



The Aravaipa Watershed Conservation Alliance

2022 Year End Update

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Highlights from this Year:

- ❖ Awarded the Bureau of Reclamation (BOR) WaterSmart Phase 1 grant which allowed the group to add two temporary contract positions
- ❖ Jonathan & Hannah Claridge joined as the new Board Administration team. They have been instrumental in organizing the AWCA computers and business programs along with creating educational informational, brochures and newsletters
- ❖ Garland Speight has been contracted to draft the foundation of the Conservation Watershed Management Plan (CWMP) and is working on all the technical mapping and recordings needed for the plan.
- ❖ An additional grant through Freeport-McMoRan allowed the AWCA to add Mike Magoffin to facilitate the meetings we are hosting this year to build stakeholder, board diversity and agency partnerships.
- ❖ AWCA is also working on a BOR, Tools for Applied Science grant to get two weather station installed in strategic locations within the Aravaipa watershed. This project is a collaboration with Pinal County as the early flood detection warning system would also affect their citizens and infrastructure as well as collecting weather data that can be useful in future projects. The first part of this grant was LiDAR and maps are now available online.

A Message from the President



Matt Magoffin

President of AWCA since 2020

To Our Aravaipa friends,

We are seeking partners to help in all phases of our year ahead; science advisors, greater stakeholder participation, a more diverse board and some innovative social event ideas and planners to get this all rolling.

We are desperately in need of donors and corporate sponsorship as we really do need to fund staffing in a reliable method. Long term goals include a Regional Conservation Partnership Program (RCPP) to work on implementation that will boost good rangeland improvements for local ranchers as well. Projects that will reduce erosion and increase native grasses will both restore and enhance water quality as well as percolation into the ground thus improving soil health.

The restoration and conservation of the Aravaipa watershed is a positive water improvement for much of Arizona. In a time where water is finally recognized as a concern in the state, the AWCA is seeking to look at overall watershed health to create secure waters, maintain wildlife and native species, while using sustainable agriculture as a positive means to achieve many of those goals.

Be sure to follow us on Facebook and Instagram and be sure to watch the website; Aravaipa.org for information on what is happening.



Aravaipa Watershed
Conservation Alliance



@awca22

Project Spotlight

BIOCHAR TO BENEFIT GRASSLANDS

By Mark Haberstich, *Board Member and science advisor*

For the past two years both the Magoffin Ranch and The Nature Conservancy have been experimenting with the use of biochar to restore native grasslands. Biochar is just charcoal, made from the incomplete combustion of wood. When added to the soil it has multiple benefits and has been used by gardeners for years. Most organic material breaks down rapidly in soil, but biochar can last for thousands of years. Evidence of ancient people using biochar to improve poor soils in the Amazon dates back 8000 years. Adding biochar to the soil can improve soil structure, and increase the water holding capacity, making plants more resistant to drought. An added benefit is that mixing biochar into soil sequesters carbon and reduces the amount of carbon dioxide that naturally decomposes and releases into the atmosphere. By reducing carbon dioxide in the atmosphere, we can mitigate conditions that have been shown to cause climate change.

Once lost, native grasses can be difficult to restore in the southwest. Conditions for germination only occur during good monsoons, and even then winter drought can make it hard for seedlings to survive while their roots are still developing. By adding biochar to our grassland restoration projects, we help the soil soak up more water, improving soil conditions, and giving seedlings a better chance to survive.



Production of biochar in a pit

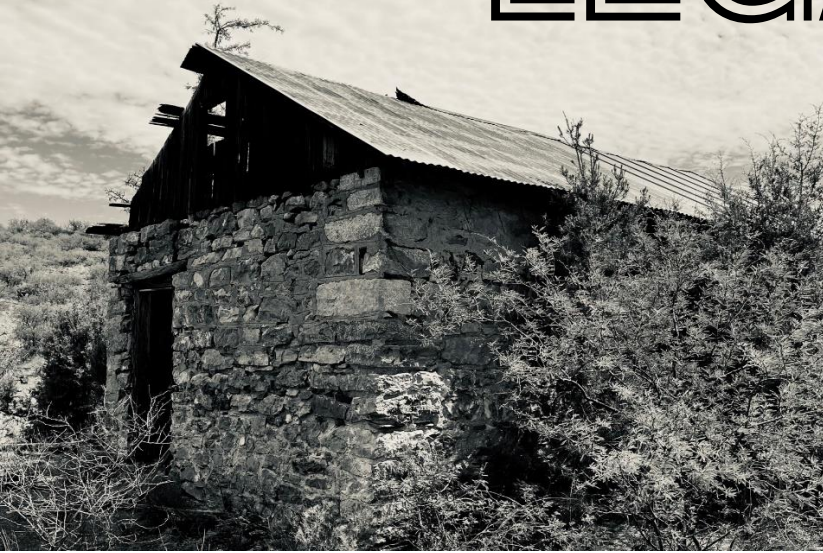


Native grass planted with biochar on the Cobra Ranch

For more information on biochar and how it could help your native grasses, check out this website: <https://extension.arizona.edu/pubs/guide-making-using-biochar-gardens-southern-arizona>

The LEGACY of Aravaipa

By Amanda Merchant
AWCA Volunteer



As you drive down the long dirt road into the Aravaipa Canyon, your thoughts may wander down the path of history. Here, where the road seems to go into the middle of nowhere, is a rich history much like that of the “Old West” filled with colorful past, people, mines, and cattle, all in a beautiful environment.

Roughly 40 miles from Safford, AZ winding down the Bonita-Klondyke Road into the valley, nestled between the Galiuro and Pinaleno Mountains is the community of Klondyke along the Aravaipa canyon. A stock tank here, a ranch sign there, and a few houses here and there. You will pass the Klondyke Cemetery just before the town center, although you would not know there is a town. There, on a ridge to the east of the road, overlooking the valley, lies loved ones laid to rest. As you pass the cattle guard you will come upon the Klondyke Store. An adobe building stands strong in its place reminding those who pass, of its rich history. A step inside will take you back as you enjoy a cool beverage and perhaps a famous Klondike ice cream. Have a chat with the owners and maybe a local or two will stop in and tell one a tale from the past. Many of the residents here are generational families and will share their rich family history with you.

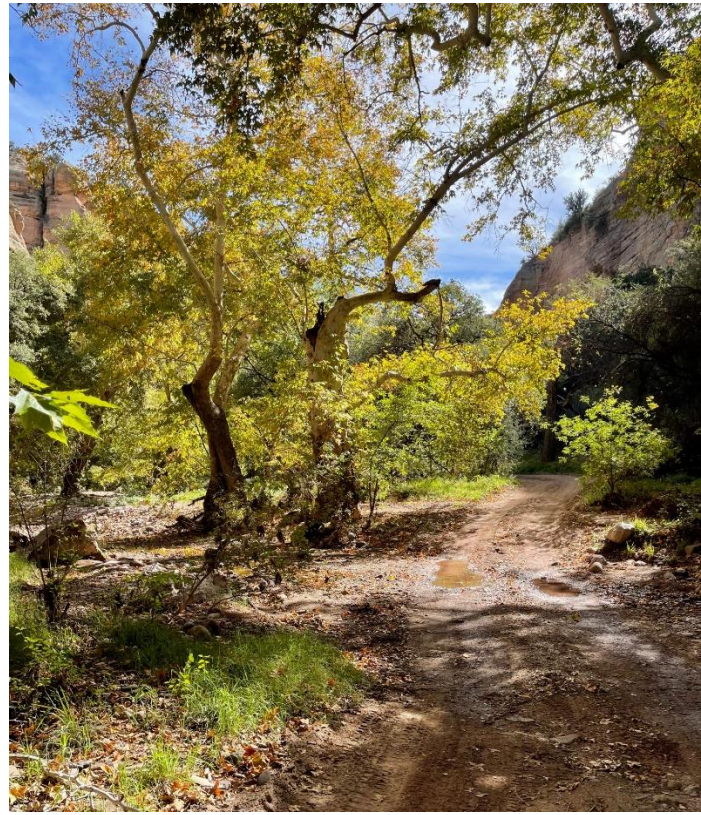
Established in the late 1800s, Klondyke, was named after its counterpart up north, with hopes of good fortune. You may ask about the unique spelling. Well- as history can be- that’s up for debate. Whether it was because they were illiterate, or just because they wanted to be different, some things will never be known. At its peak, roughly 4,500 residents lived in the valley. The town had a saloon, a general store, a post office, a school, and a church. While the town only thrived till the late 1950s, some of the buildings still stand and are in use today.



Top: The Klondyke store in 1910 (*picture acquired from Wikipedia*). Bottom: The Klondyke store today.



If you travel further down the canyon towards the northwest, you will find much more. Most of what you pass at this point is Nature Conservancy Land. A few residents here and there, a point for history. The Aravaipa Canyon itself is like stepping into another world. Filled with tall trees, wildflowers, green grass, coatimundi to bear, and yes, water. The creek runs all year round in this canyon as this is where it is above ground. When the rains fall in just the right way the rest of the canyon comes to life. The Aravaipa becomes a roaring monster, overflowing the creek bed, running for a few hours to days depending on the rain. You can continue down the road into the canyon and experience cliff dwellings and cool temperatures. If you head to the east, up the Aravaipa Road, you will eventually run into the actual townsite of Aravaipa, which was also a mine.



Mining was a very large part of the Aravaipa canyon. Some records show that over 100 mining permits were taken out for the area. The area was known for its lead and silver ore. Some copper, zinc, and gold were also found in the ore, other mines even had Linarite, Azurite, and Wulfenite. There was even a unique mineral known as Aravaipaite. By the 1960s they no longer commercially mined the area as it was expensive to get the ore out.

Cattle have always played a part in Aravaipa's history. Cattle were originally brought in to support the military and miners. Cattle ranches are still important to Aravaipa as a means of sustainable agriculture. Aravaipa canyon has about 100 year-round residents, which include the ranchers, folks with jobs in nearby towns and those who simply love the remote open spaces the Aravaipa provides.

Come, take a drive, and visit the area, learn something new, and take a step back in time.





DEVELOPING

The Cooperative Watershed Management Plan

watershed (noun): an area or ridge of land that separates waters flowing to different rivers, basins, or seas

The AWCA is focused on cooperative watershed management plan development. We've held a series of meetings with community stakeholders, other watershed conservation groups, and agency stakeholders to ensure that we document the wide range of interests, expertise, and experience. This article provides a summary of the plan purpose, methods, and work completed on the plan to date.

The primary purpose of the plan is three-fold:

1. Document the current state of the watershed
2. Lay out desired conditions and goals
3. Identify and prioritize projects that bridge the gap between the two

After our initial release, planned for 2023, this living document will be updated periodically as new information becomes available or prevailing conditions in the watershed change. Development of the plan gives us an opportunity to build consensus around issues and priorities and demonstrate to external funding agencies that we have made appropriate progress to get funds to implement improvement projects.



Garland Speight
AWCA Plan Administrator

Masters Student in
Water, Society & Policy,
University of Arizona

Graduate Research
Assistant, Water Resources
Research Center

10+ years' experience
in project engineering
and management

US Navy nuclear engineering

Water processing
technology for NASA

Developing The Watershed Management Plan continued...

Our progress to date has focused on stakeholder engagement and literature review. **Table 1** shows the preliminary stakeholder questionnaire results for ranking topics. Stakeholders scored topics on a scale of 1-5, with 1 being not important and 5 being extremely important. Stakeholder scores were averaged, and the top five topics are presented in **Table 1** for community and agency stakeholders. Although the scores and ranks are slightly different between community and agency stakeholders, there is good agreement amongst the top priority items between stakeholder groups, including erosion control, water conservation, and protecting native plant and wildlife species.

Table 1: Stakeholder Questionnaire Results

Rank	Community		Agency	
	Topic	Score	Topic	Score
1	Erosion control	4.9	Conservation of riparian areas	4.5
2	Water conservation	4.8	Protecting native plant and wildlife species	4.4
3	Sustainable agriculture	4.7	Conservation of natural resources	4.3
4	Protecting native plant and wildlife species	4.6	Water conservation	4.2
5	Conserving open spaces	4.5	Erosion Control	4.0



The literature review is focused on identifying information used to characterize the watershed. This includes research in well data, groundwater levels, precipitation and temperature history, flow history, water supplies, water demands, impaired waters, etc. We are also reviewing all available management guidance from different agencies applicable to our watershed to ensure our efforts are not counterproductive to their goals. Finally, we're working to identify projects completed to address issues in similar semi-arid regions to evaluate for incorporation into our plans.

In addition to the cooperative watershed management plan development, we are using the stakeholder questionnaire forms to identify interest in both attending and teaching classes and trainings on topics related to watershed health. Stay tuned to our webpage and Facebook page for details on upcoming trainings. Combined with the influx of new funding sources for infrastructure and community resilience projects, this is a very exciting opportunity to make our community stronger. We won't be successful without stakeholder input and encourage you to reach out if you have not yet filled out a questionnaire. Please contact me at garland@aravaipa.org or find questionnaires at the Klondyke Store. We plan on having another meeting in the February 2023 timeframe to review plan progress with stakeholders.

Upcoming



Our next year should be a busy one, and we hope we can keep the team in place, so we are looking for corporate sponsorship. The Watershed Conservation Plan should be finalized early in 2023 and we hope to secure a second grant with BOR to begin the biggest task- creating an overall implementation plan for the Aravaipa watershed in the AWCA's working area. Erosion has been named as the biggest concern for stakeholders, so identifying the erosion origins and deciding priorities will be a huge task.

Next year should see...

- Hosting the presentation of a series of stakeholder workshops on topics such as: erosion, water harvesting, rainfall data collection, and plant identification
- A large community clean-up for the Aravaipa canyon
- Community social events such as tours and collaborations with residents to really kick off the diversity of the area while showcasing the “common grounds” we all share

Join Our Email List

to keep up with our upcoming projects and events!
Join by emailing your name to awca@aravaipa.org



*Art created by Angelika Piwiwarczyk
<http://floraiillustration.com>*