

Stevens Creek Fish Monitoring and Trends

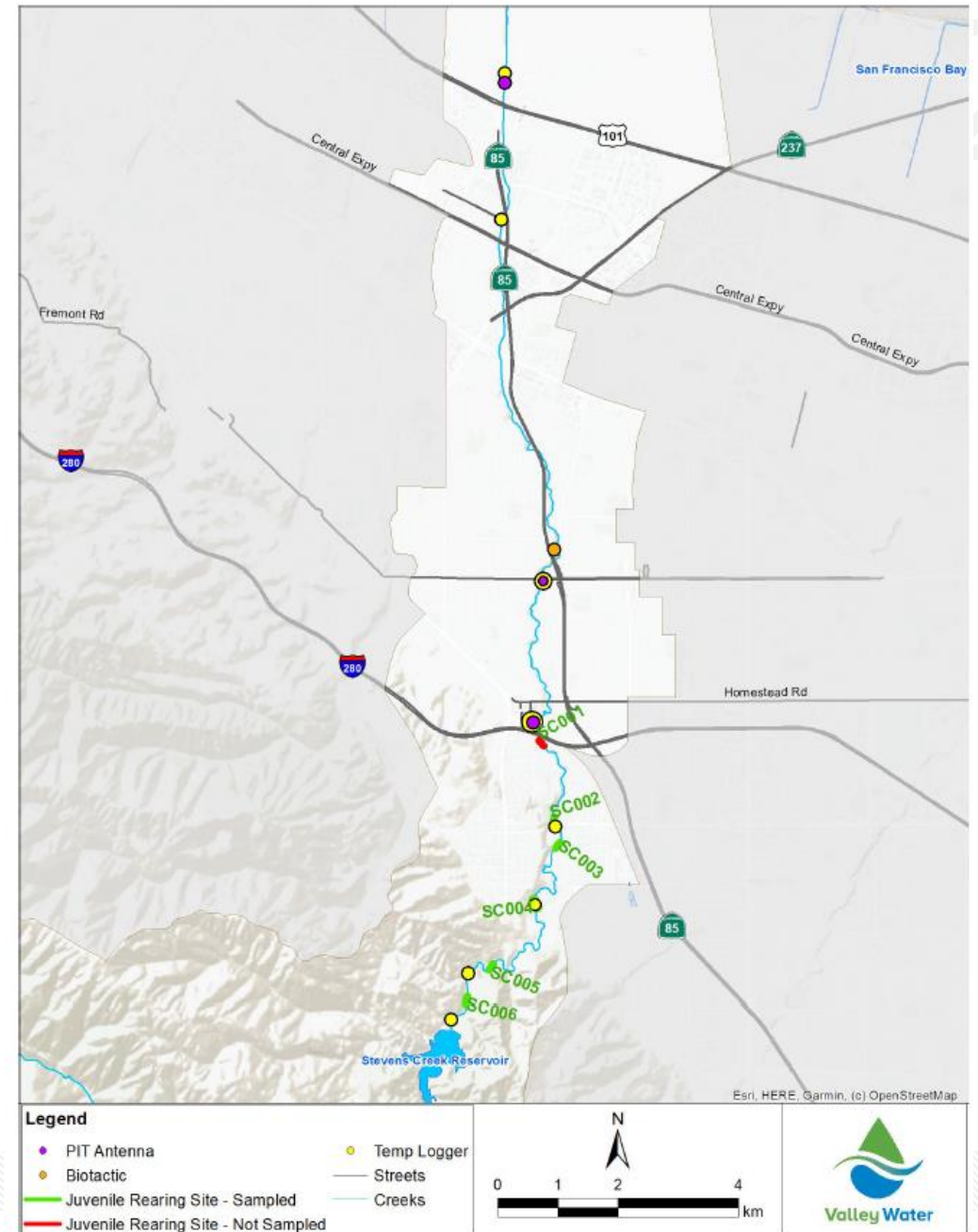
Clayton Leal

Valley Water



Fish Monitoring

- Focuses on distribution and densities of all fish and assesses condition, migratory timing, and habitat use of steelhead/rainbow trout.
- The program has five main monitoring components:
 1. Juvenile steelhead migration
 2. Adult steelhead migration
 3. Fish species density and composition
 4. Juvenile steelhead body condition analysis
 5. Stream temperatures



Shoutout to biologists conducting this work!

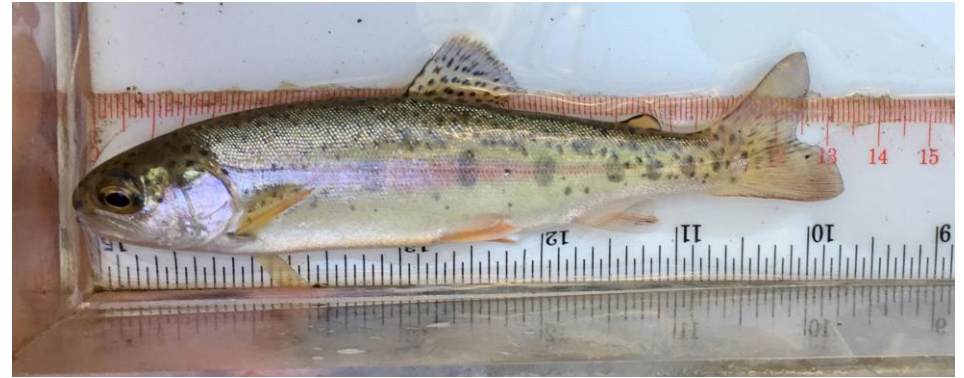


valleywater.org

Stevens Creek Watershed Fish Assemblage

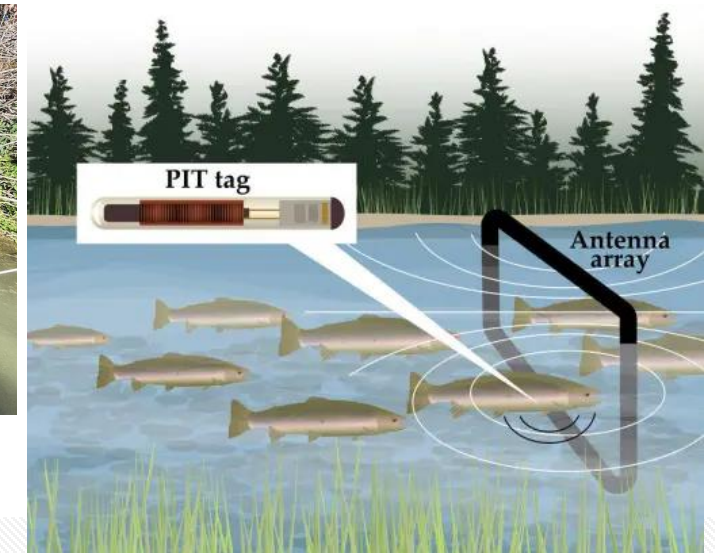
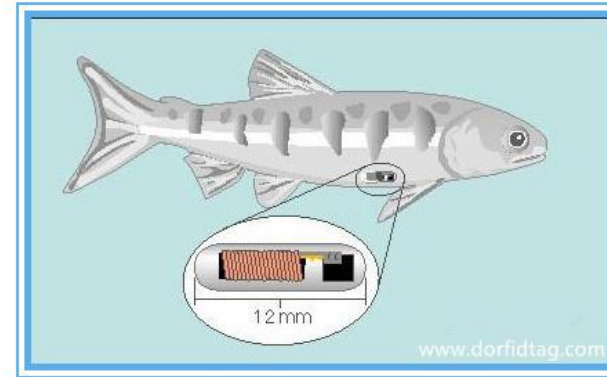
4

- Four species are consistently present in Stevens Creek:
 - Steelhead/rainbow trout
 - Sacramento sucker
 - Southern coastal roach
 - Three-spine stickleback
- Non-native species such as largemouth bass, black crappie, bluegill, common carp and catfish species are found in Stevens Creek Reservoir.



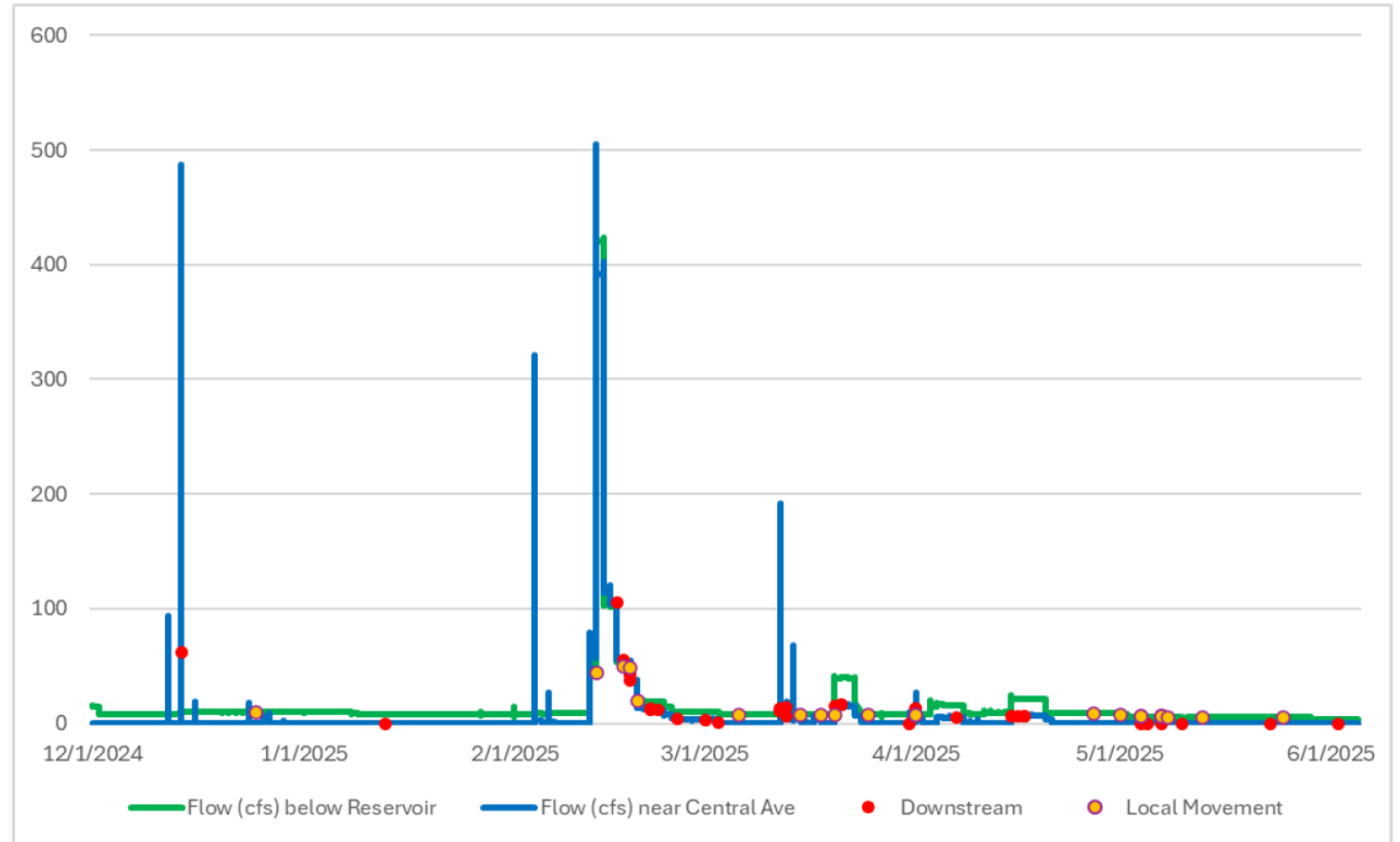
Steelhead Migration Monitoring

- Juveniles are tagged with Passive Integrated Transponder (PIT) Tags.
- Stevens Creek has three PIT antenna Stations to track migration.
- Automated fish counter for adult migration monitoring.



Juvenile Migration Monitoring

- 62 individuals were detected in 2024-2025 season.
- 39 showed downstream movement.
- 23 individuals showed local movement (downstream then went back upstream).
- Downstream movement was recorded as early as December, but peaked February-April.



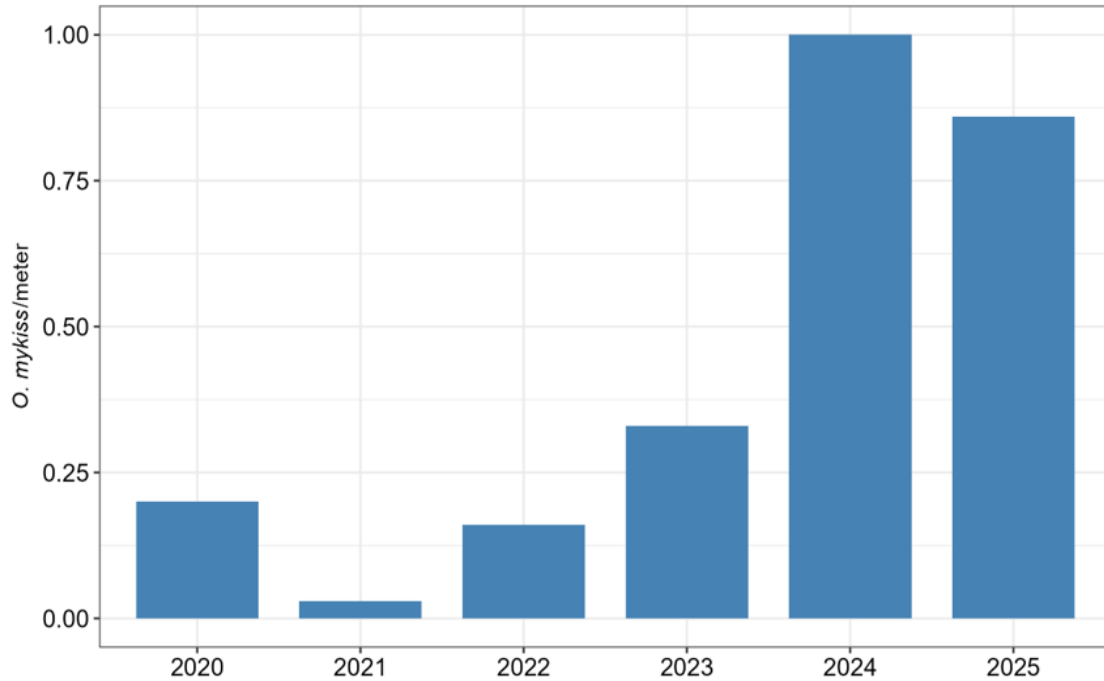
Fish Density and Composition Monitoring 7

- Annual electrofishing at established index sites.
- Provides data on:
 - Fish assemblage
 - Distribution
 - Body condition
 - Age structure
 - Growth
- Provides opportunity to PIT tag fish.

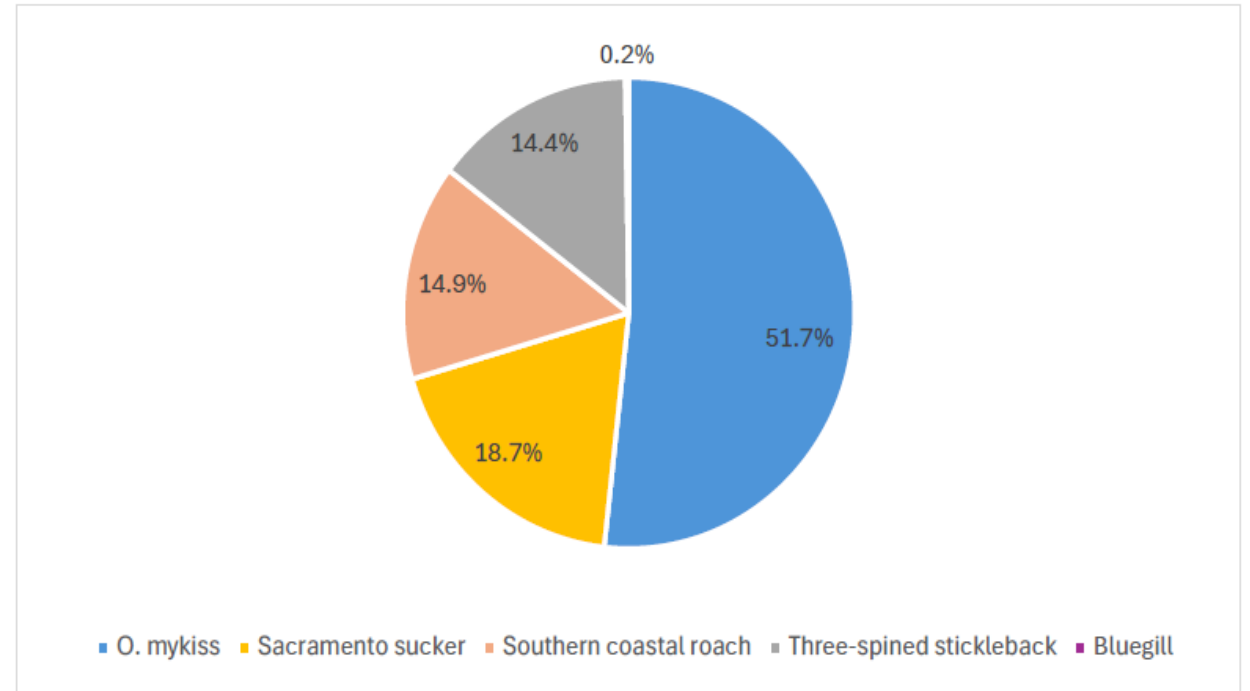


Fish Density and Composition Monitoring

O. mykiss Density (fish per meter) 2020-2025



Species Composition 2025



Fish Body Condition Analysis

- Represents the nutritional state of fish calculated based on measures of length and weight.
- Optimal condition is defined as a relative weight (W_r) of 95-105%, indicative of good condition and adequate food supply.

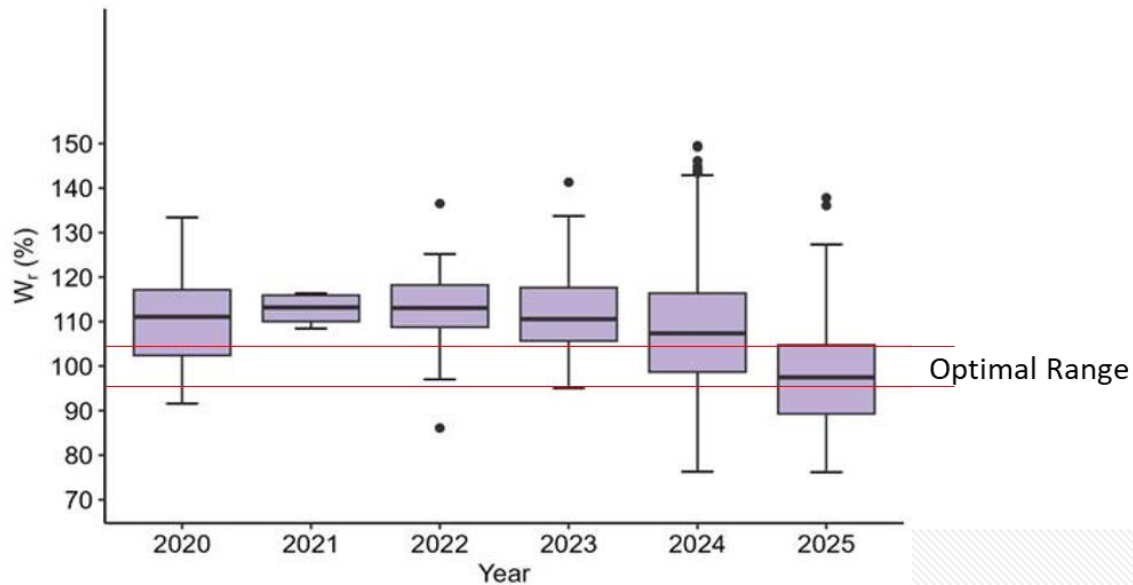
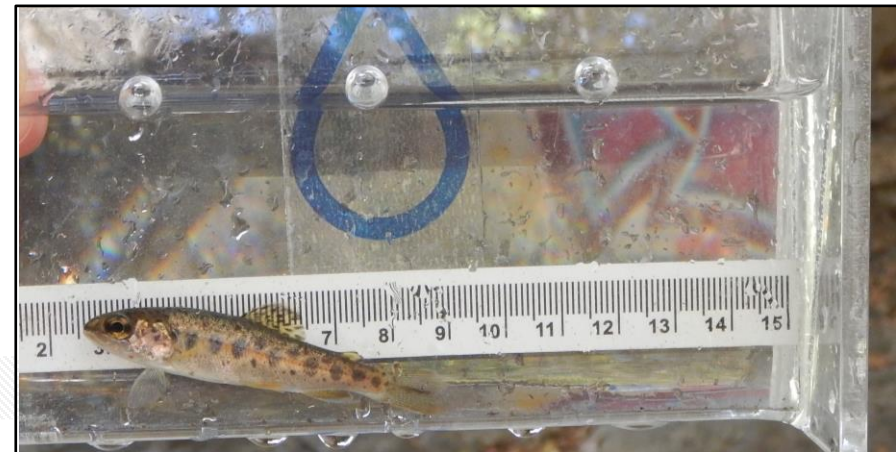


Photo from: Idaho Game and Fish

Summary

- Healthy native fish community persists.
- *O. mykiss* density in 2025 was over 2.5 times the recorded average.
- Successful *O. mykiss* reproduction and rearing has been observed in every year.
- A strong rebound occurred after extreme drought conditions.
- *O. mykiss* are in good body condition.
- Juvenile outmigration was documented.

Still more we hope to learn and we are improving our data collection efforts in each year.



Habitat Enhancements



STEVENS CREEK

Large Woody Debris and Gravel Augmentation at Stevens Creek



Looking perpendicular to channel prior to large woody debris installation.



Looking perpendicular to channel after large woody debris installation.



Looking downstream at riffle prior to gravel and large woody debris augmentation.



Looking downstream at riffle after gravel and large woody debris augmentation.



Large woody debris installed at the site.

For more information, visit us at valleywater.org/fahce.

Fish Passage Improvements

12



For more information, please visit us at: <https://www.valleywater.org/project-updates/creek-river-projects/fahce-fish-and-aquatic-habitat-collaborative-effort>



Before



After

For more information, please visit us at: <https://www.valleywater.org/project-updates/creek-river-projects/fahce-fish-and-aquatic-habitat-collaborative-effort>



Before



After