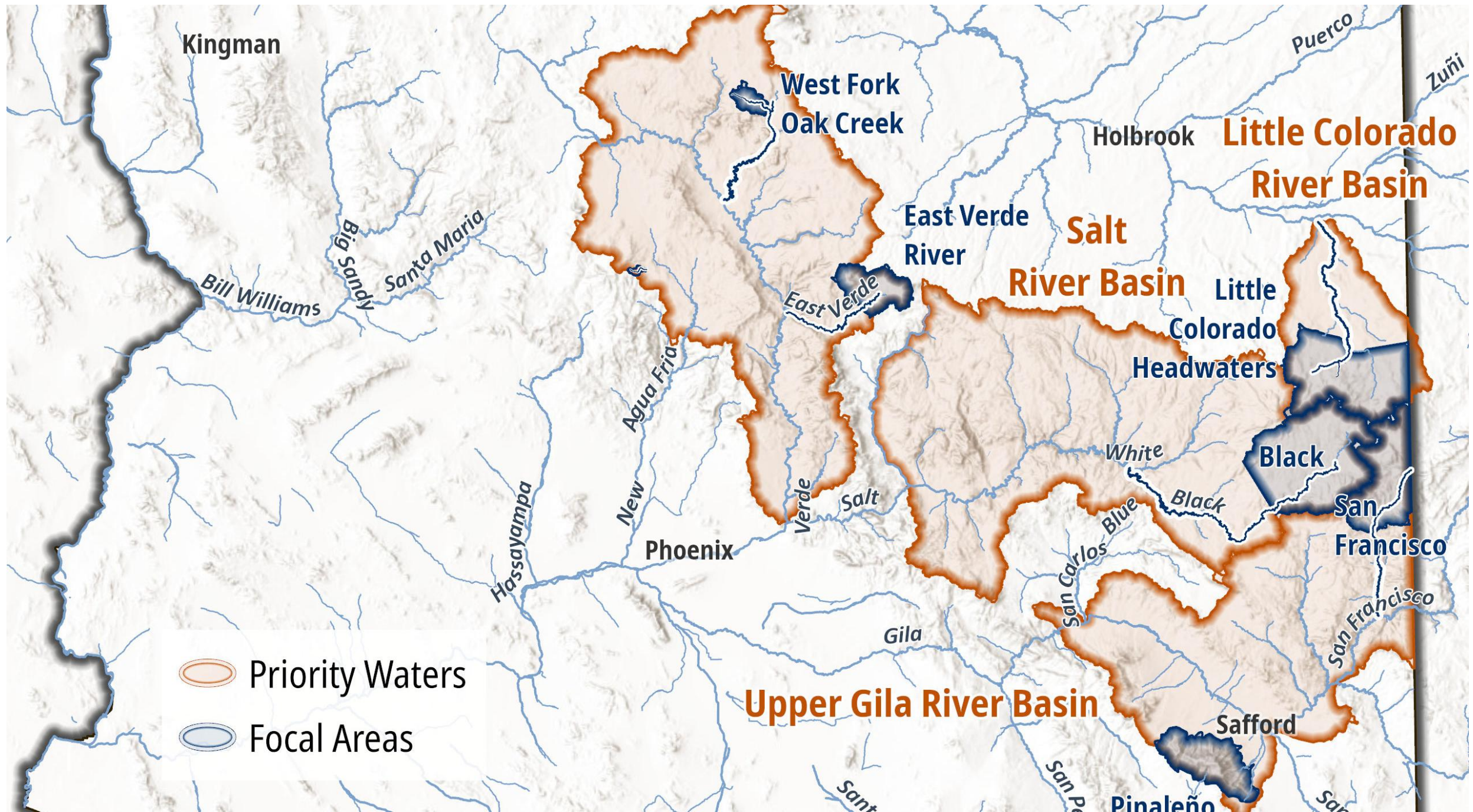




Arizona Projects

Engagement Manager – Alec Young
State Lead – Nate Rees



Arizona Projects



2 Dude Creek Headcut, Fall 2024, \$110k fully funded **Completed**

A head-cut has formed in the upper section of Dude Creek. Engineering plans have been completed, an RFP for contractors is in process, and repair is likely coming this Fall.

2 Dude Creek Blackberry removal and Riparian Planting, Fall 2026, \$35k Fully funded

Remove blackberry throughout the perennial stretch of Dude Creek. And conduct riparian plantings on the AZGFD project site and TU project site to stabilize banks.

3 Chase Creek, Spring 2027, \$300k fully funded

The stream habitat needs to be improved, and the invasive blackberry removed. NCD has assessed the project site. The formal partners are TU, NFF, FS, and AZGFD. We are looking to have a design completed by next year with a phased restoration approach. TU is currently contracting the heritage study.

4 Canyon Creek, Fall 2025, \$25k fully funded

Last season's runoff ripped out the original habitat structures. We are looking to hire an engineer to conduct an assessment and then design the project.

5 South Fork Little Colorado River, Spring 2025, \$45k fully funded

AZGFD has contracted the design for this restoration project. TU is currently contracting the archaeological study and will likely contribute funds to the implementation when it occurs.

6 Thompson-Burro Meadow, Spring 2025 - Fall 2029, \$2 million fully funded

Wet meadow restoration designs are 60% completed. This project is currently in the permitting phase. An in-person stakeholder tour will be held on 6/26. Construction is expected to start in Spring 2025 and continue in the spring and fall until 2029. We are looking to document the whole project with a contracted videographer.

7 Deep Creek, Fall 2024 – Fall 2028, \$600k partially funded

Designs have been completed to improve eight culverts on Deep Creek located on White Mountain Apache Tribal Lands to enhance Apache trout fish passage. However, to complete the project, we need to raise an additional 2 million.

8 Paradise Creek, Fall 2024 - Fall 2026, \$430k partially funded

Designs have been completed to improve three culverts on Paradise Creek located on White Mountain Apache Tribal Lands to enhance Apache trout fish passage. However, to complete the project, we need to raise an additional \$500k.

9 Bear Wallow Wilderness Fish Barrier removal, Summer 2025, \$25k partially funded

An ineffective rock gabion fish barrier has been in place for 50+ years. We are looking to remove or reroute the stream around the barrier before the structure receives historical protections. We are looking to hire an engineer to conduct an assessment and then design for this project. After that we'll fundraise for implementation dollars.

10 Hayground Creek, Spring 2026, \$680k fully funded

We are constructing an enclosure on 104 acres of riparian habitat and 1.76 miles of Hayground Creek. After the enclosure is constructed, we will plant native vegetation along the riparian corridor.



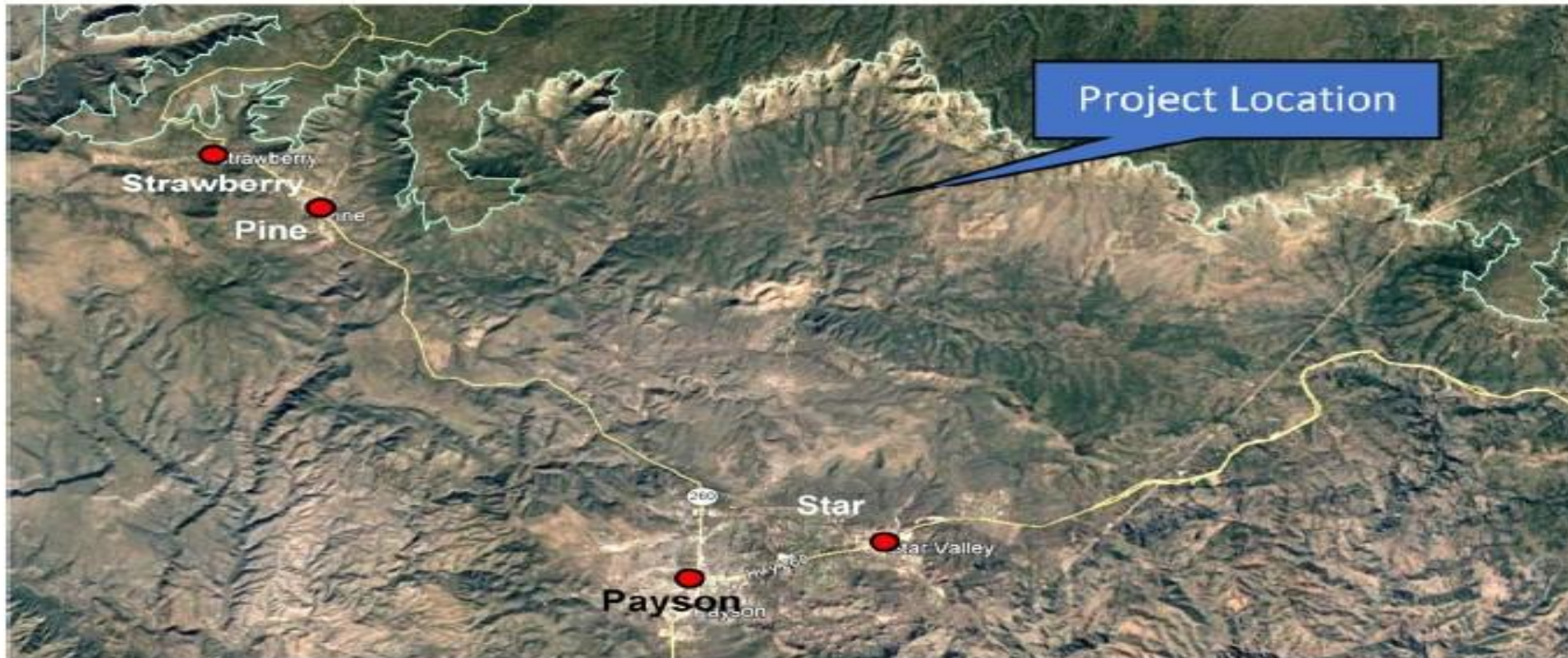
Map
Area

Dude Creek Headcut Restoration



Objectives and Background

Dude Creek is an important conservation habitat for the federally protected Gila trout (*Oncorhynchus gilae*). The purpose of this project is to provide a design for arresting an advancing headcut which threatens good condition habitat. Additionally, concepts are provided to enhance habitat for Gila trout in an incised reach downstream of the headcut. Dude Creek is located in the East Verde River watershed and has year-round surface water. The project is located in the NW1/4 of Section 25, Township 12N, Range 10E of the GSRB&M and the general area is shown in Figure 1 below. This analysis and design were undertaken as part of a plan to arrest an advancing headcut and restore geomorphic function to this reach of channel.





- Headcut appeared just upstream from a previous repair that had been completed a year prior. (AZGFD)
- This stretch had caused significant impediment to flow and had begun to form two separate side channels, limiting what little flow there was.
- This stretch also had very limited elevation change, pools, or structure which created extremely limited fish habitat.

- Construction started in early October 2024 (M.D. Merrett INC.)
- Designs included adding elevation change, rock weirs, & Zuni bowls. The eroded bank was stabilized with biodegradable netting.
- The project utilized over 25 boulders that weighed more than 1000 lbs.
- All removed soil and plant material repurposed to fill in the side channels.





















Arboretum at Flagstaff



(Juncus balticus)
"Baltic Rush"



(Carex scoparia)
"Broom Sedge"

Arboretum at Flagstaff



(*Rubus neomexicanus*)
"New Mexico Raspberry"



(*Aquilegia chrysantha*)
"Golden Columbine"

Thank You!

- Alex Loubere (AZGFD)
- Ryn Davison (AZGFD)
- Kelly Mott Iacroix (Forest Service)
- Christina Akins (Forest Service)
- Kenda Svoboda (Forest Service)
- Mike & Beth Merrett (M.D. Merrett Inc.)
- Jake Fleishman (NCDE)
- Mark Wirtanen (NCDE)

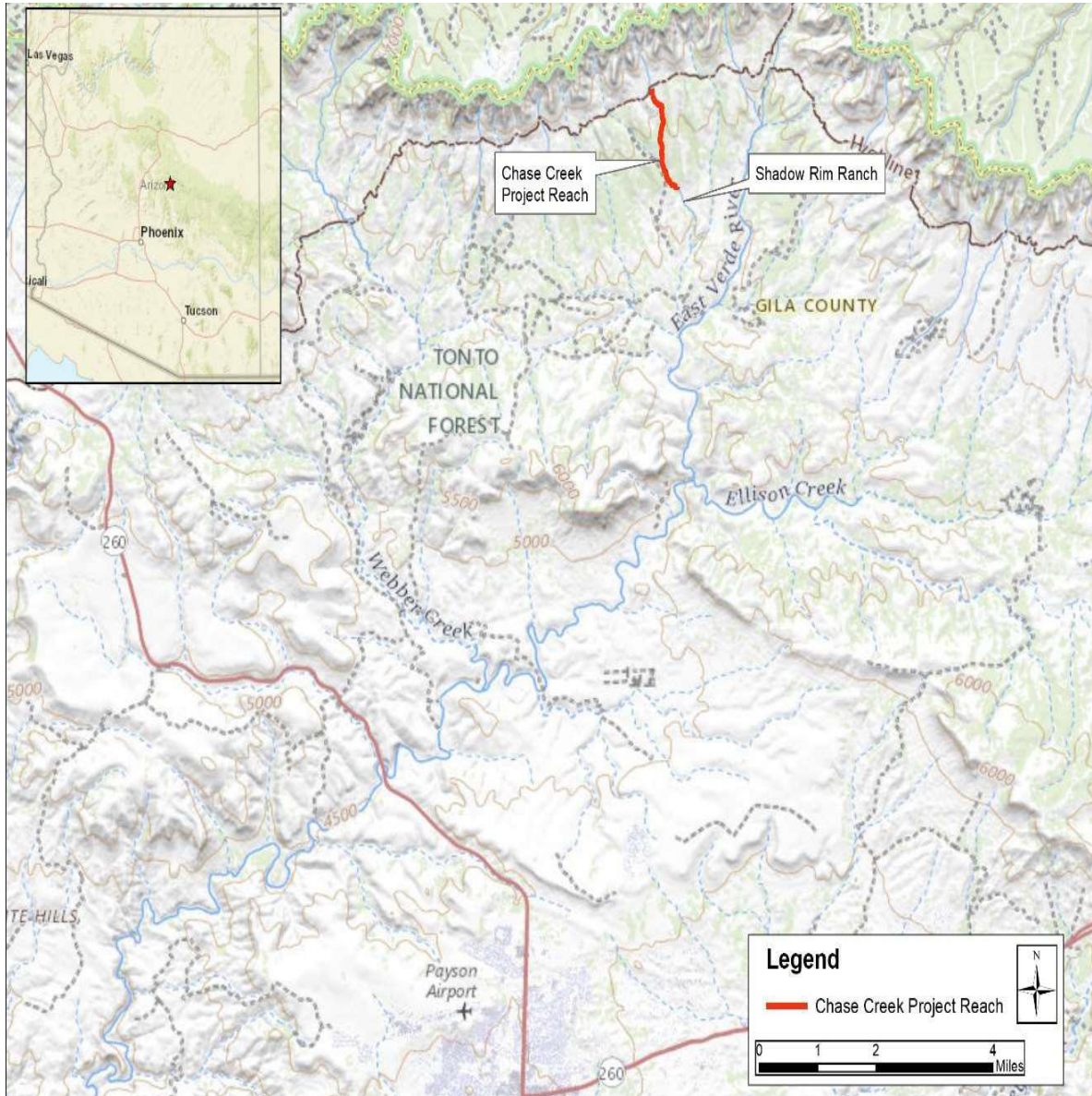


Natural Channel Design
Engineering Inc.

ncdengineeringinc.com



Chase Creek

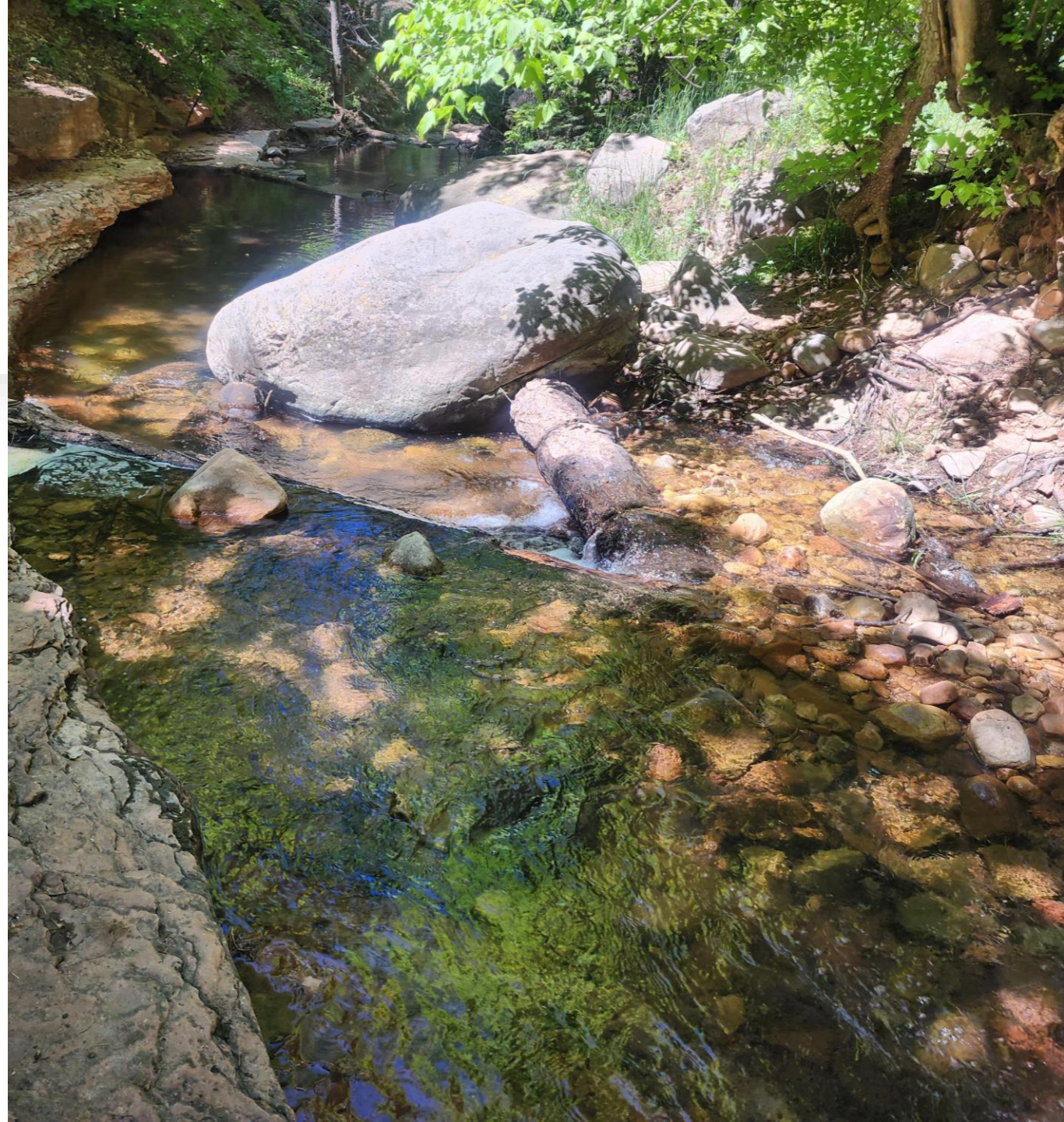


- Stream habitat is going to be improved, and invasive Himalayan Blackberry bushes removed.
- Natural Channel Design has submitted an assessment of the proposed project area to us and our partners.
- The formal partners on this project are Trout Unlimited, National Forest Foundation, Tonto National Forest, & AZGFD.
- We are looking to have the design for the work completed by next year with a phased restoration approach.
- A heritage study for the project area was completed recently, giving us the information needed to move to the design phase.



East Verde River

- Simple instream habitat structures will be installed throughout the upper portions of East Verde.
- 3 Cross Vane Weirs
- One Rock Dams
- Woody Debris
- Volunteer opportunities are coming this Fall. AZGFD has filed the necessary environmental compliance paperwork, we should be able to have boots on the ground this Fall.





Canyon Creek

- Last season's runoff ripped out the original habitat structures. We are looking to hire an engineer to conduct an assessment and then design the project.
- Contracting drone imagery this fall as well.





Perkins Tank

- This project is a collaboration between the Kaibab National Forest, Arizona Game & Fish Department, and Trout Unlimited.
- The area encompassing Perkins tank is a grassland/meadow which has a variety of native grass and forb species. This watershed attracts a variety of wildlife species including elk, deer, turkeys and waterfowl.
- Perkins Tank is a special regulation fishery for anglers who are looking to target brook trout and grayling. The fishery is known for its remoteness and scenery with an abundance of wildlife viewing opportunities.
- The current dysfunctional fence is being replaced by one designed to allow elk, deer, etc.. but eliminate degradation by cattle.



Perkins Tank



Davis Dam

- The stretch of the Colorado River below Davis Dam near Laughlin / Bullhead City, experiences extreme caddisfly hatches throughout the year.
- To help mitigate this, the municipality has been working with an entomologist to find solutions.
- Trout have been stocked to help consume the caddisflies but are being preyed on heavily by bass species.
- Trout Unlimited is going to collaborate on work that will introduce more fish habitat along sections where trout are being introduced, to create a higher likelihood of survival during caddisfly hatch seasons.





South Fork Little Colorado River Restoration

- Joint project with AZGFD
- Project will improve Apache trout habitat and help build a resilient and self-sustaining riverscape.
- The restoration objectives include:
 - Increasing channel morphological and structural variability
 - Increase aquatic habitat diversity
 - Increase the water level
 - Deepen pool habitat/refugia
 - Increase near stream wetland and backwater habitat
 - Plant native flora in riparian corridor



Thompson-Burro Meadow Restoration

- This project aims to reconnect 2.6 miles of the West Fork Black River and its tributaries, Thompson and Burro Creeks, to their historic floodplains, improving habitat conditions for Apache Trout and New Mexico Meadow Jumping Mouse.
- Installing low-tech process-based structures will raise surface water levels and, subsequently, groundwater levels, reconnect historic side channels, and create conditions that support improved riparian and wetland vegetation growth.
- After the water table has been raised, an enclosure will be constructed and planting of native vegetation will conclude the project.



Paradise Creek Culvert Replacements

- Replace three culverts on Paradise Creek to enhance fish passage at all life stages for Apache Trout.
- Project will connect 9.3 stream miles that Apache trout can freely move within at any time of the year.



Deep Creek Culvert Replacements

- Replace/ improve eight culverts on Deep Creek to enhance fish passage at all life stages.
- Project will connect 6.5 stream miles that Apache trout can freely move within at any time of the year.



Bear Wallow Creek; Fish Barrier

- An ineffective rock gabion fish barrier has been in place for 50+ years. We will remove the barrier to enhance fish passage and habitat for Apache trout.
- Newly constructed barrier downstream on San Carlos Tribal Lands at Black River confluence.
- Located in the Bear Wallow Wilderness



Hayground Creek Exclosure & Riparian Planting

- Constructing an exclosure on 104 acres of riparian habitat and 1.76 miles on Hayground Creek.
- After the exclosure is constructed, we will plant native vegetation along the riparian corridor.



Home Creek Meadow Restoration

- The project area for Home Creek includes roughly 7.9 miles of historically Apache trout habitat that needs to be restored.
- Drought conditions, and the Wallow fire have decimated this habitat to the point where it will only sustain fish temporarily in wet periods throughout the year.
- Our goal with this project is to increase the overall habitat quality, stream function, and cold-water storage to sustain trout year-round. Starting in the headwaters, utilizing LTPBR techniques, working downstream, re-wetting the meadows, and restoring floodplain function.



TU Projects

- 13 Ongoing Projects
- Numerous volunteer opportunities coming within the next year and a half.
- Total of \$4,315,000 in Trout Unlimited projects on the Arizona landscape in 2025.

