

# Zuni Mountain Collaborative Forest Landscape Restoration



Funded by the Collaborative Forest Landscape Restoration Program (CFLRP) of the USDA Forest Service

## Zuni Mountain Landscape Water Quality Monitoring Sub-Group

March 22<sup>nd</sup>, 2016

9:30-11:30

Albuquerque, NM

**Attendees:** Robert Findling, The Nature Conservancy; Rebecca J. Frus, UNM; Livia Crowley, Cibola National Forest; Kirk Bemis, Zuni Pueblo; Matt Zeigler, NM Department of Game and Fish; Angela Gregory, UNM; Laura Crosse, UNM Earth and Planetary Sciences Department; Matt Piccarello, Forest Stewards Guild.

### Meeting Purpose

- Conduct a gap analysis to identify where current monitoring efforts can be used by the CFLR to avoid duplicated efforts and responsibly use project funding.
- What are we monitoring and why?

### Meeting notes:

- HOBO gauges on TNC land are no longer functioning.
- Water quality data needs to be uploaded to a central site at predictable intervals.
- Data should either be corrected to account for abnormalities (from removing devices to calibrate for example) or a caveat should be added to the data that it is not corrected.
- The McGaffey lake weather station has been discontinued. The Forest Stewards Guild managed weather station will need to fill this gap.
- The collaborative should adopt a quality checking protocol for water quality and weather data.
- Should the collaborative pursue a SNOTEL on the westside of the continental divide?
- A snowpack measuring device would cost \$800 and could be linked with the Campbell Scientific weather station.
- A potential source of data: the BIA collects snow courses and shares with the NRCS.
- When the road for the Tampico Springs subdivision was approved, the FS agreed to long-term monitoring.
- Recommendation: A yearly summary of monitoring data.
- Possible mechanisms for data sharing include Databasin and Google Earth.
- Monitoring in Sawyer creek is not a high priority. Device should be moved to New Well Springs.
- Monitoring at Grasshopper springs should continue because:
  - It is consistently wet and is the “oldest” water of active springs.

- The spring level is declining
  - May be a potential site for wetland/spring restoration.
- Recommendation: Thinning prescriptions should include strategies for increasing snowpack.
  - Springs are primarily recharged through snowmelt.
  - Considerations for increasing snowpack may include the size of openings between tree groups.
- We have baseline data for Zuni Springs. Should we continue to monitor it?
- USGS is a potential partner not currently engaged in the collaborative.
- Calibration drift may impact data and should be addressed.
- There is a need for Solinst data analyses. There is a capacity issue with software and QC.
- Becky Bixby from UNM would be a great addition to the WQ subgroup as she specializes in aquatic ecology and freshwater algae.

### **Next steps and follow-up:**

1. Host WQ data on new Zuni Mountain Collaborative website (in development)
2. Further explore snowpack monitoring options on west side of continental divide including purchasing device from Campbell Scientific and through existing efforts lead by partners such as NOAA.
3. Work with WQ subgroup to address Solinst and weather data analyses and QC needs.
4. Refine monitoring questions.
5. Continue monitoring at Grasshopper Springs continuing existing protocols and potentially installing Solinst device.