

# AZ Sportsmen For Wildlife Conservation GRANT COMPLETION REPORT

**Project Title:** Long Valley Meadow Restoration Phase II

**Organization:** Arizona Elk Society

**Event/Project Completion Date:** Sept. 31, 2019

**Project Location** (Include info such as event center, hunting unit, etc.): Unit 5A, Long Valley, close to Clints Well

**Submitted By:** Stephen Clark

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**Today's Date:** 10/18/2019

**AZSFWC Recognition:**

**AZSFWC Logo and Link to AZSFWC on organization's website?** (attach screen print image) Yes  No

**License Plate Image w/link to MVD on organization's website?** (attach screen print image) Yes  No

**AZSFWC Logo displayed at event?** (attach photo(s)) Yes  No

**AZSFWC recognized in all marketing materials & post event articles?** (attach all samples) Yes  No

**List any social media recognition of AZSFWC** (include all screen print images) Facebook, Videos

**Was there any media or press coverage?** (attach copies if available) Yes  No

**List any other recognition? Nationally through presentations at Department of Agriculture in D.C. and other local presentations and video showings, USFS, AZGFD and local groups interested in the project and volunteering.**

**Summarize Project Accomplishments:** see attached

**Measurable Results** (Fill in all that are applicable):

**Attendees** (If project was an event, list total # of participants, excluding staff, visiting parents, etc): \_\_1500\_\_

**Visitors** (If the project is an interpretive display, list total # of annual visitors): \_\_\_\_\_

**Brochures, Pamphlets, etc.** (If the project is a brochure, publication, poster or video, list the total produced and distributed): \_Mostly Social Media and outreach to Businesses for volunteers. The videos have been viewed over 20,000 times.\_\_\_\_\_

**Other** (please explain):

**Budget** (specifically describe how AZSFWC funds were used; e.g. program promotion, type of equipment, materials and/or supplies, etc.):

Budget Item	Planned	Actual
<b>Total Budget</b>		<b>\$191108</b>
<b>Monies from AZSFWC were focused on materials inc. rock, Fencing, seed, erosion control materials. Wildlife/water focus.</b>		

**Project Cooperator(s)** (please include any in-kind contributions):

<b>Cooperator (no abbreviations)</b>	<b>Amount Contributors \$</b>
<b>AZSFWC</b>	<b>29829</b>
National Forest Foundation	70000
AZGFD HPC	62549
Volunteers (still ongoing for maintenance and monitoring)	35350

## Photographs



Long Valley Restoration Grasses



Highway Meadow Plug & Pond Feature



Sawyers After 2



Spreader Doing Its Job



Water Accumulation on Meadow Below Spreader

# Narrative

## Long Valley Meadow Riparian Restoration Phase II

Final Report, as of September. 31, 2019

The Long Valley Meadow is on the Mogollon Rim Ranger District of the Coconino National Forest. The Long Valley meadow system serves as the headwaters of West Clear Creek and provides important habitat for elk, mule deer and other wildlife. Past forest management practices have impaired the meadow function and ability to capture and store precipitation as near surface groundwater. The rapid release of precipitation as surface flows across the meadow has led to erosion of ephemeral stream channel and expanding head cuts. A stock tank placed in the main meadow has failed and the catastrophic breach has channelized the water flow and created a large, deep channel that has directed the water away from the surface of the meadow and lowered the water table substantially. In the secondary meadows similar channeling has focus the water in deep channels along the edges of the meadows, thus removing the much-needed water and decreasing the ability of the meadows water storage. This has also changed the plant base to allow conifers and other hard dirt plants to infiltrate the meadows. This project will restore function to the meadow area by stabilizing head cuts and reducing bank failure through channel shaping, decommissioning a stock tank within the meadow/incised channel, constructing plug and pond gully control features to reconnect the channel to its floodplain, removing conifers encroaching on the meadow, and installing loose rock structures and log sills to spread water and reduce its erosive power.

To date we have finished all the work including the Keyline plowing, which had been delayed, of the meadow itself.

### Stage 1:

With our contractor all the earthwork including plug and pond construction in the incised channel, stock tank decommissioning which involved leveling the area for water distribution, digging and installing the log sills – basically sills designed to force the water to run further up the meadow sides and spill back into the meadow in a controlled release, grading and sloping of the channels to stop the erosion and the equipment mobilization/demobilization. All the rock and material were delivered and off loaded at this time.

At the same time, we brought in the AES sawyer crew to cut, limb and square up the necessary logs for the log sills, stacking all the left-over materials into burn piles to be burned by the Forest Service when conditions allow.

At this point the all the necessary rock and materials were distributed in preparation for the volunteer work crew.

### Stage II:

At the end of My 2018 153 volunteers along with the contractor, engineers and Forest Service personnel gathered to do the bulk of labor for the project.

Work performed this weekend included:

- Engineers worked with all the crews to make sure the work was done properly
- Drilling and driving rebar in place to help all the installed log sills in place
- Raking, seeding and finish shaping all the newly exposed dirt areas
- Digging and shaping areas that were to receive rock structures
- Placing tons of rock into the head cuts and channel, Zuni Bowls, Rock run downs, Media Luna's etc.
- Installing erosion control material and staking and stapling it down on all exposed areas and on the channel banks
- The AES sawyers cut and stacked trees along with the contracted sawyer crew
- The AES set up the kitchen area and fed the crews for three days
- EMTs were on hand as well as volunteers checking on all the crews

### Stage III:

In July of 2019 we were granted permission to remove many more of the small diameter trees in the work project area. The Arizona Elk Society volunteer Sawyer crew brought 25 certified sawyers in and removed many more trees. These were in addition to the planned removal that had already been completed.

At the same time the contractor brought in a new style tractor with the Keyline Plow attached to do the plowing along the Keyline of the meadow to the low areas. This plow is special for riparian meadows to cut a narrow cut with minimal soil disturbance. This allows water, during rain and runoff events, to be trapped and dissipated slowly throughout all the areas that had been plowed. Rehydrating the whole meadow will benefit the health of the ecosystem and increase forage base for all wildlife. It will also assist in increasing the water table in the area.

2019 saw the completion of the fence repairs and maintenance work needed after damage created by the early storms and massive runoff from the increased winter snow accumulation melting.

In the months after the majority of the work completion, the water flow has been significantly slowed by installed structures, ponds have formed and the distribution of water has been rerouted to the meadow, as more of a controlled sheet flow. We have seen no further erosion and the forage in the meadow has increased in density. Most of the bared areas that were seeded have grassed back in. Moisture retention in the soils has increased.

While we had to delay the Keyline plowing this delay will be a benefit for gathering needed data of the effectiveness. The water events of spring and summer of 2019 has been recorded and the structures and design features worked as planned. Future monitoring will include the effectiveness of the plowings ability to enhance water retention and increase forage.

We have created video, social media outreach, volunteer coordination and website outreach with visuals from this project. In addition, we were presented the Rise to the Future Award for Partnerships and used video and pictures from the project for the presentation in Washington D.C. at the U.S. Department of Agriculture. We have shown the AZSFWC Logo as a funder and partner.

The partners in this project included the Arizona Game and Fish Department/ National Forest Foundation/Arizona Sportsmen for Wildlife Conservation/ Arizona Elk Society/ U.S. Forest Service/ SRP/ APS/ Intel/ Bank of America/ Phoenix Varmint Callers/ Trout Unlimited/ Audubon Arizona.

The only challenges for this project were the NEPA and other permits needed. Arizona Forest Service and agencies struggle with budget issues that delay many processes that are needed for this type of work. We have learned to start the process years in advance to make sure all is covered. Other delays included forest closures and closures for fires in the immediate areas.

Thank you, Stephen Clark, Executive Director, Arizona Elk Society