



Status Update on Mogollon Rim Trout Streams

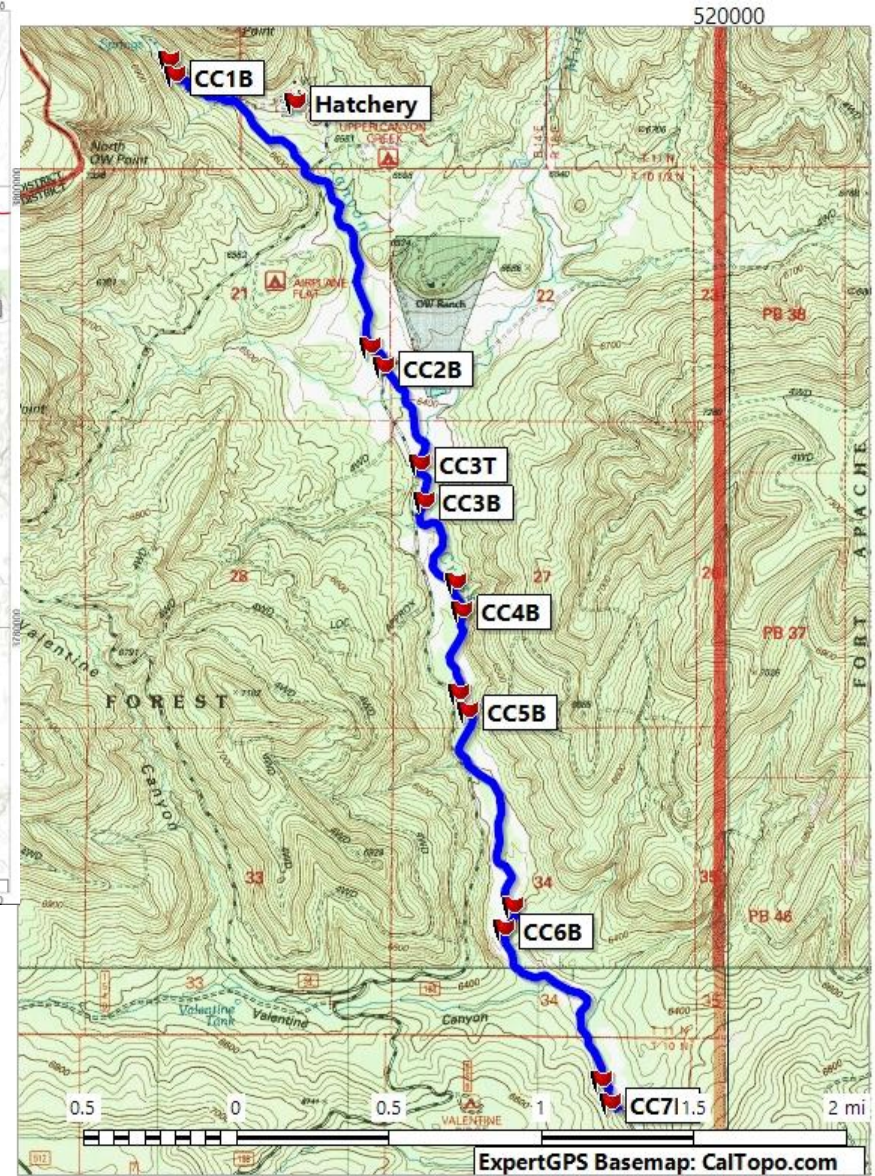
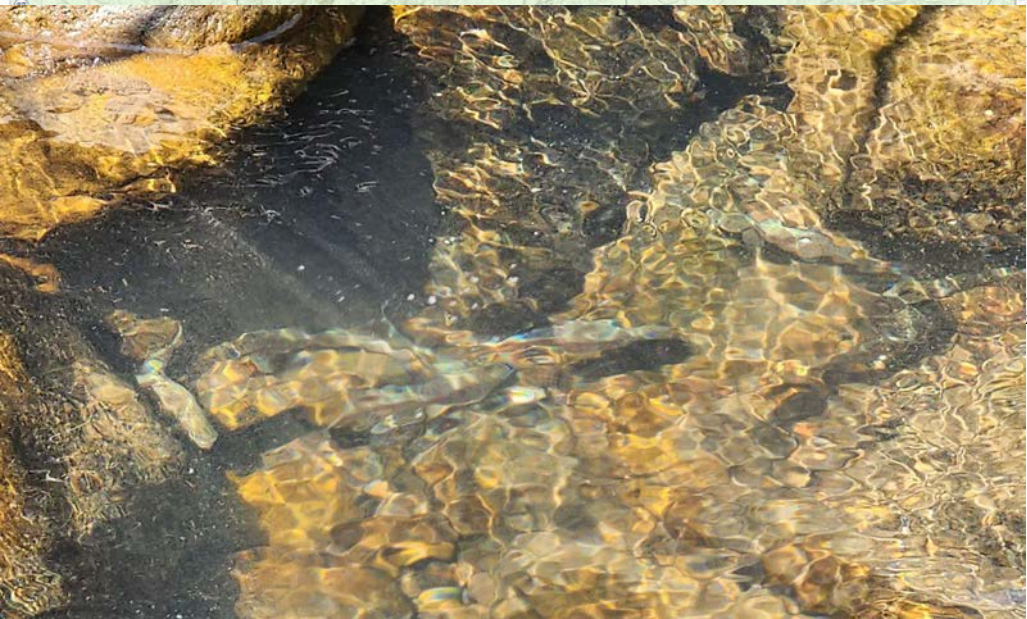
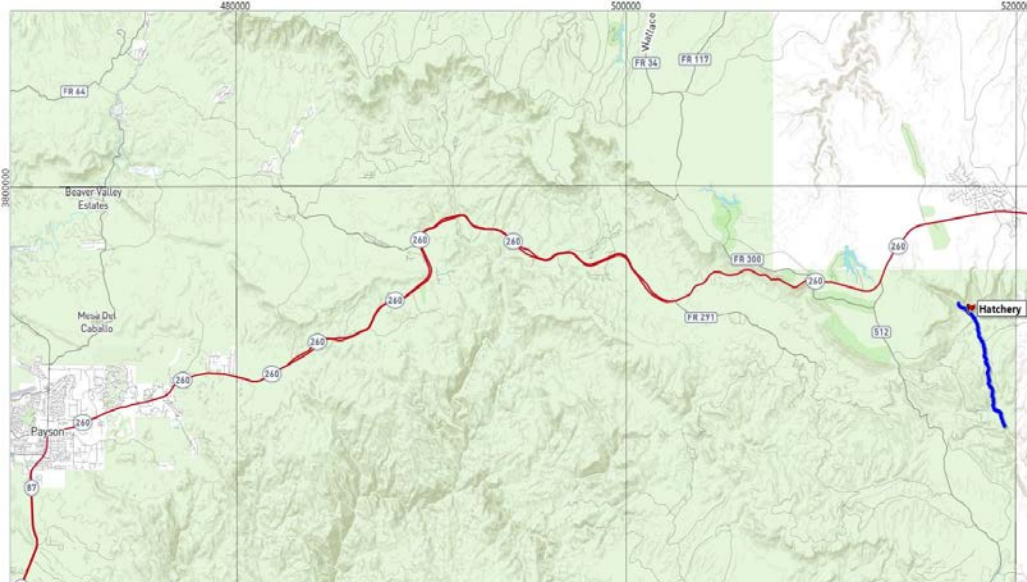
Kassandra Cole - R6 Aquatic Specialist II





Canyon Creek





May 2023 - Summary

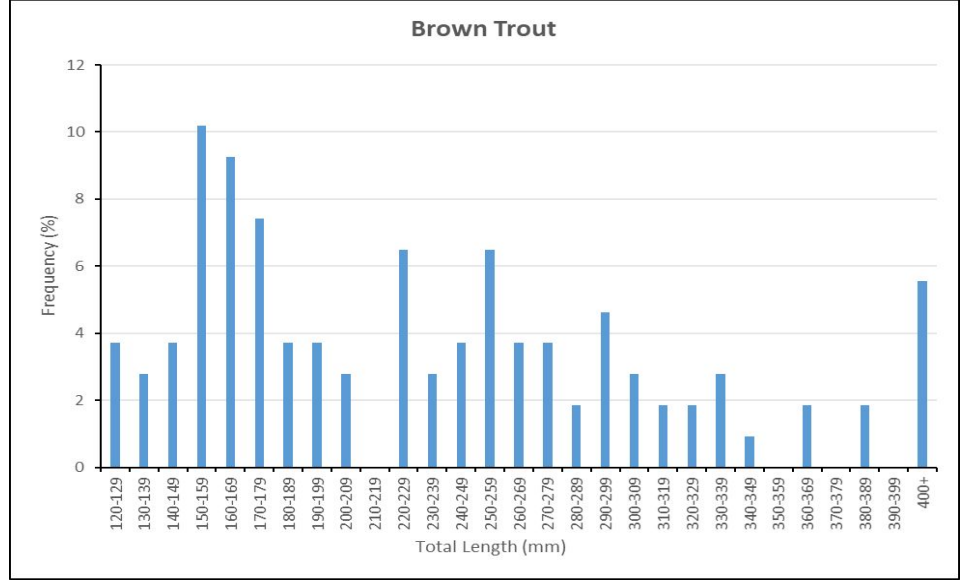
Brown trout population survey

- Last surveyed 2022
- 7 Historical sites
- Multiple high water events
- Caught 108 Brown trout - all sites
 - Mean CPUE: 23 fish/hr
 - No young-of-year
 - Max length: 18.5 inches
- Decreased catch rates but likely a stable population
- Stocked 1,000 fingerling Brown Trout
- Next survey in 2024, NZMS monitoring, Habitat Improvements
- Tagging and Movement Study

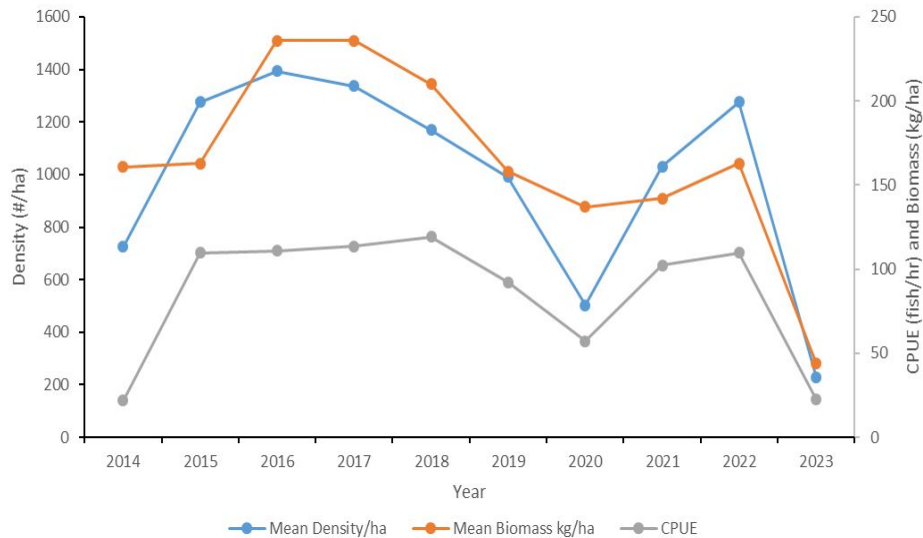


Population Trends

- Lower catch rates due to high flow events
- Strong age 1 and 2 classes
- Increased redds and spawning activity
- Larger fish!
- Relative abundance inversion: more native fish



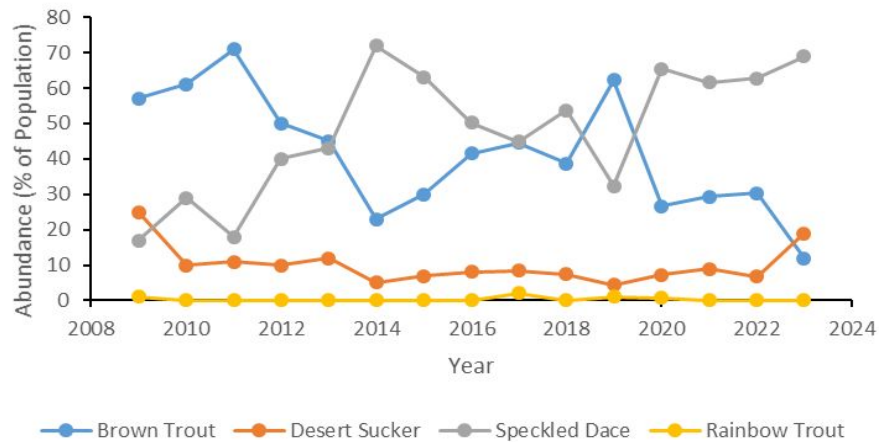
Brown Trout



Brown Trout



Relative Abundance (%)

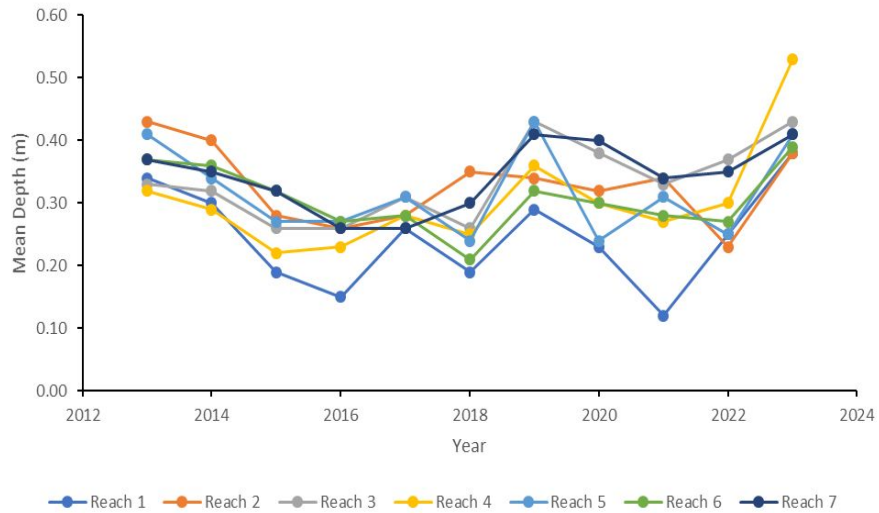


Habitat Trends

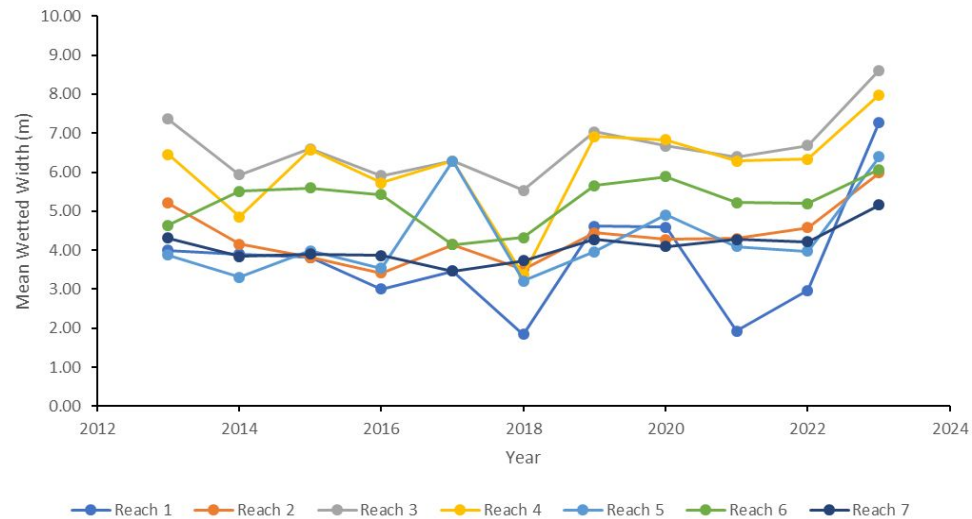
- Habitat Improvements between 2013-2016
- Stream channel shifts
- Recent high flow events:
 - 2018
 - 2019
 - 2020
 - 2022
 - 2023
- Lower width:depth ratio - Stream is becoming deeper and narrower
- Stream bank erosion: improvements planned for 2025 or 2026 below OW Bridge
- Adding trial “cover” habitat component in future surveys



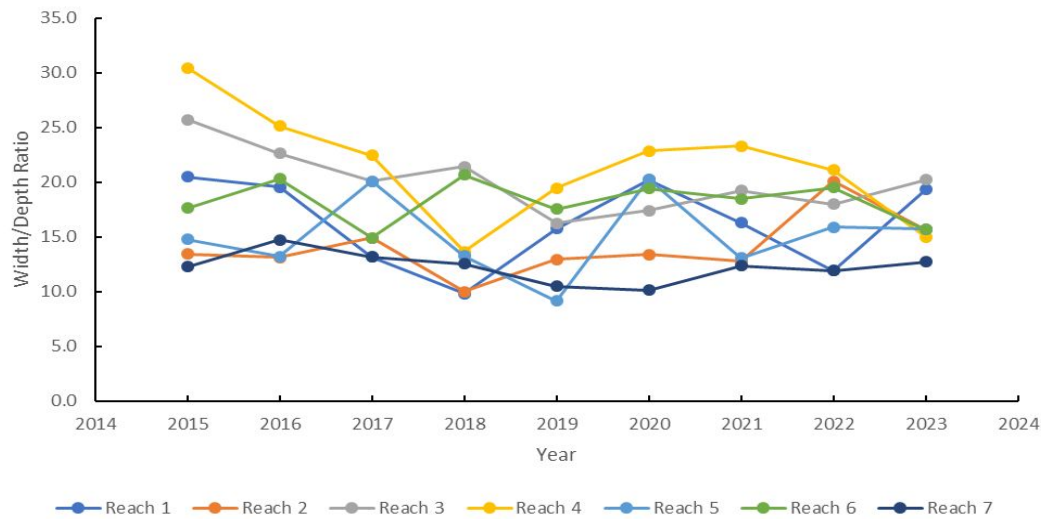
Canyon Creek Depths

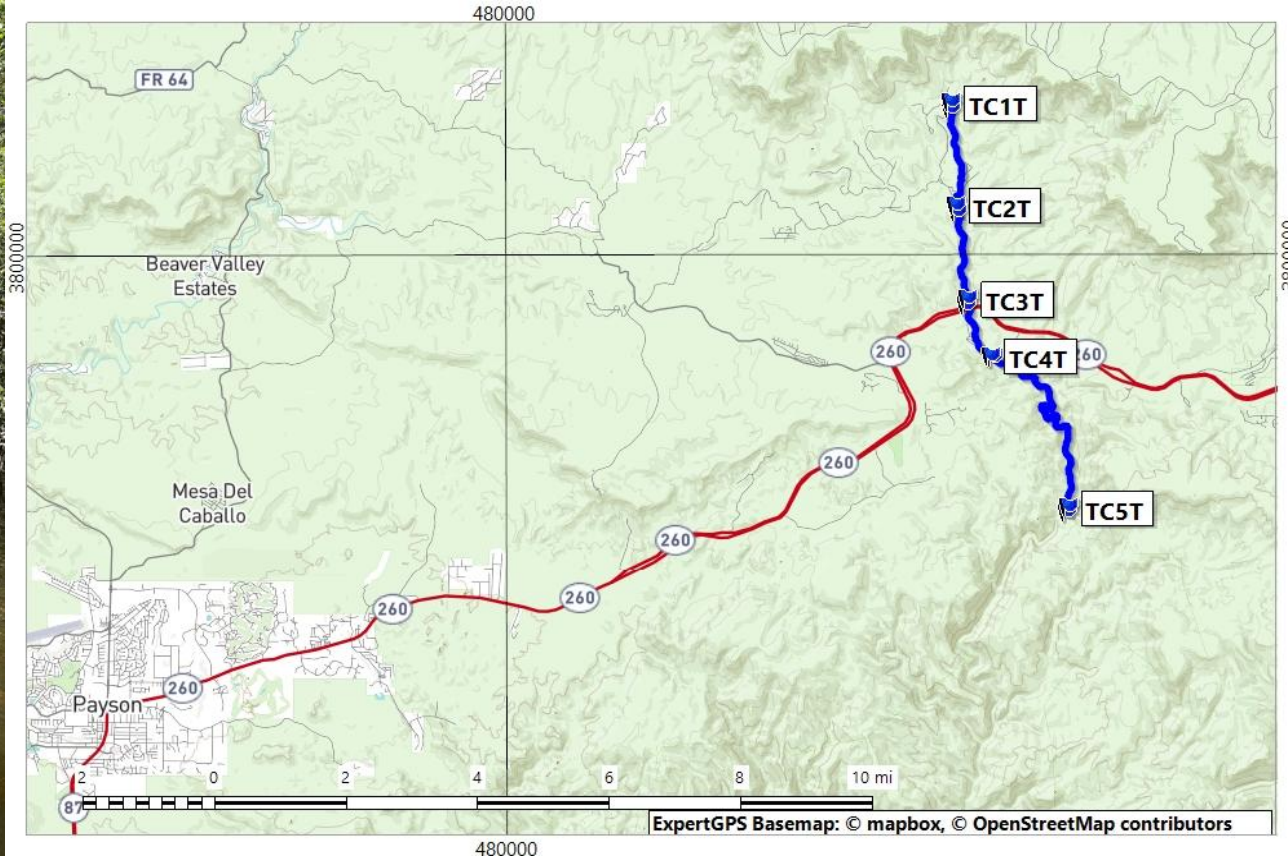


Canyon Creek Wetted Widths



Canyon Creek Habitat





Tonto Creek



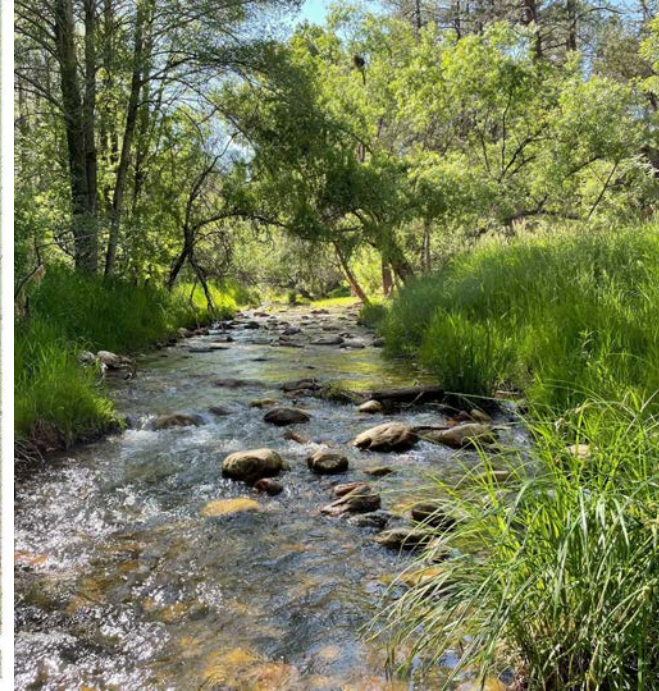
May/June 2023 -

Rainbow and Brown trout
population survey

- Last surveyed 2019
- 5 Historical sites

Brown Trout

- Caught 114 Brown trout -
TC3, TC4, TC5
 - Mean CPUE: 55 fish/hr
 - One young-of-year
 - Max length: 17.7 inches
- Stable population
- Next population survey in
2025, NZMS monitoring





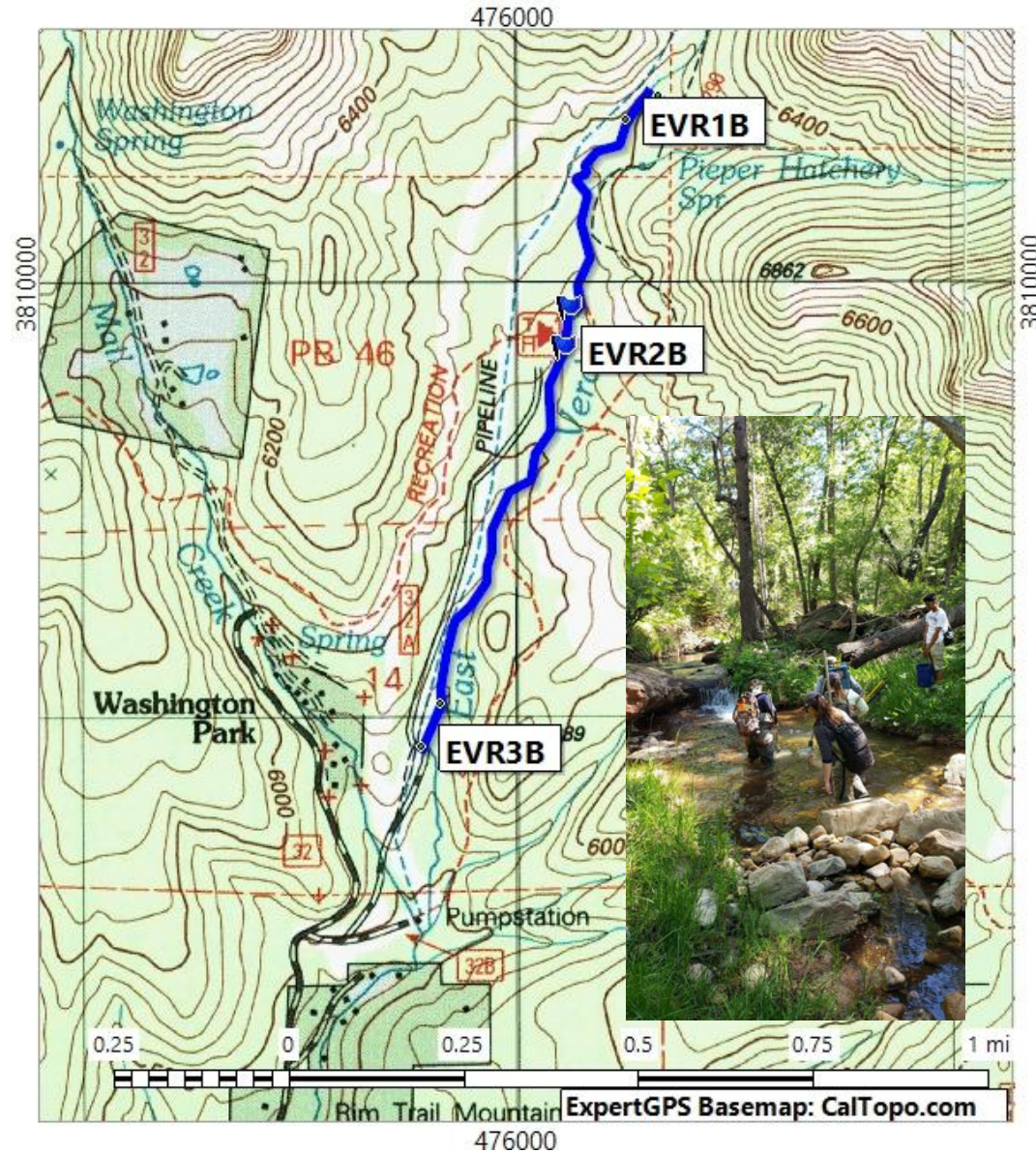
Upper East Verde River

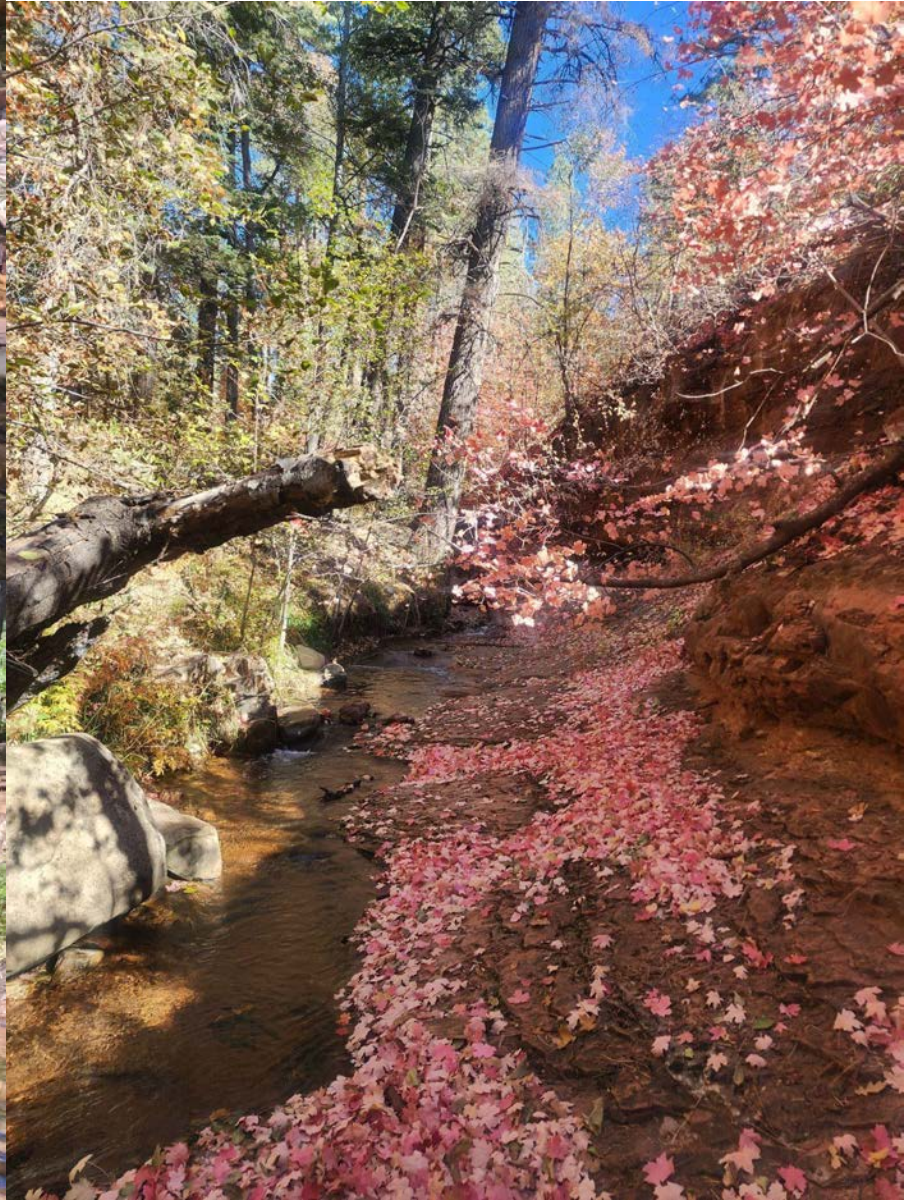


May 2023 -

Rainbow trout population survey

- Last surveyed 2016
- 3 Historical sites
- Caught 87 trout - all sites
 - Mean CPUE: 76 fish/hr
 - No young-of-year
 - Max length: 10.0 inches
- Increasing population since Water Wheel Fire in 2009 - fish distribution downstream
- Next survey in 2025







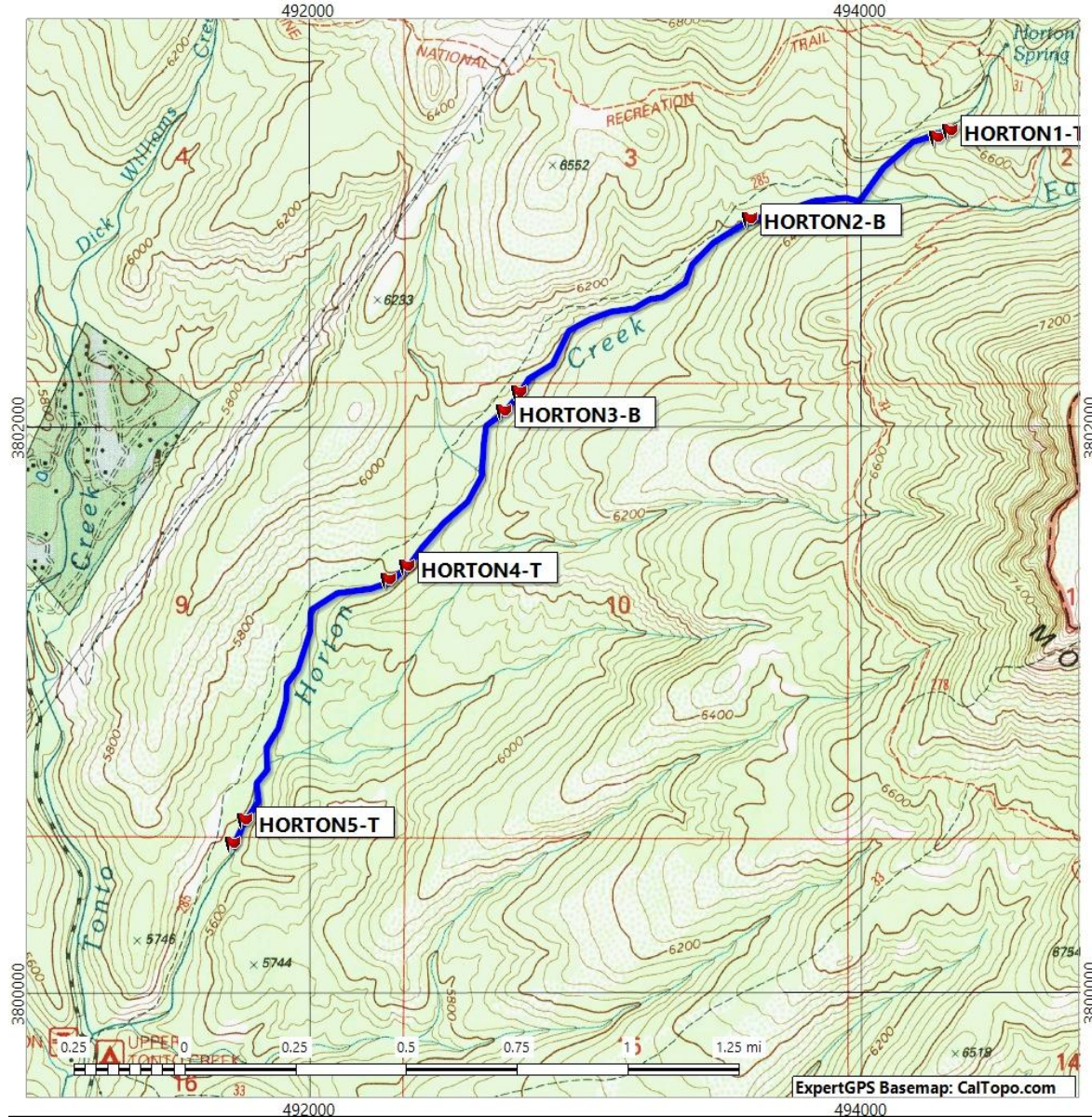
Horton Creek



June 2023 -

Brown trout population survey

- Last surveyed 2019
- 5 Historical sites
 - Mean CPUE: 138 fish/hr
 - No young-of-year
 - Max length: 13.0 inches
- Increasing population since Catch and Release - double average biomass and density since 2019
- Next population survey in 2025, NZMS e-DNA sample in summer 2024





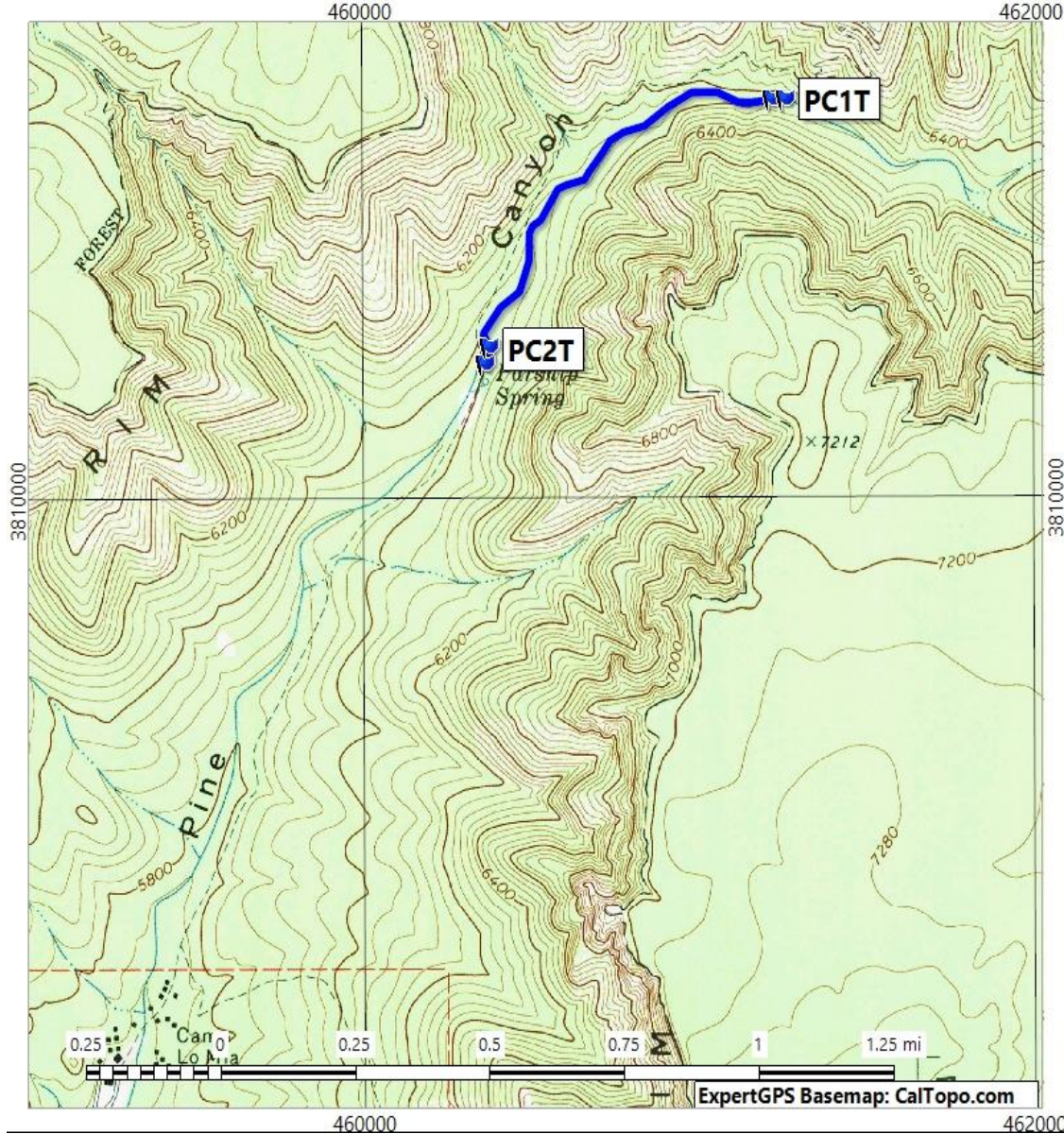
Pine Creek

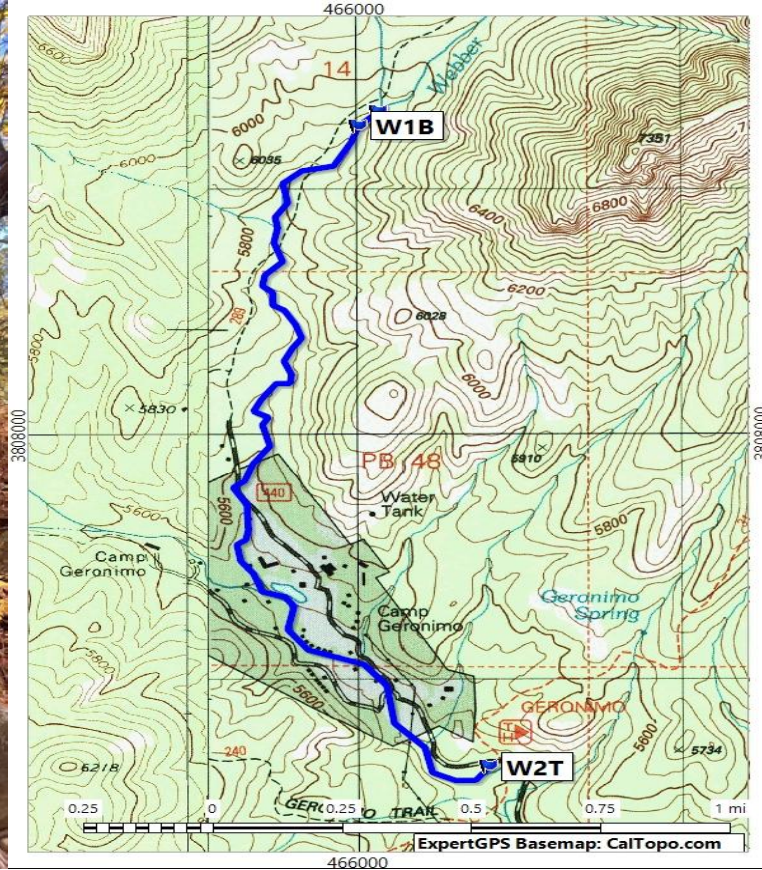


June 2023 -

Rainbow trout population survey

- Last surveyed 2015
- 2 Historical sites
- Caught 76 trout - both sites
 - Mean CPUE: 107 fish/hr
 - No young-of-year
 - Max length: 8.9 inches
- Stable population
- Next survey in 2025





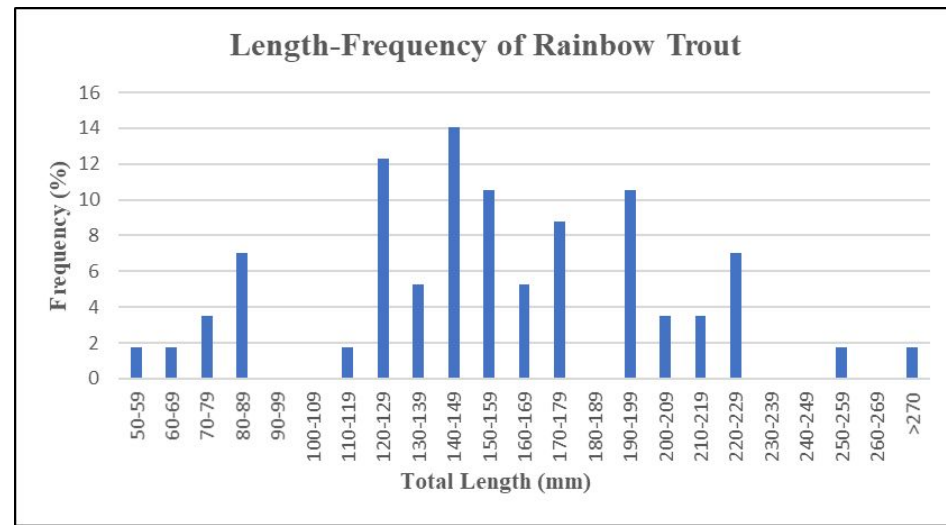
Webber Creek



November 2023 -

Rainbow trout population survey

- Last surveyed 2015
- 2 Historical sites
- Caught 57 trout - WC 1 only
 - Total CPUE: 112 fish/hr
 - 8 were young-of-year
 - Max length: 11 inches
 - WC2 contained only Speckled Dace
- Increasing population
- Next survey in 2025
 - Added sites, temperature profile





Workman Creek



August 2024 - Rainbow trout population survey

- Last survey in 2018
- 2 Historical survey sites
- Site 1 caught 13 Rainbow Trout
 - 9 were young-of-year
 - Max Length: 12.0 inches
- Site 3 Dry with isolated pools. No fish caught

March 2024 - stocked with 1,500 Gila Trout fingerlings upstream of FS288 to Workman Creek Falls

May 2024 - Spring population survey, new survey sites

Report in progress





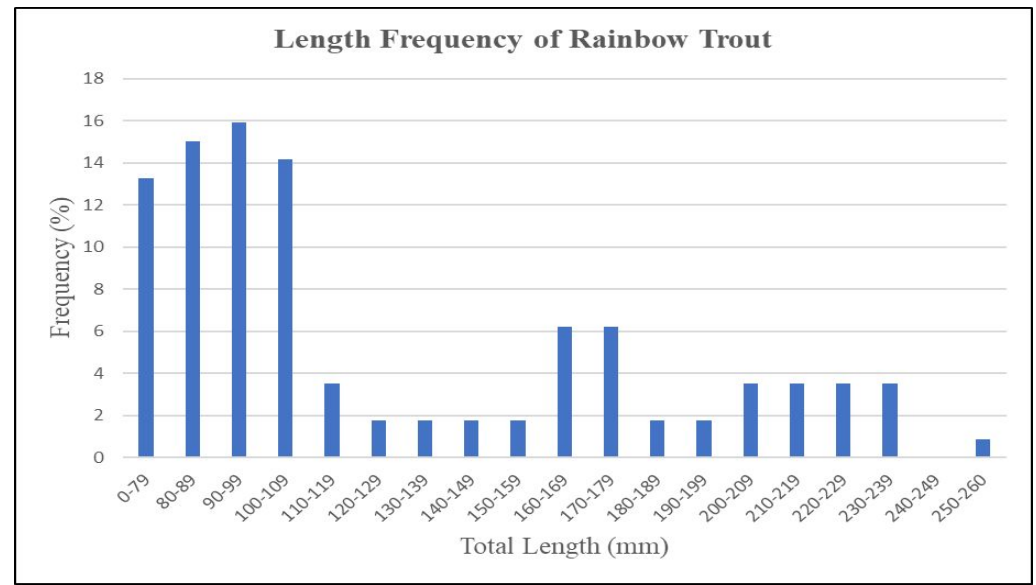
Sycamore Creek



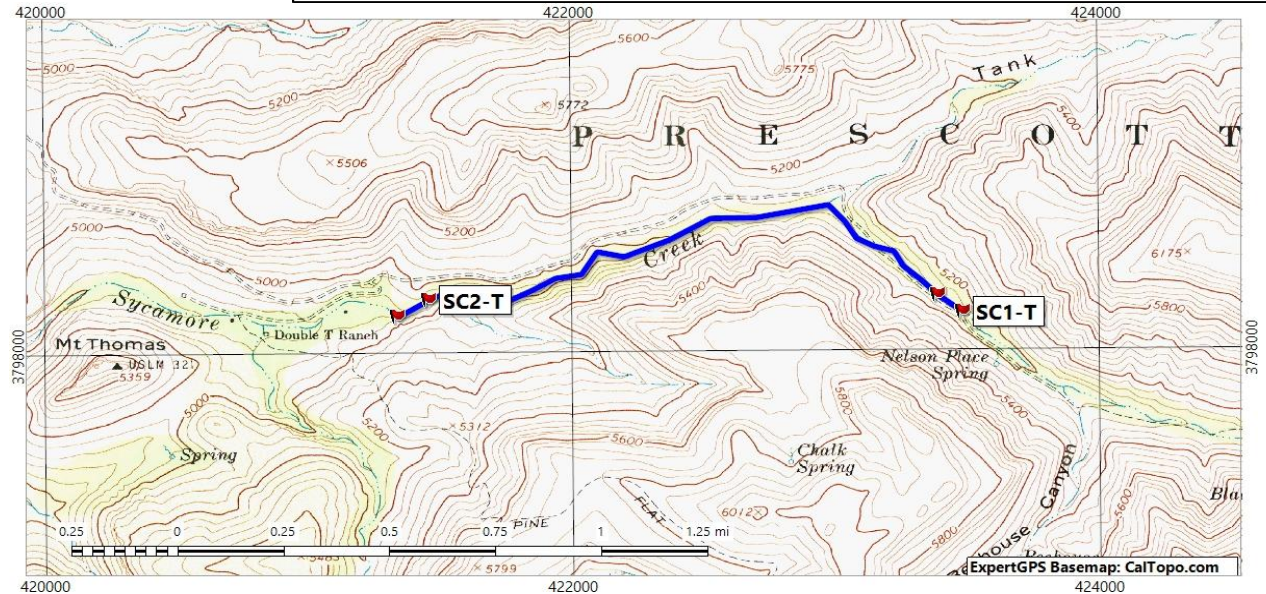
October 2023 -

Rainbow trout population survey

- Last survey in 2016
- 2 Historical survey sites - dry between sites
- Caught 113 trout - both sites
 - 67 were young-of-year
 - Mean CPUE 121 fish/hr
 - Max length: 10.1 inches



Report in progress



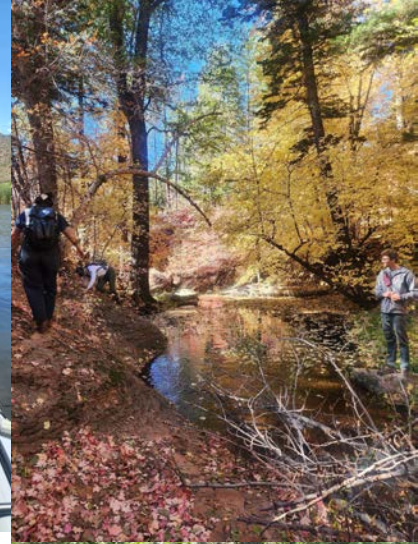
Upcoming Surveys

- Canyon Creek
- Tonto Creek
- Haigler Creek
- Mule Creek
- Christopher Creek
- Ellison Creek
- Bonita Creek
- East Verde River
- Workman Creek
- Reynolds Creek
- Salome Creek





THANK YOU



Natural Channel Design
Engineering





Questions?

Contact:

Kassandra Cole

kcole@azgfd.gov 480-324-3544

Amberle Jones

akjones@azgfd.gov 480-324-3545

