade and estimated the flood capacity for the reach and recommended the new channel configuration, the size and spacing of step pool structures, and the filling and regrading of the old channel. An overflow berm and side channel that water used in a mild event was improved upon. Pictured on the left.

Planned Deliverables

1. Construct a minimum of two (three if funding is available) in-stream structures at the mainstem stream channel to reduce the flow of sediment and debris.
2. Enhancement of one floodplain (widened by creating steps) in the mainstem stream channel to reduce the flow of sediment and debris.
3. Install one log and root wing wall in the mainstem stream channel to reconnect the stream with the floodplain and to reduce the flow of sediment and debris.
4. Reduce the speed of flows from 20 ft. to 9 ft. per second per a two-year rain event.
5. Provide structure protection for one immediate residence and downstream communities of approximately 400 residents.

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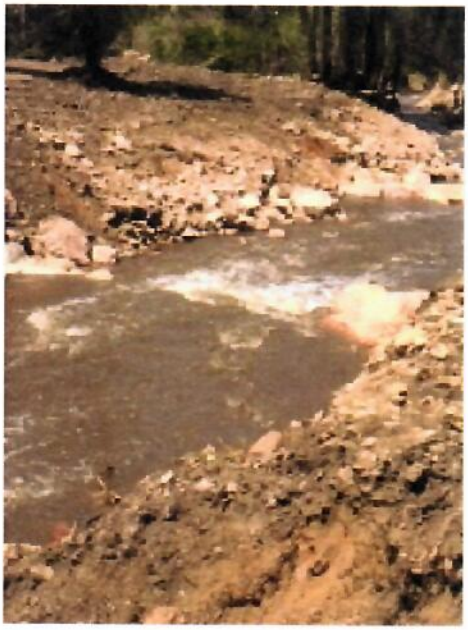
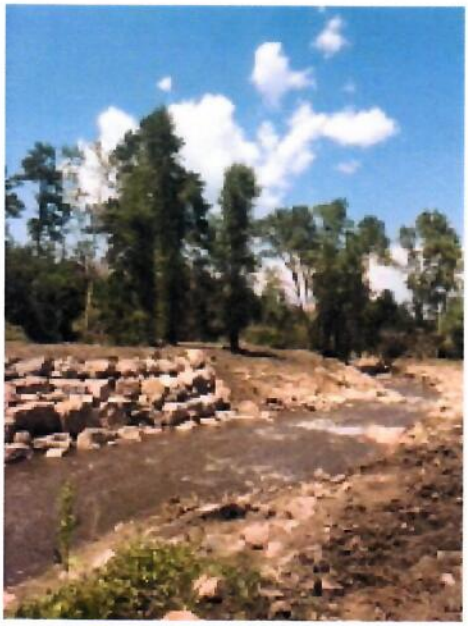
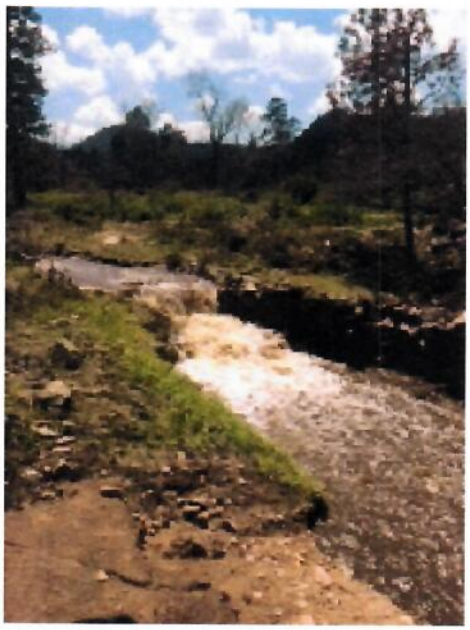


Actual Deliverables: The main objectives were met. The steep bank below the home is intact. To the left of the two stumps in the picture is a 30" diameter buried tree. This photo was taken after an estimated 50 year event that took place during construction. The J-hook is fully exposed. The footer thalweg rock weathered the storm. The top rock is farther down stream. Sediment is starting to build between and behind the rocks. Burned trees jammed up during the flood in the live trees just down stream of this photo. This caused an hydraulic lift, when the dam broke it than sucked the first structure in the channel down stream. The vertical bank in this area is about three feet high. We believe it will continue to heal over time.
A lot of large boulders passed over the vane during the July flood. I believe the key to this structure holding is the overflow channel that was enhanced. The channel diversion is just upstream of this photo, and the channel is to the right, out of the view in this photo.



The photo at left is of the cut off wall to the channel that was near the steep bank. It held during the flood. The vanes where the water tumbles were replaced after the event. The boulders from these vanes (which were in construction when the flood occure) were found ¼ mile down stream.
Below is a photo that shows the overflow channel the day of the flood. The creek has to rise about ½ a foot above bank full to be utilized, so it will not routinely flow during spring run off. It runs between the trees. It has now started to grass over, and should continue to provide overflow capacity during extreme events.



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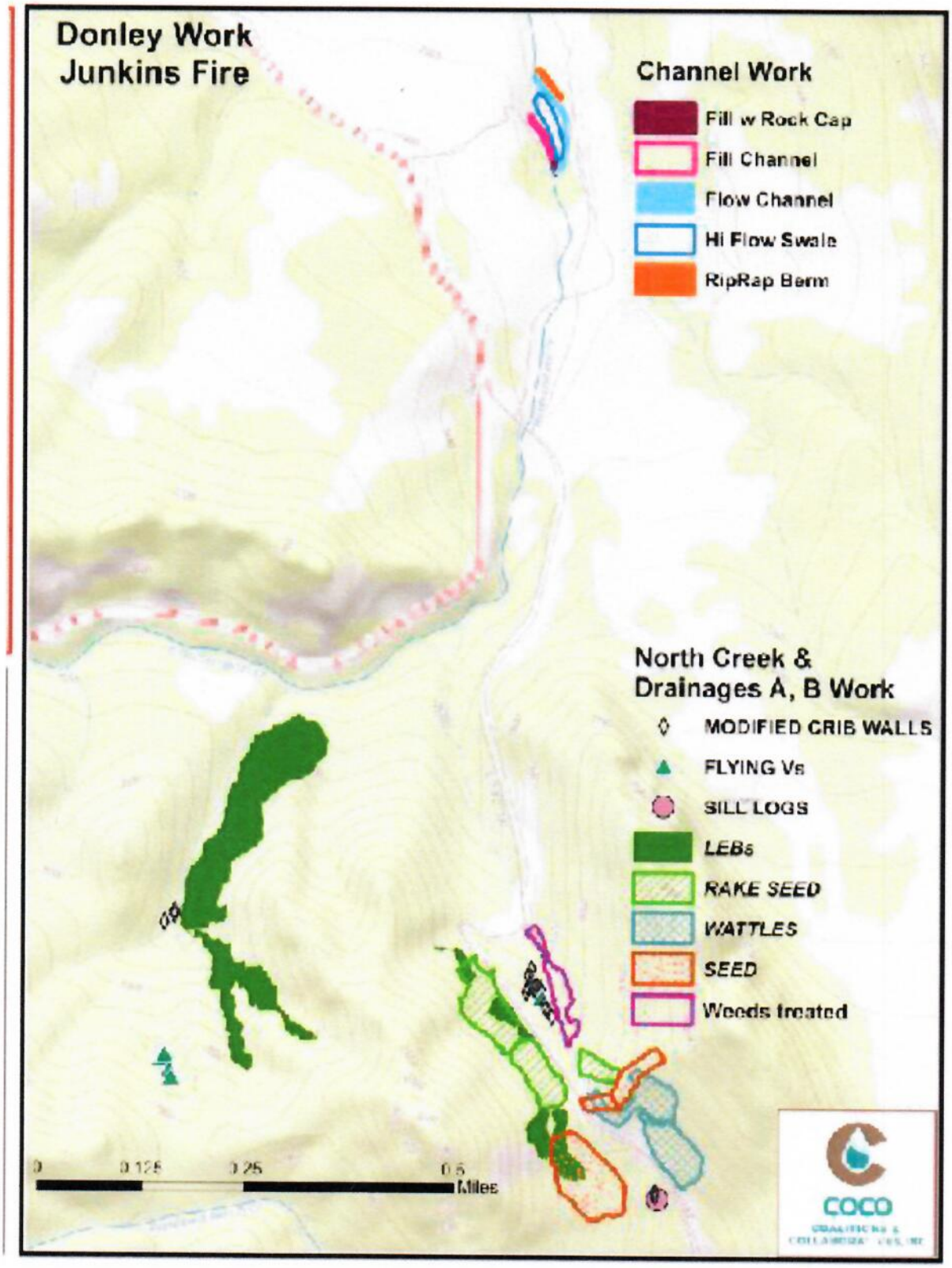

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TASK 2 – Hand Work, SWIFT Crew: hillslope stabilization with log erosion barriers (LEBs) (Additional map below)

COCO worked in two primary areas in the Junkins (the upper reaches on the Donley site and downstream in the vicinity of Wetmore. Sites were prioritized based on values at risk, including homes, county roads and infrastructure, and power lines. COCO utilized the SWIFT crew out of Canon City. This turned out to be an exceptional partnership. They exceeded the total acres cut, LEBs, wattles and head cut structures installed. The time frame was longer than two weeks because their output was so high.

The crew not only cut trees and installed LEB's they installed wattles, modified crib walls, and responded to the floods. They helped open roads and remove large trees that were blocking the water course. Just and excellent job CUSP saw crew also helped out and did an excellent job. We had a week of volunteers. CUSP and SWIFT spent time dropping trees while volunteers dug them in and seeded.

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The modified crib walls were mentioned heavily in our monthly reports; below are some after pictures. It is hard to find the structures. This was taken after a storm event.

Many of the other Modified crib walls can not be seen at all. The landscape looks like grassy steps.

The photo shows a different angle but same place as the photo above.

In conclusion, the noteworthy items that are different than other fires: The design and installation has been modified for crib walls. A handbook on how to install one was prepared, and a certification training for contractors and residents was provided on how to install them. We had some failures in the original design but now have it perfected to withstand much higher flows.

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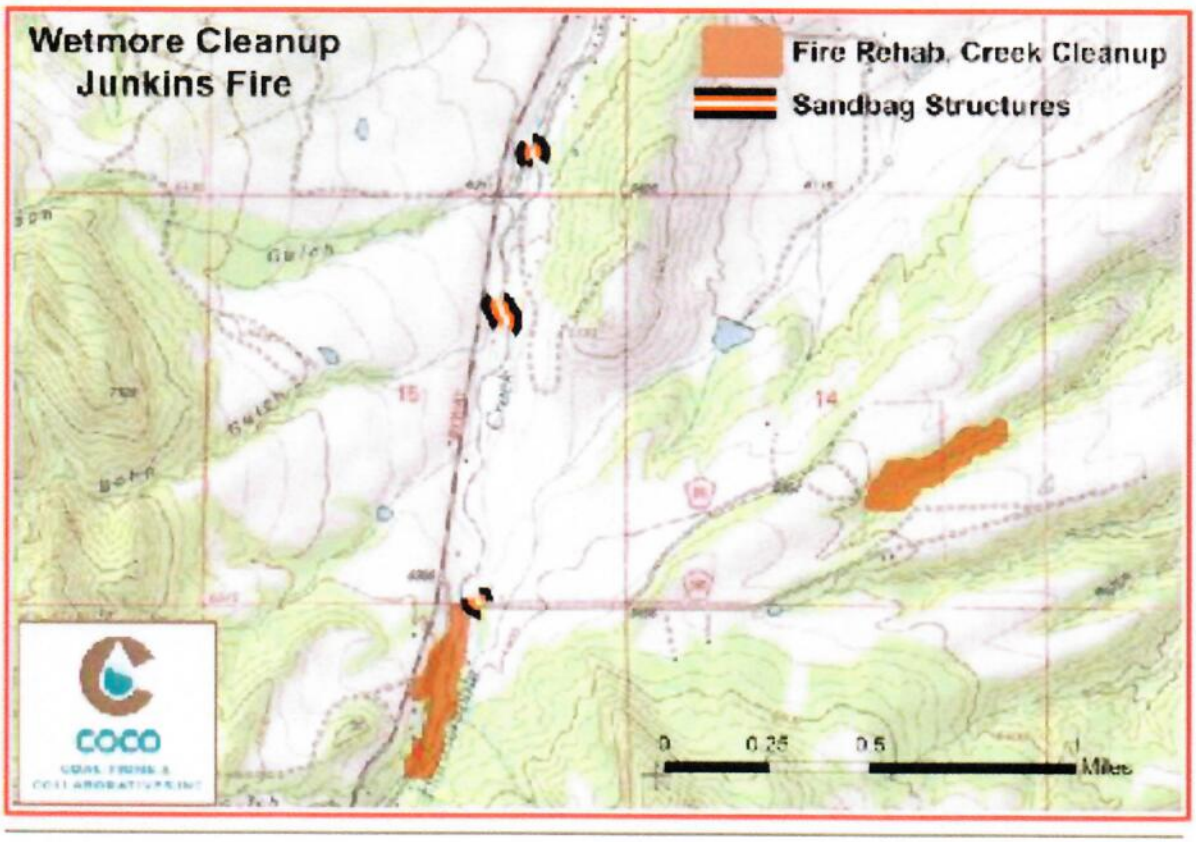
The Albuquerque Corp of Engineers working so closely with us on post fire The partnership worked very well. This allowed us to save money on an engineering firm when installing a field fit design.

We did have an accidental over seeding, but agencies are rethinking their revegetation strategy in a weedy fire scar. Two groups of volunteers seeded the same area. COCO, under the recovery teams direction, typically seed at double the recommended rate in a fire scar. The accidental overseeding resulted in much higher than recommended seed being dispersed. I was a little worried about the nurse crop of oats. I was afraid they would choke themselves out. Deer and turkey are plentiful in the burn scar. They kept the oats in check.The native is coming up as prescribed. What is not coming up is the noxious weeds. It is like a line draw between overseeded and correctly seeded areas. The overseeded area has no weeds. The oats crowded them out. This is worth monitoring. The land owner is going to receive an EQIP grant from NRCS and they have added the thicker seeding.

Our volunteers make a world of difference. The two big groups were the Catholic Heart charities who spent a week working and Team Rubicon who arrived after the flooding. They sandbagged and mucked homes as well as worked closely with the county opening up log jams to protect county roads.

Custer county, home of the Junkins fire, lacks resources and funds. They make it up in community involvement and heart.



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