

Dolores Watershed Resilient Forest (DWRF) Collaborative

9-5-18 Meeting, 1:30 - 3:30 at Dolores Water Conservancy District Office

In Attendance:

Eric Janes, Bill Baker, Shauna Jensen, Phil Ayers, Steve Garchar, Floyd Cook, Ken Curtis, Bruce Short, Ashley Greco, Duncan Rose, Garrett Hanks, Tom Hooten, Paulette Church, Jimbo Buickerood, Thurman Wilson, and Rebecca Samulski (facilitating)

Updates

Becca directed people to the DWRF website (dwrfcollaborative.org) and showed people how to use it to log their volunteer hours using a smart phone, tablet or computer. Type dwrfcollaborative.org into your browser, then click on "Take Action" on the top of the home page, followed by "Log Your Hours" on the dropdown menu that appears. Then fill in the requested information.

Jimbo mentioned several upcoming events. Bridging the Divide will have presentations at Wolf Creek Ski Area on September 7 and a tour of the Million and West Fork Fires on September 8. The What's Next: 416 Fire Open House will take place on September 13, from 5:00 to 8:00 PM at the La Plata County Fairgrounds. The 416 & Missionary Ridge Tour: Ecological Resilience and Changing Landscapes will take place on September 14, from 9:00 AM to 3:00 PM, beginning at the La Plata County Fairgrounds. More information about all of these events is available on the Mountain Studies Institute website (<http://www.mountainstudies.org>).

Bruce mentioned that money is available for fuels mitigation through the Natural Resources Conservation Services (NRCS) Environmental Quality Incentives Program (EQIP). The geographic focus area for these projects runs from Haycamp Mesa Road to Echo Basin Road.

Duncan and Becca met last week to talk about forest management and water connections. They have also discussed this with the Mountain Studies Institute. MSI always asks what questions do they want answered. In an attempt to make progress on this, Becca, Duncan, and MSI have discussed a review of the scientific literature and will try to get that organized. MSI has an intern with a hydrology background that may be able to help. Eric pointed out that it is more complicated than just forest cover types; geology, soils and other factors are relevant. He volunteered to help. Shauna said that there is so much research out there that they will be overwhelmed if they can't focus in on more specific topics or questions. Garrett said there is lots of research on old forest management techniques but questioned whether research has caught up with current forest management techniques. Several people expressed concerns that water research is currently suffering from a lack of funding. Becca said the big topics seem to be forest thinning, wildfire, and large-scale beetle epidemics. Duncan and Eric think it will be helpful to develop a simple visual concept model that helps us focus and simplify for the layperson.

Becca reported that FireWise of Southwest Colorado is adopting a new name, Wildfire Adapted Partnership. Becca has been offered a director position with Fire Adapted Colorado, a state-level non-profit organization. She will phase out of working for Wildfire Adapted Partnership by the end of the year but will still be the DWRF Coordinator for a few more months while the DWRF Coordinating Team looks for a replacement. Ashley Downing, the Wildfire Adapted Partnership's Executive Director has agreed to join the Coordinating Team. Ashley will work with her Board on flying a DWRF Coordinator job. This makes sense because they currently have the funding for the position. Phil, a member of that Board as well as a DWRF participant, pointed out that DWRF needs to agree they are OK with that. The other major source of DWRF funding is the WaterSMART grant from BOR to the Dolores Water Conservancy District, but the agreement is not yet in place for DWCD to spend those funds on DWRF strategic planning efforts. Becca will likely pursue ongoing participation in the DWRF Collaborative through the WaterSMART grant.

The Montezuma County Commissioners and Emergency Manager participated in a tour or engaged neighborhoods including Cedar Mesa Ranches, Kernan Creek Ranch, and Cash Canyon/ Stinking Springs. Becca provided some materials for distribution by the West Fork Fire Chief and conducted assessments in the Blue Spruce Glen subdivision up the west fork. Becca has been promoting the concept of building a West Fork Fire Station with

capacity for biomass heating. Becca provided fire and watershed lessons to over 90 elementary and middle school students at Kiva Montessori Charter School. They now know a lot more about fire and watersheds.

The Dolores Ranger District is putting in for funding under the Joint Chiefs' initiative (the Chiefs of the US Forest Service and the NRCS). Money for work on National Forest lands comes through the Forest Service. Money for work on private lands comes through the NRCS. (*since the meeting, they have opted not to put in this year.)

People are encouraged to look at the on-line tour for the [Lone Pine](#) project that Becca shared in an email if they weren't able to attend. The scoping document for this project isn't out yet. (*scoping document came out Sept. 13 for input by Oct. 12 and can be reviewed at <https://www.fs.usda.gov/project/?project=54682>)

Aspen Wall Wood purchased the Western Excelsior property and remaining equipment on the Mancos site (not the company – they have multiple locations in the U.S.). They will make excelsior but on a smaller scale than Western Excelsior did. They will also move some of their other equipment to this site because it has more room. They will have logs coming in to the Mancos site the week of September 9. They also purchased Findley Logging from Dewayne to add the logging component to their operation.

Another wood entrepreneur, Derek Smith, has leased an old plywood plant location on Road T (west of Hwy 145). He used to work for Montrose Forest Products and has since been setting up mills in British Columbia and on the west coast, so he has a good bit of experience. This could be a large operation and there is interest in including biomass.

Burro Fire BAER Presentation – Shauna Jensen

Shauna presented the Burned Area Emergency Response (BAER) Team's work on the Burro Fire and also commented briefly on the West Guard and Plateau fires. Shauna's biggest take-home message is that there were a wide variety of fire intensities resulting in a mosaic pattern. Most of the area was either unburned or burned at low intensity, with some medium intensity areas and little high intensity. A summary of her presentation follows. See her [slideshow on Google Drive](#) for more details.

The BAER process consists of the following steps:

- Identify *critical* values.
- Identify *threats* to those values.
- Evaluate *risk* to determine if emergency conditions exist.
- Develop treatment prescriptions to address the emergency conditions and mitigate the risk.
- Document findings and request funding.

The BAER Team was staffed with personnel from the Dolores Ranger District with the following skills represented: soils, hydrology, geology, archeology, transportation, recreation, wildlife, and GIS. They also got some modeling assistance from USGS.

Critical values identified for the Burro Fire consist of:

- Human life and safety downstream and downslope.
- Downstream/downslope private property and wells.
- Gold Run, Bear Creek and Little Bear Trails.
- Public safety.
- Forest Service Roads 561 and 436 plus spurs.
- Soil productivity.
- Water quality.
- Native plant communities.

Risk analysis and threat identification was done by modeling crown fire severity, which was then used to estimate soil burn severity. Fire intensity is a function of the heat or energy released by the combustion of organic material. FSim and BARC were both used to estimate fire severity. The soil burn severity was then field validated. The following factors are used in field assessment of soil burn severity:

- Ground cover amount and condition.
- Ash color and depth.
- Soil structure.
- Root structure.
- Hydrophobicity (how rapidly the soil can absorb water).

37.6 percent of the area was found to be unburned, 44.9 percent had low soil burn severity, and 17.4 percent had moderate. No areas of high burn severity were found.

Erosion modeling was done using ERMiT. This estimated 3.07 tons/acre of sediment in the first year following the fire, 1.28 in the second year, and none in the following years. Treatments such as seeding and mulching could reduce the second-year erosion but are costly.

The potential for debris flow was also analyzed. This is a function of:

- Percent of basin with high or moderate soil burn severity.
- Percent of basin with slopes greater than or equal to 30%.
- Ruggedness, topography, relief ratio.
- Soils composition: percent clay, percent organic matter, K-factor (erodability), grain size distribution, and liquid limit.
- Stored channel material.

Combined debris flow probability and risk was estimated with less than 1 percent of the area being high, 40 percent being moderate, and 59 percent being low.

Post-fire flooding was assessed using the Wildcat 5 rainfall-runoff hydrograph model developed by the University of Arizona. A 59 percent increase in streamflow was estimated. An estimate of only 1.6 percent was obtained using another model, AGWA. Estimated post-fire streamflows, even using the higher number, are just slightly over the two-year peak flood level and well below the five-year.

The Team concluded that Bear Creek, based on its channel morphology, floodplains, and other factors, could handle the predicted increase in flow. There is no expected risk to human life, safety or property at the mouth of Bear Creek or below. There could be localized risk to the public within the burn area. The Gold Run Trail may be affected by erosion within and immediately downslope of moderate soil burn severity areas. Other trails are adequately buffered by unburned areas. Hazard trees potentially exist along all of the trails but especially along the Gold Run Trail.

No effects are expected to soil productivity or water quality (except an initial flush of ash and small organic material). Native plant communities may be affected by an increase in noxious weeds, particularly Canada and musk thistle.

Treatments proposed for public safety along trails include: armored drainage crossings, waterbars, switchback reconstruction, hazard tree removal, and warning signs at trailheads and trail junctions. Treatments proposed for natural resources include: invasive plant survey and treatment (Early Detection and Rapid Response [EDRR]) and treating new and expanding populations of noxious weeds. Overall the mosaic created by the burn is expected to have ecological benefits. Good aspen regeneration is expected.

A BAER analysis wasn't determined to be needed for the West Guard Fire because it occurred on relatively flat ground. Noxious weeds are the only anticipated problem. A full BAER analysis will be done for the Plateau Fire but it isn't scheduled yet. It will be done in seven days once they start. The Plateau Fire also created a mosaic with lots of unburned and low intensity burn areas.

Next Meeting: The next meeting will be Wednesday, October 3, from 1:30 to 3:30 and the Water Conservancy Office. DWRP will host a Fall Forest Festival Saturday, October 20th, with field workshops from 9:00 to 4:00 and evening festivities at the Dolores River Campground.

Notes by Thurman Wilson with Becca Samulski edits