

Arizona Gila Trout Update



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Gila Trout Recovery: Objectives and Criteria

- 2022 Gila Trout Recovery Plan

- Recovery objectives

- Secure the existing genetic diversity of Gila Trout
- Increase the geographic distribution of Gila Trout
- Increase the size, dendritic population structure and interconnectedness of Gila Trout populations.



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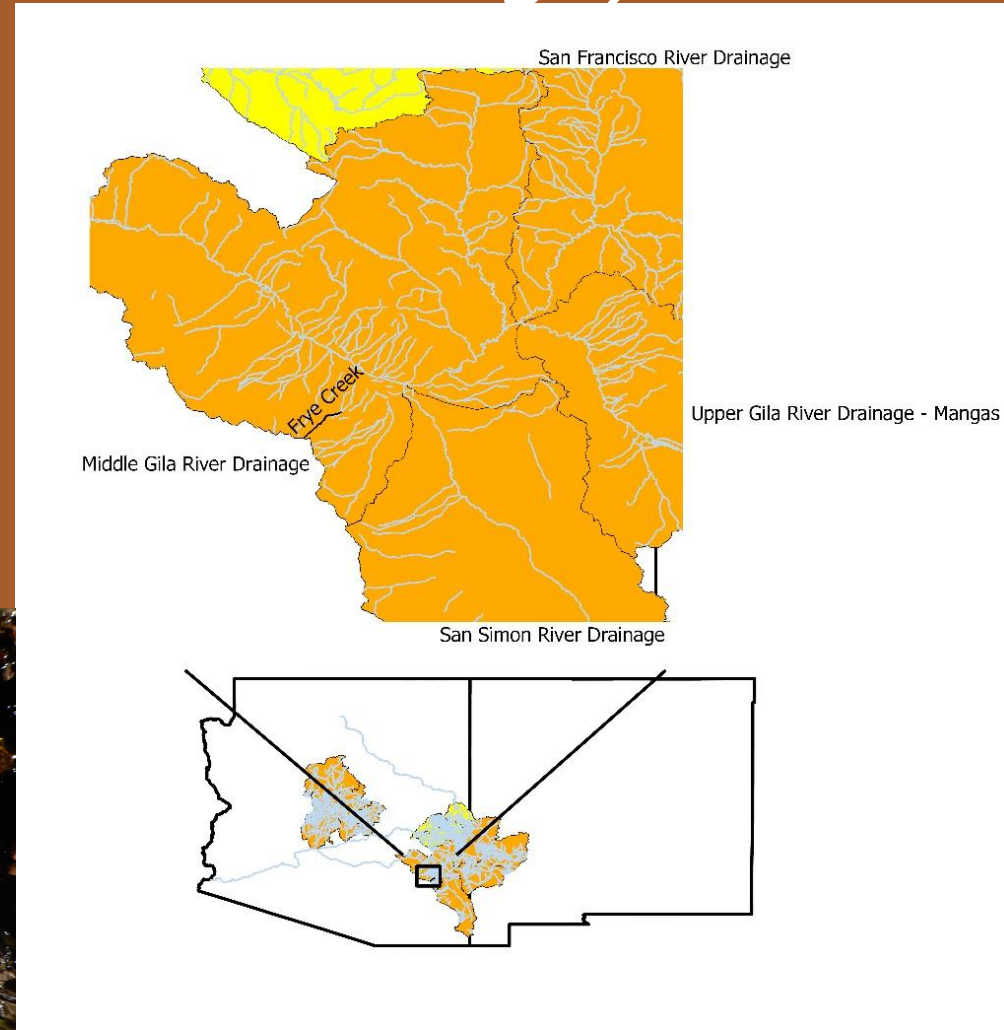
- Recovery criteria

- 280 km of stream occupied by viable Gila Trout populations within its historic range
- Each genetic lineage represented by at least three geographically separate (> 34 km apart) populations
- Establish at least four dendritic meta populations
- Nonnative trout absent from recovery streams and preventative measures in place to prevent future invasion by non-native salmonids



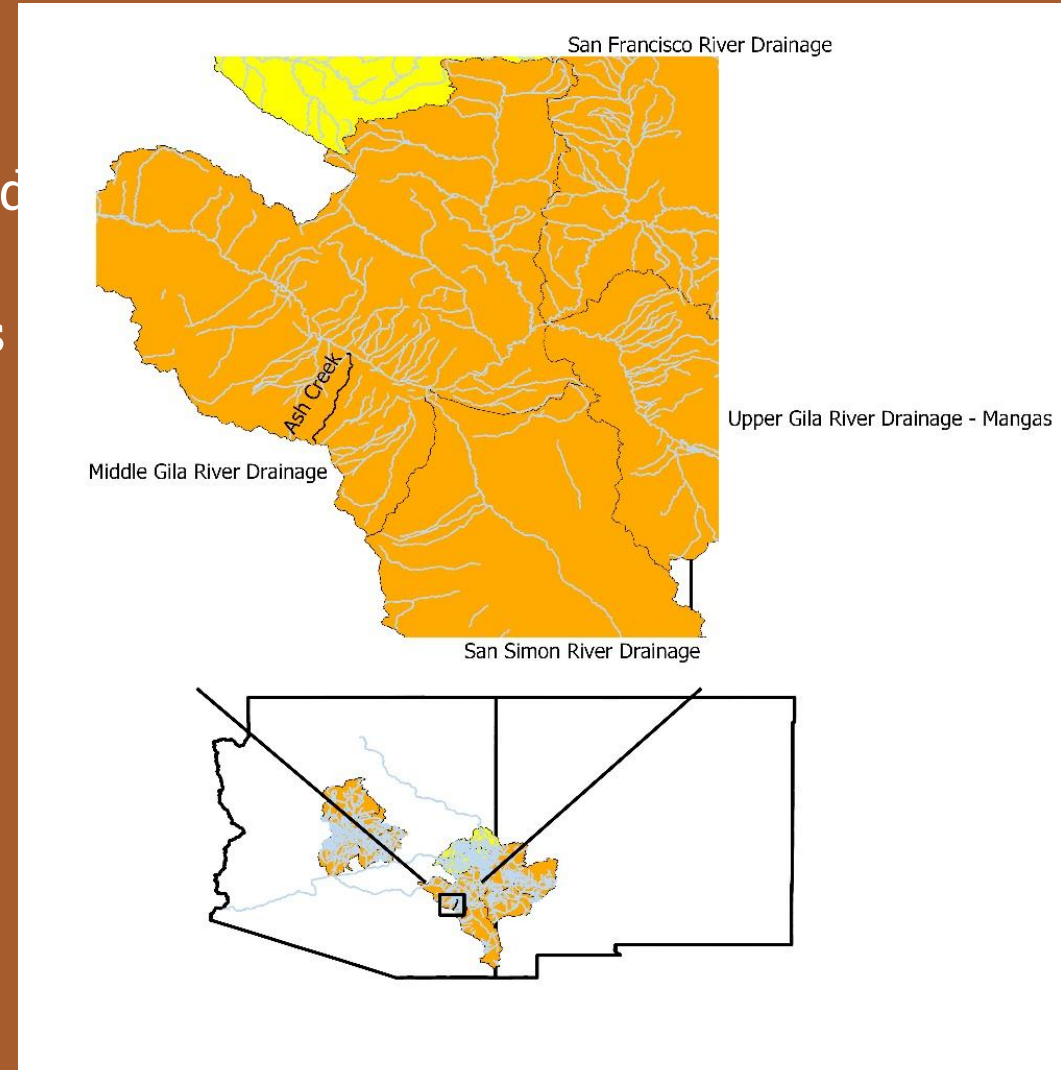
Frye Creek (Middle Gila River Drainage)

- 2023 work
 - Snorkel survey attempted in September
 - Sites too shallow to effectively survey
 - 8 adult and 1 juvenile observed
- Future plans
 - Next population estimate scheduled for 2025



Ash Creek (Middle Gila River Drainage)

- 2023 work
 - Photo point surveys, 17/37 sites photographed
 - Show vegetation recolonizing riparian area
 - Pools forming around deadfalls and log jams
- Future plans
 - Continue photo point survey
 - Monitor water temp and habitat progression

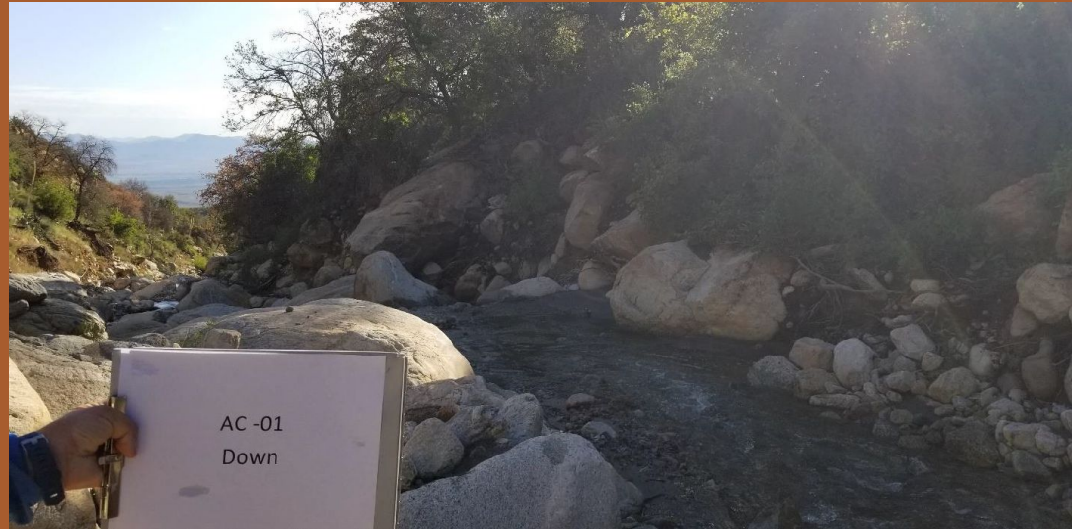


Ash Creek – Site AC 01 Downstream

Summer 2010

August 2019

August
2022



Ash Creek – Site AC 195 UPstream

Summer 2010

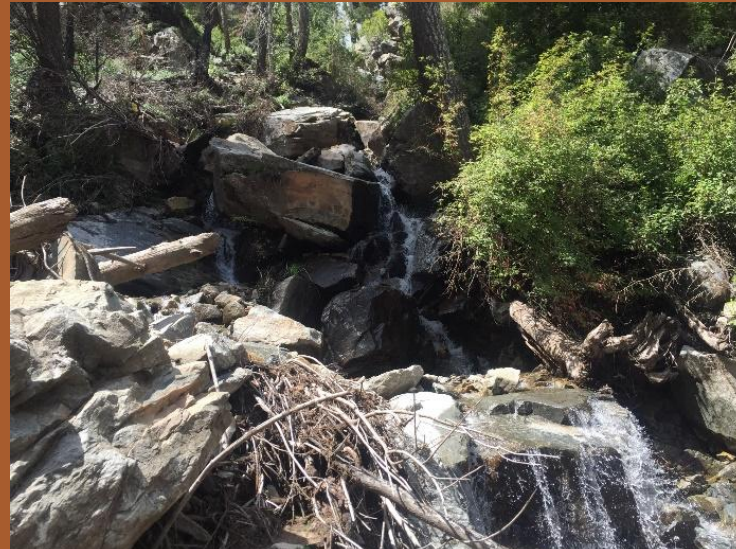
August 2019

August
2023



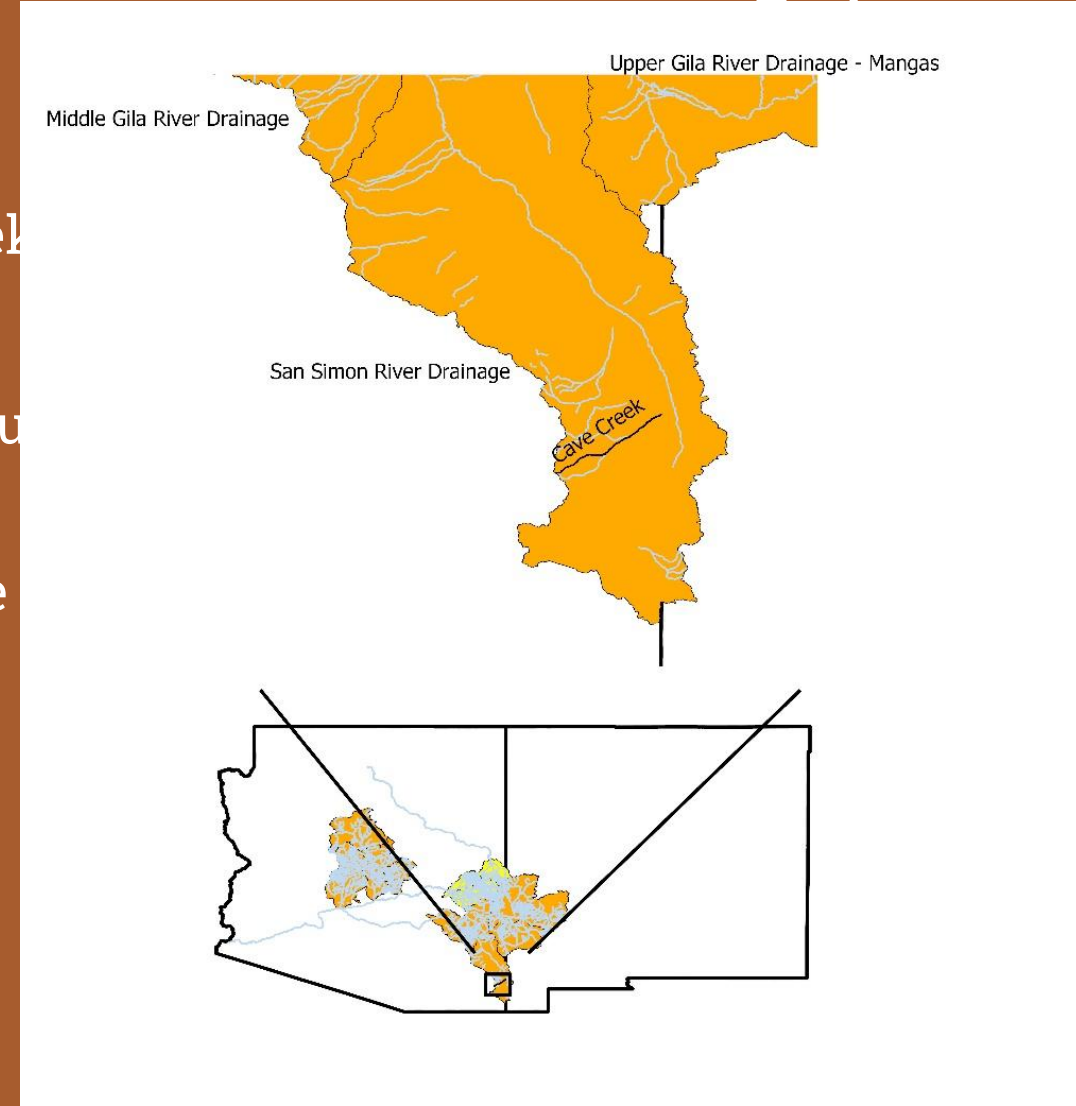
Marijilda Creek (Middle Gila River Drainage)

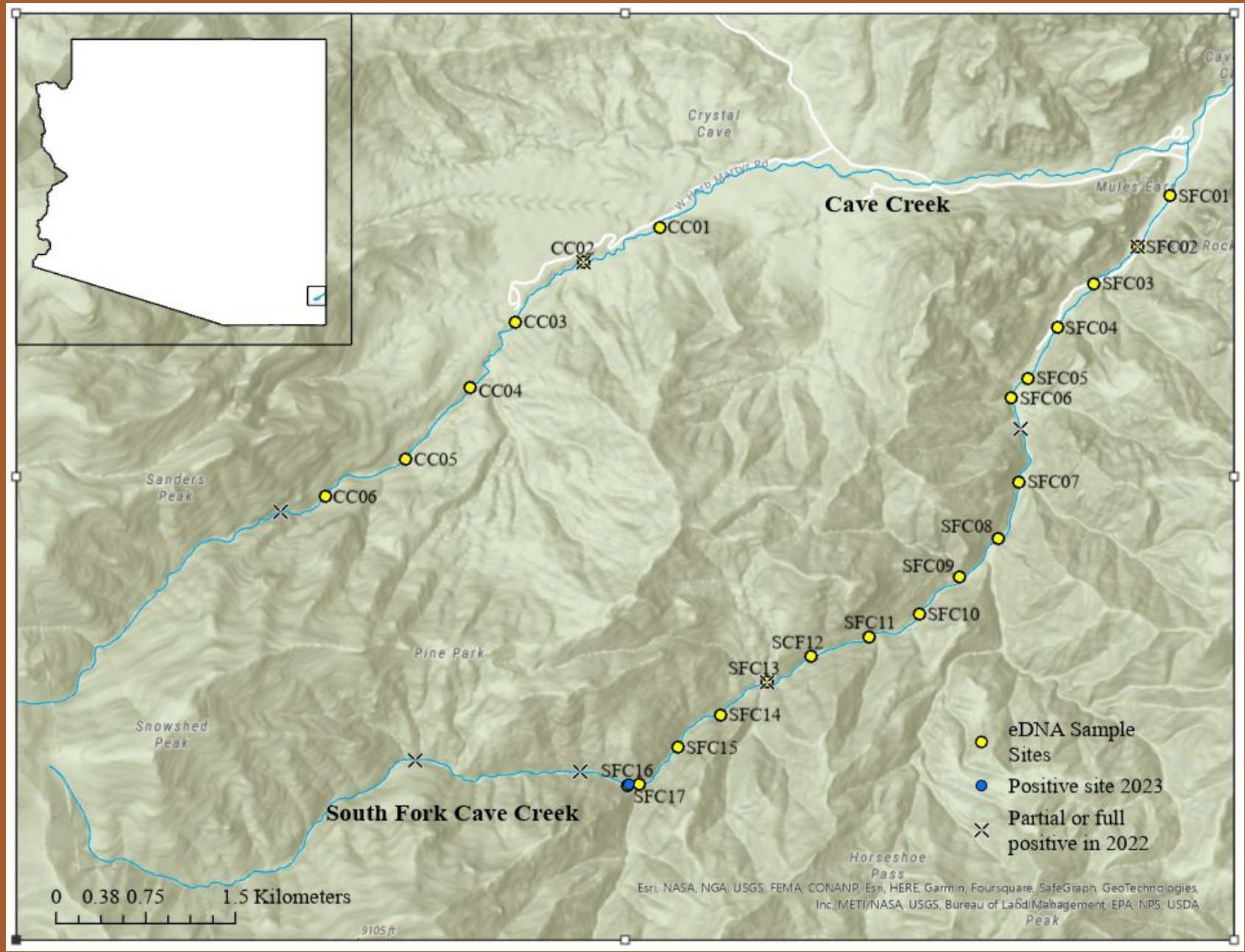
- No work in 2023
- 2024 plans
 - Population estimate of lower and upper Marijilda Creek
 - Determine if any natural recruitment has occurred



Cave Creek Complex (San Simon River Drainage)

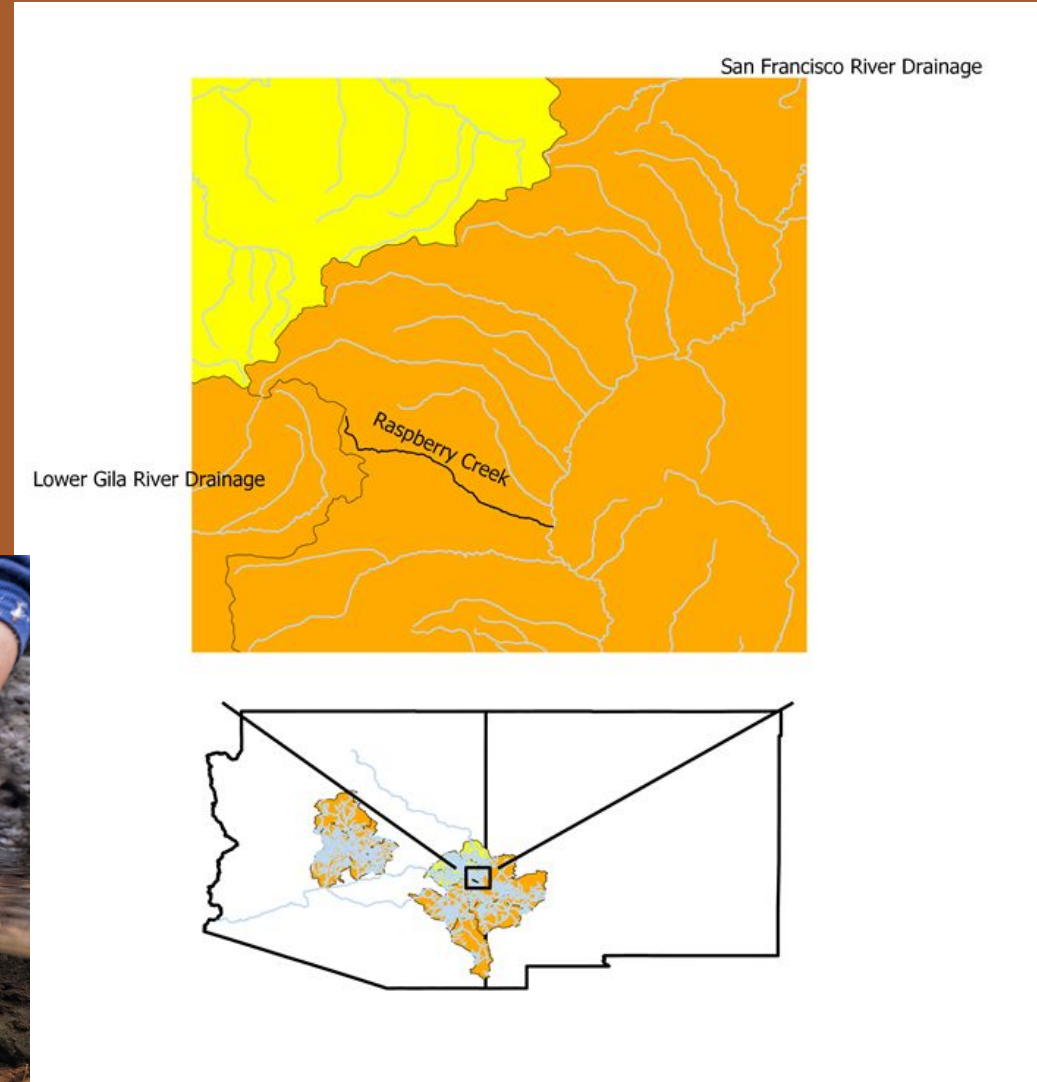
- 2023 work
 - eDNA collected from S. Fork and main Cave Creek
 - 6 sites on main Cave Creek, 0 positive
 - 17 sites on S. Fork, 1 positive
 - Sampling equipment difficulties, low sample volume
- 2024 plans
 - More eDNA samples from S. Fork and Main Cave
 - Rainbow Trout Removals on N. Fork
 - Electrofishing S. Fork to look for Rainbow Trout





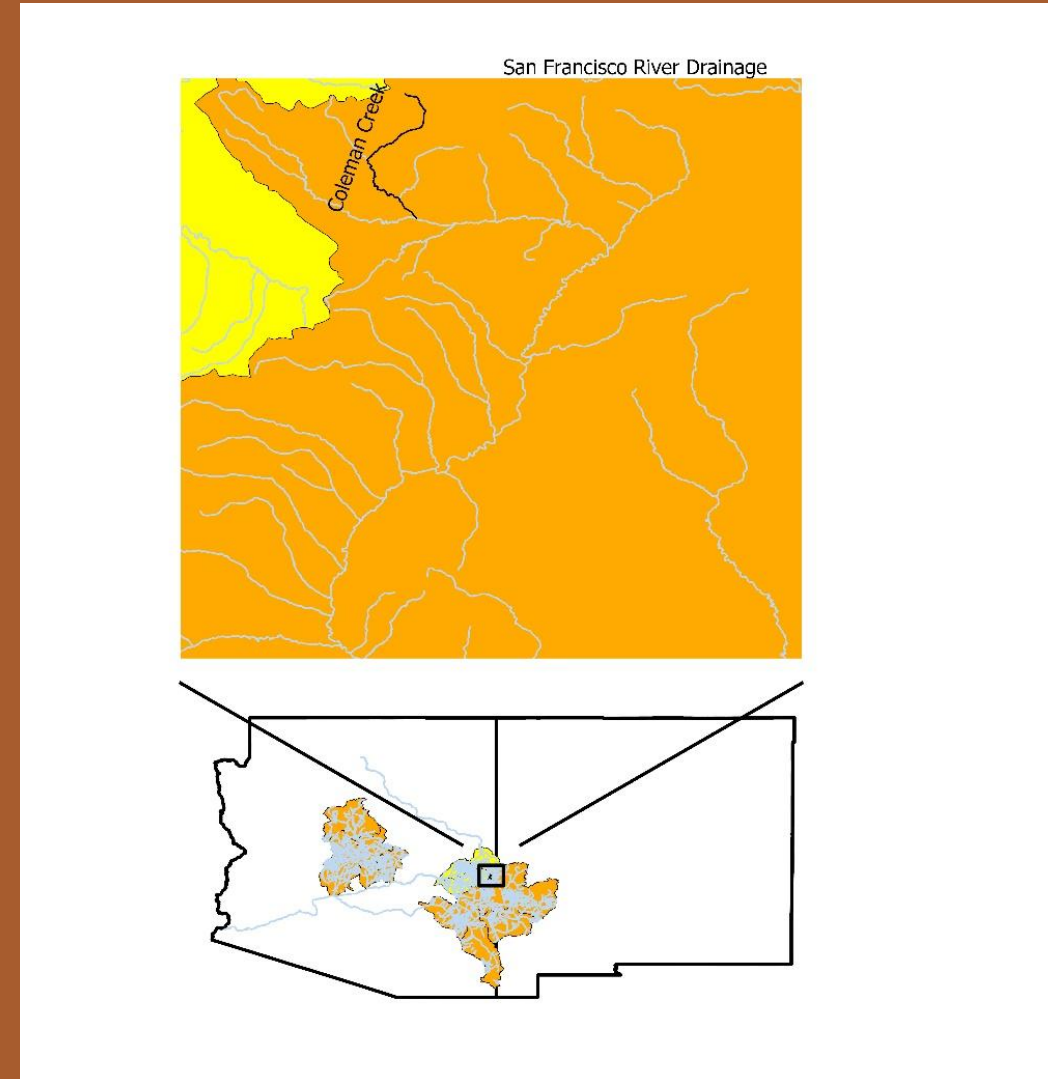
Raspberry Creek (Blue River Drainage)

- Spot Check conducted in 2023, fish observed
- Stream is small and doesn't seem like it will hold more
- Future plans
 - Monitor
 - Augment population as needed



Coleman Creek (Blue River Drainage)

- 2023 work
 - Population estimate completed in September
 - 5 adult trout sampled, population estimated at 14
 - Salvage of remaining fish conducted in October, 7 captured and taken to Mora
- No 2024 plans
 - Creek likely not suitable for Gila Trout unless successive years of snowpack raise water table significantly
 - Potential for habitat restoration to raise water table and create

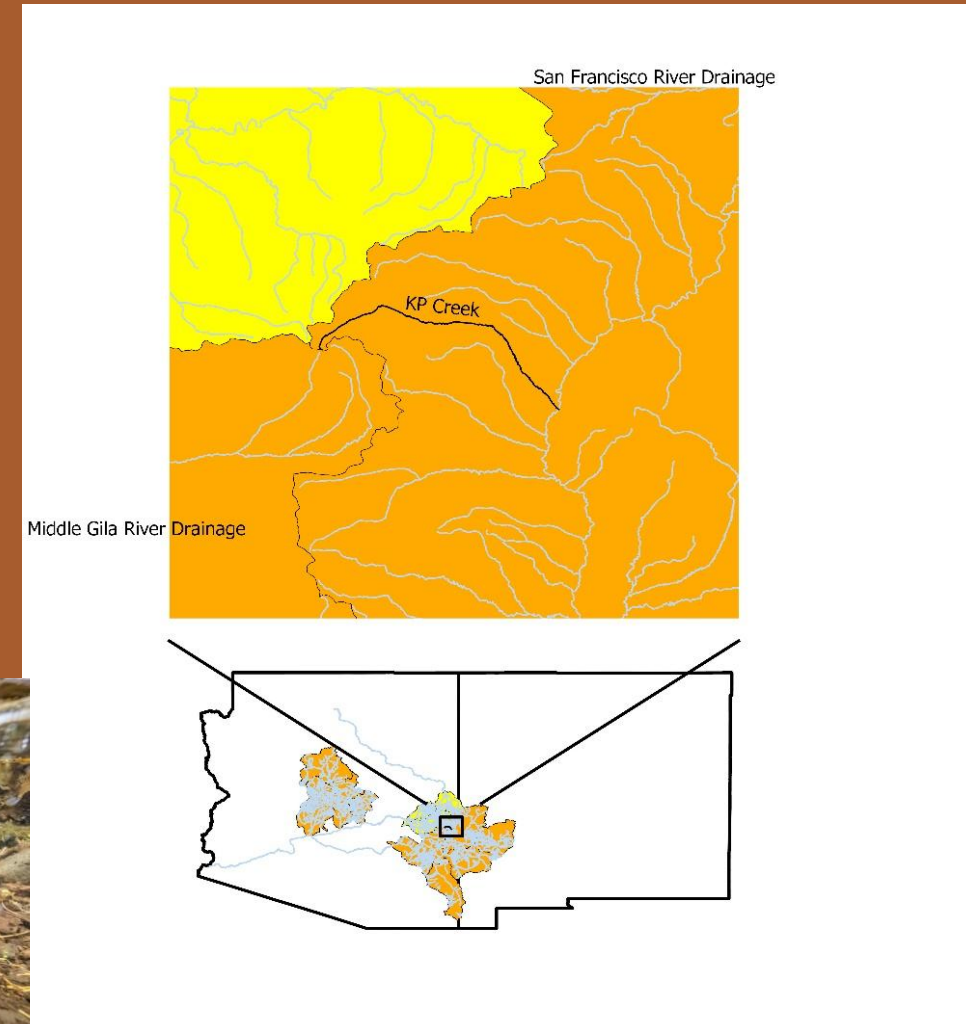


KP Creek (Blue River Drainage)

- 2023 work
 - 2,383 Gila Trout stocked over two different stockings
 - Upcoming presentation will elaborate on this work

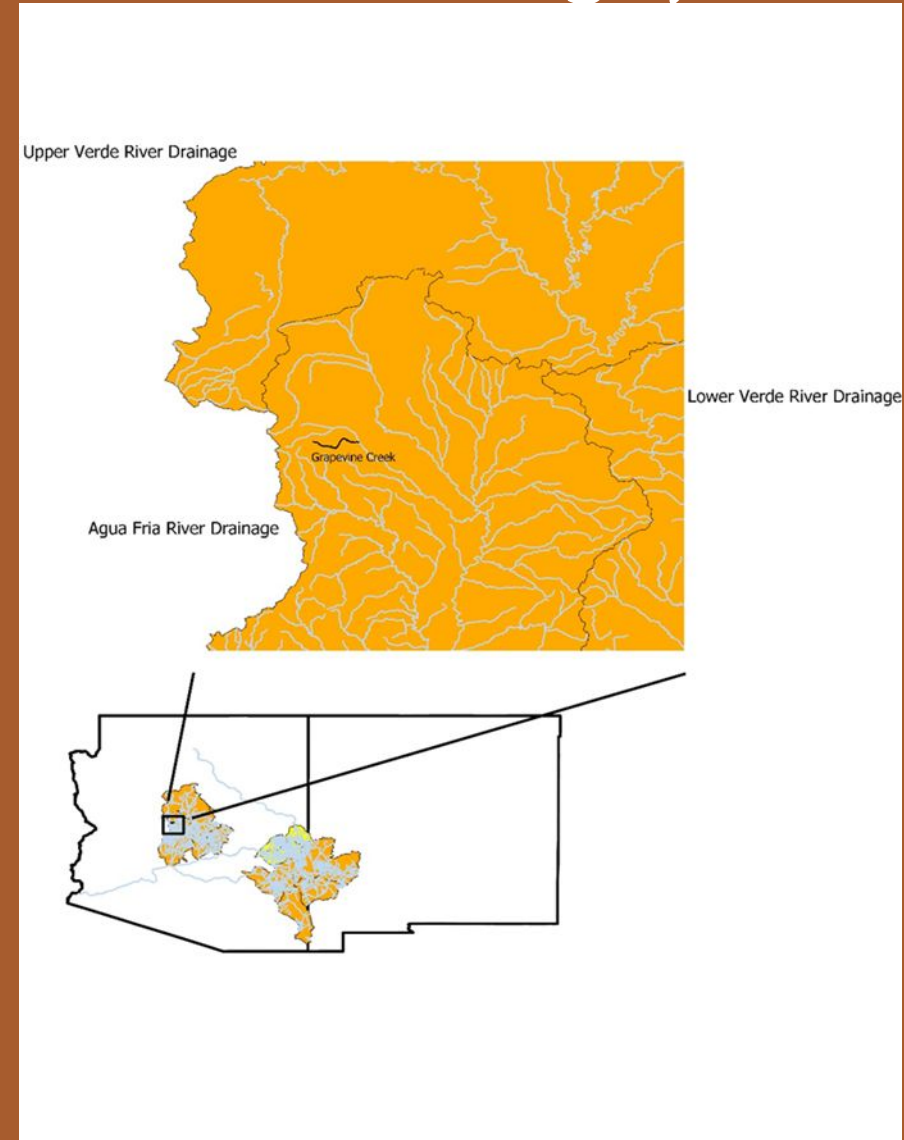
Future plans

- Monitor population for natural recruitment (visual)
- Stock more Gila Trout



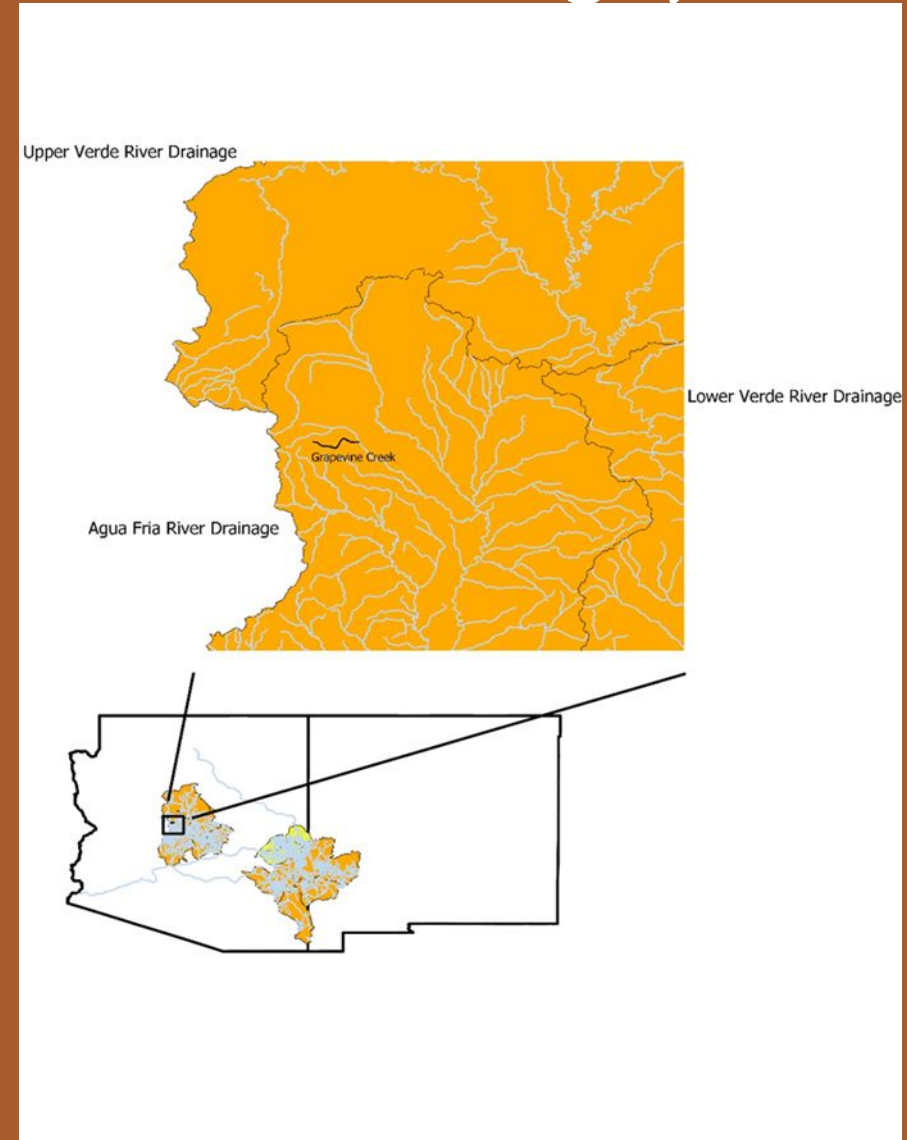
Grapevine Creek (Agua Fria River Drainage)

- No work in 2023
 - Observations of YOY have been reported by anglers



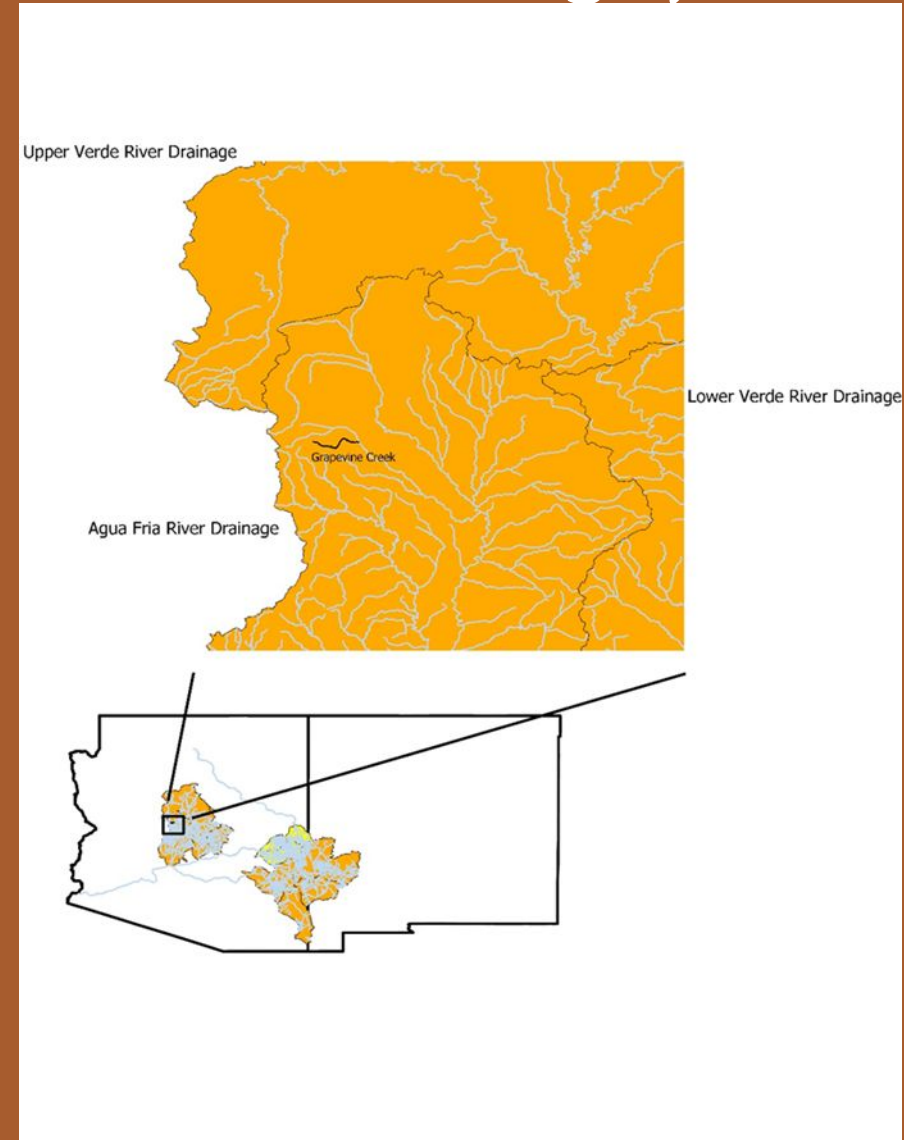
Grapevine Creek (Agua Fria River Drainage)

- No work in 2023
 - Observations of YOY have been reported by anglers
- Creel
 - 14 responses
 - Average CPUE – 0.664 fish/hour
 - Average catch rate satisfaction – 4.43
 - Average overall satisfaction – 4.79



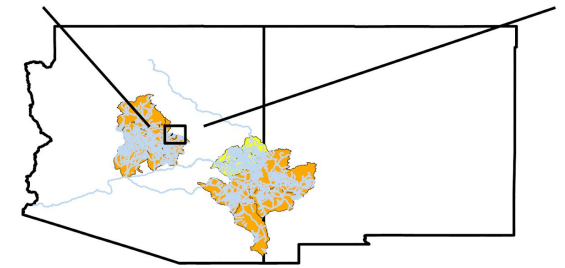
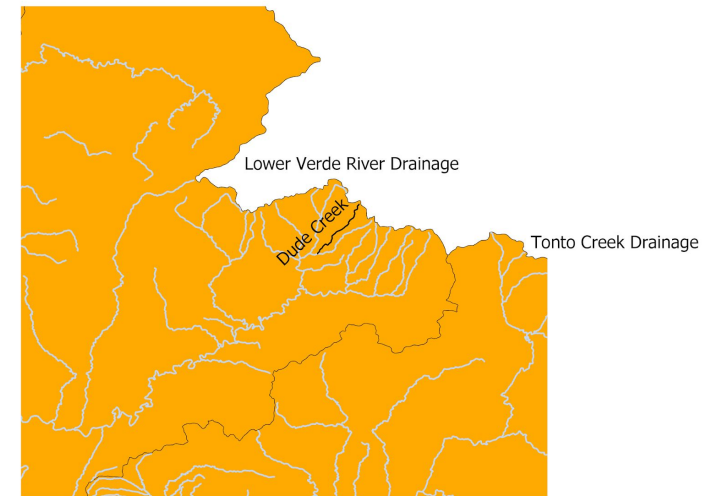
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 - Average overall satisfaction – 4.79
- 2024 work
 - Visual surveys to look for YOY
 - Self reported creel analysis to track angler effort and success



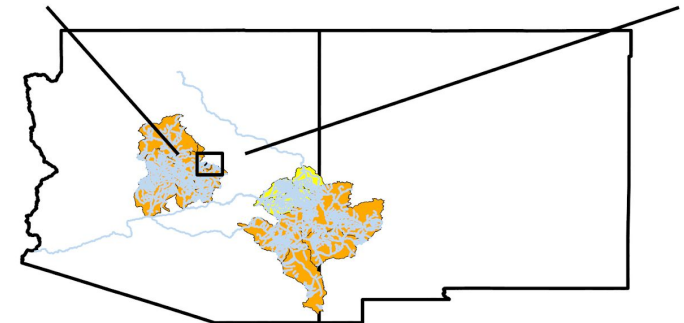
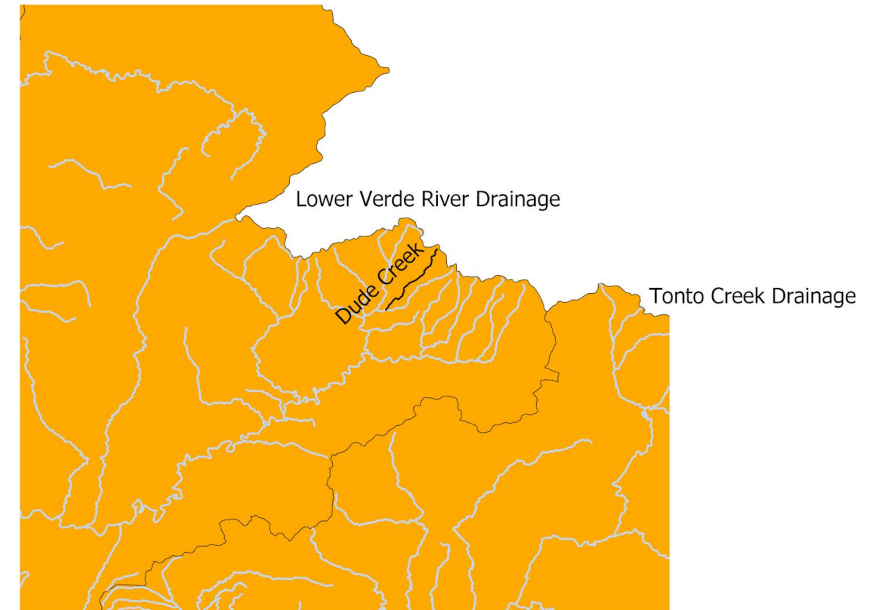
Dude Creek (Verde River Drainage)

- 2023 work
 - Habitat modifications completed September to remediate head cut
 - Secondary head cut forming that will need to be addressed



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 - Secondary head cut forming that will need to be addressed
 - Population estimate completed in October



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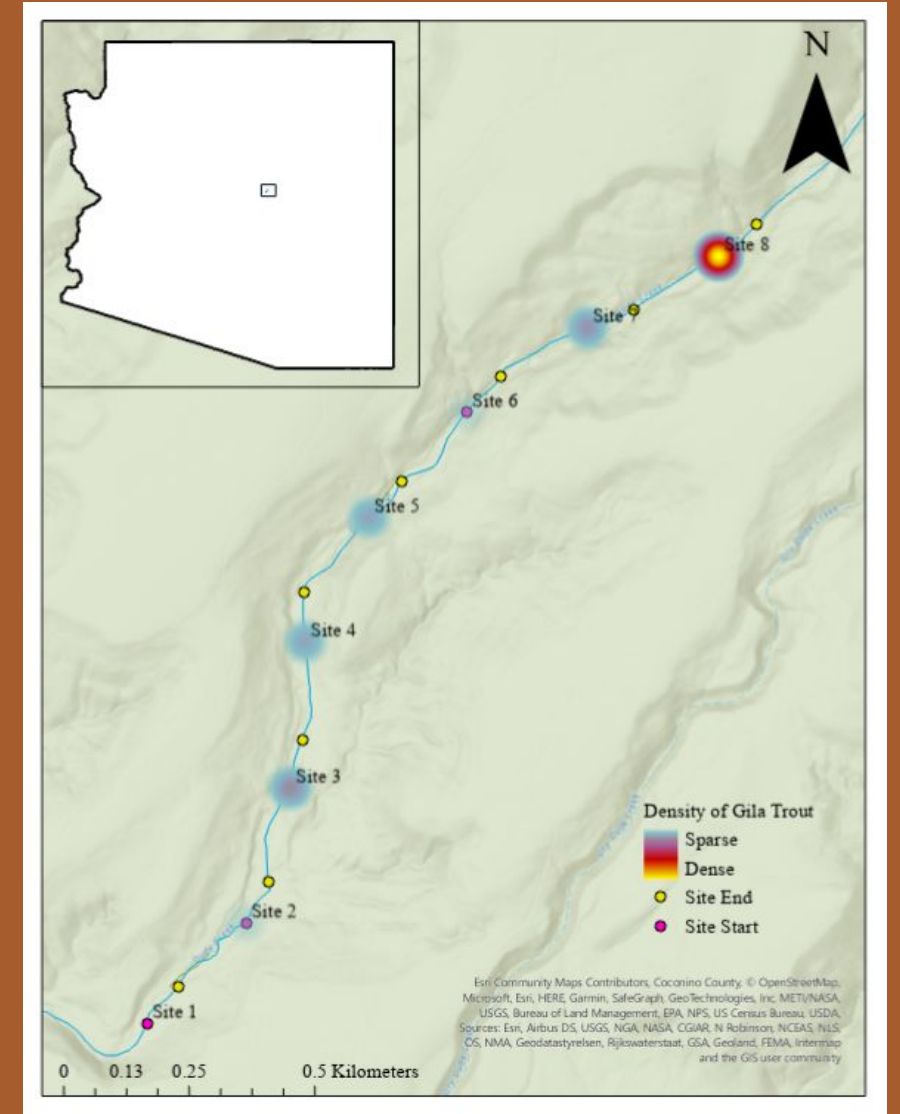
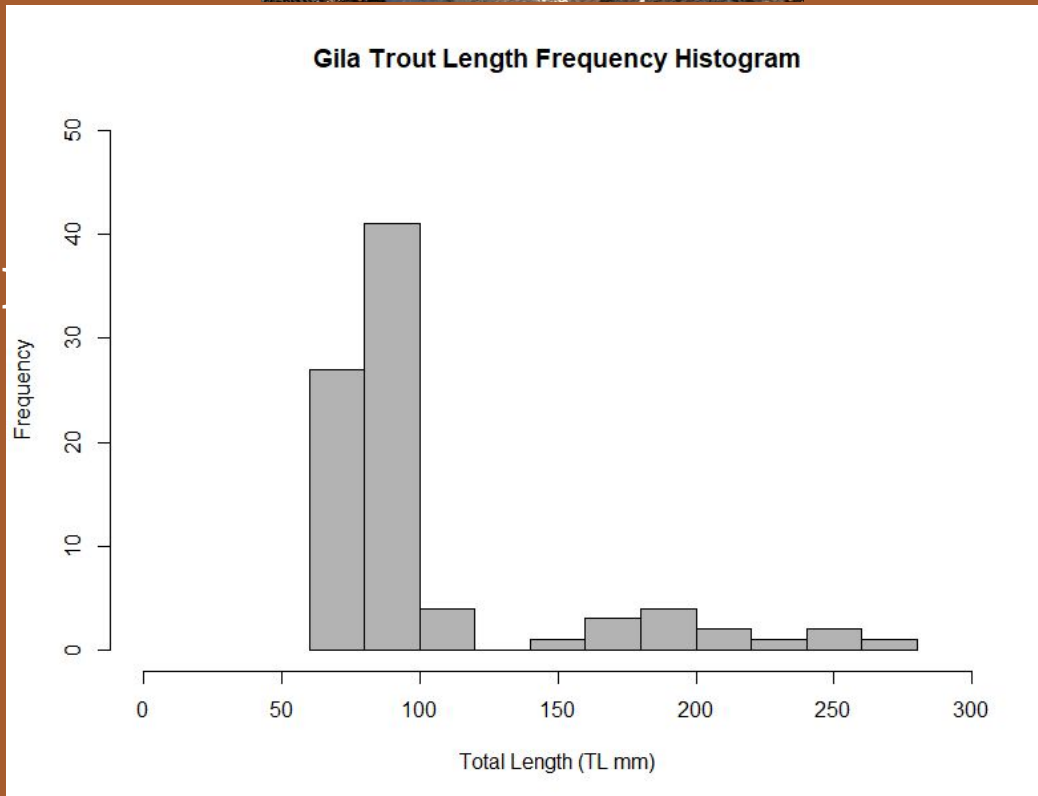
Population Estimate

- 253 individuals
- 39 adults



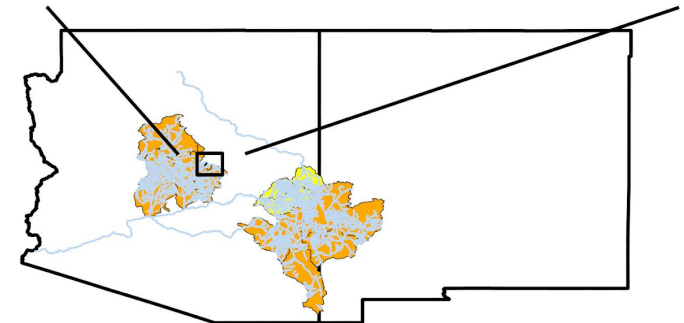
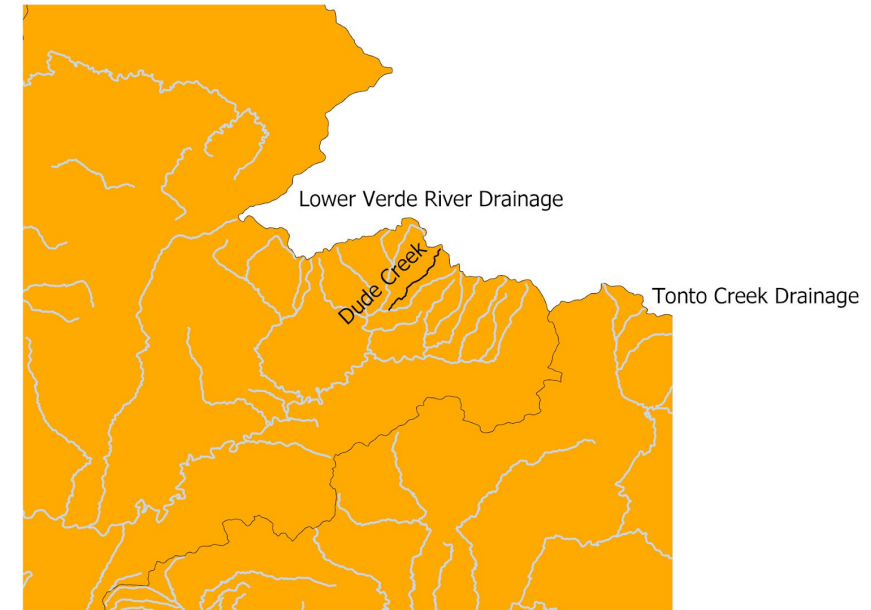
Collection

- 87 Gila Trout total
- 14 adults
- 49 sub-adults
- 24 young-of-year



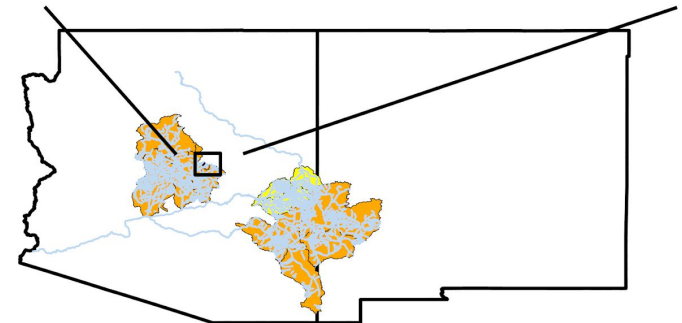
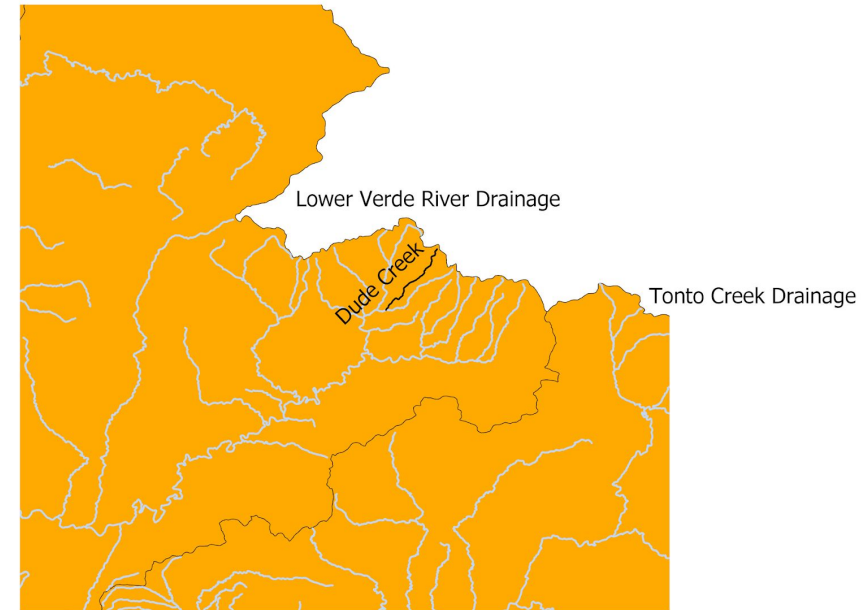
Dude Creek (Verde River Drainage)

- 2023 work
 - Habitat modifications completed September to remediate head cut
 - Secondary head cut forming that will need to be addressed
 - Population estimate completed in October
- Creel
 - 38 responses
 - Average CPUE – 0.69 fish/hour
 - Average catch rate satisfaction – 3.76
 - Average overall satisfaction – 4.47



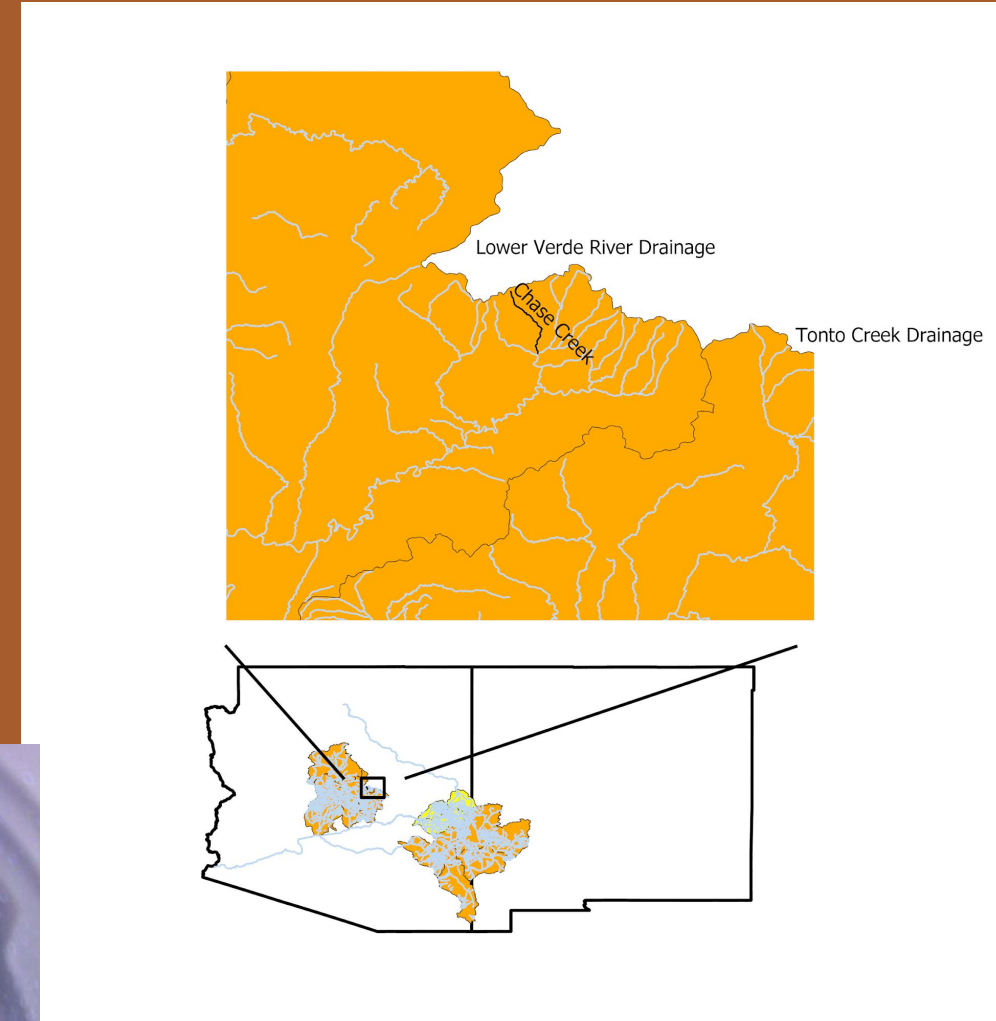
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 - Continue habitat improvement work
 - Visual surveys for YOY
 - Monitor temperatures through summer with new temp loggers
 - Self reported creel analysis to track angler effort and success



Chase Creek (Verde River Drainage)

- 2023 work
 - 750 age 0 Iron Creek lineage stocked in October
 - Intended to augment population
 - First of three consecutive years of stocking
- 2024 plans
 - Monitor stream temperature with newly placed logger
 - Conduct visual survey that had to be canceled in 2023 due to fire closure



Current Status in Arizona

- Eight occupied recovery streams consisting of nine populations
- 28.6 miles of stream

Population	Stream Mileage	Population Estimate	Year of Estimate	Year Founded	Lineage
Chase Creek	1.2	39	2022	2017	Iron Creek
Coleman Creek	2.5	14	2023	2020	Spruce Creek
Dude Creek	1.9	253	2023	2015	Spruce x Whiskey, Whiskey, Main Diamond, South Diamond Creeks
Frye Creek	5.0	231	2022	2019	South Diamond Creek
Grapevine Creek	2.0	111	2022	2019	South Diamond Creek
KP Creek	9.3	NA	NA	2021	Iron Creek
Lower Marjilda Creek	3.0	NA	NA	2020	South Diamond Creek
Upper Marijilda Creek	1.2	NA	NA	2020	Whiskey Creek
Raspberry Creek	2.5	26	2021	2018	Whiskey Creek

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Acknowledgements

- Arizona Game and Fish
- USDA Forest Service
- US Fish and Wildlife Service
- Mora National Fish Hatchery
- Mogollon Sporting Association
- Trout Unlimited
- Back Country Hunters and Anglers

