

# Stevens Creek Fish Passage

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Valley Water



## **Valley Water Fish Passage Recent Efforts**

### **2020: Fish Passage Assessment Study (AECOM and Michael Love and Associates)**

1. Investigated 38 fish passage impediments
2. Included topographic surveys and hydraulic modeling
3. Resulted in 16 impediments ranked against CDFW criteria

### **2021: Fish Passage Prioritization Assessment (Valley Water)**

1. Considered additional logistical constraints (i.e., non-fish passage factors) for each of the 16 sites.
2. Included construction access, right-of-way, maintenance cost

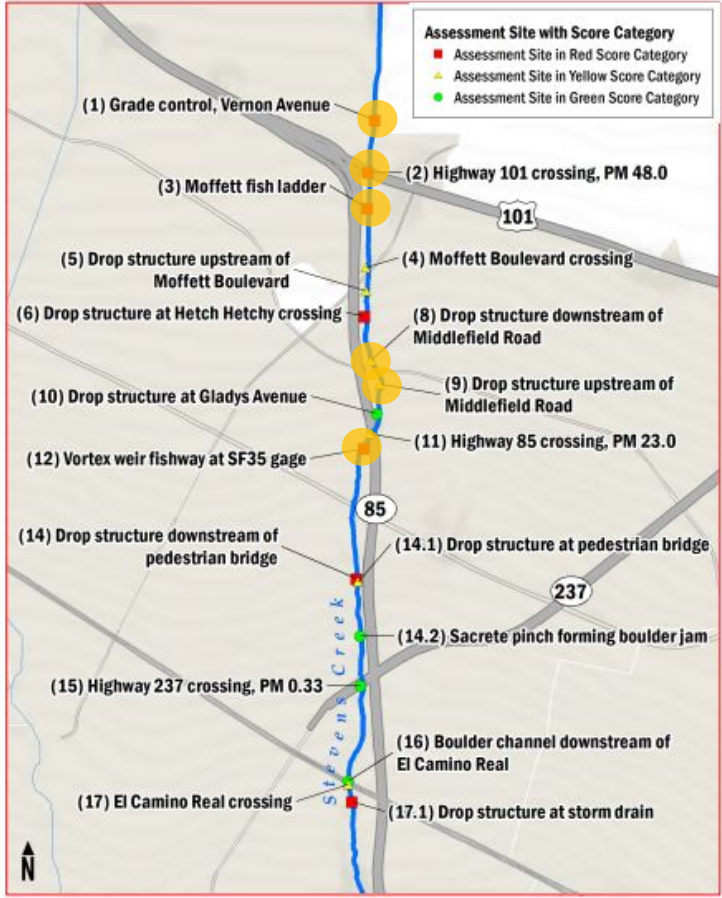
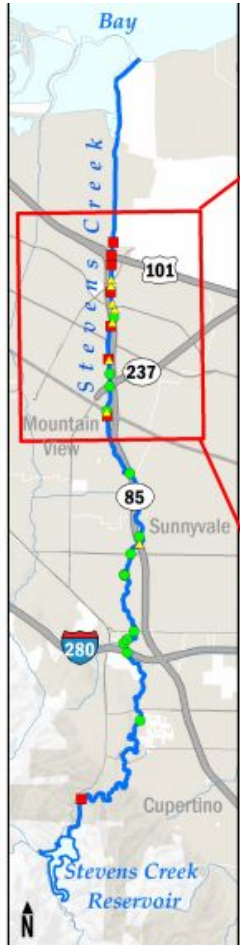


# Ownership

\* Valley Water holds Easement or Fee ownership for 5 of the 16 highest prioritized fish passage impediments.

- 1. Gage 35 at Central Avenue (Ranked #5)
- 2. Vernon Avenue (Ranked #7)
- 3. Moffett Fish Ladder (Ranked #8)
- 4. Middlefield Road Downstream (Ranked #10)
- 5. Middlefield Road Upstream (Ranked #11)

\* The most Prioritized fish passage impediment is Hwy 101 which is owned by Caltrans



# Hwy 101

- \* Owned by Caltrans
- \* The most significant fish passage impediment in the lower watershed
- \* Valley Water reached out to Caltrans in 2021 to explore planning a project at Hwy 101.
- \* Caltrans is interested to improve fish passage.
- \* The planning and coordination will take about 5 years to complete
- \* The scale of cost and planning for Hwy 101 makes it a strong candidate for multi-agency coordination.

Looking downstream at Highway 101 inlet (a) west culvert and (b) east culvert, with inlet drop in foreground



a. b.

Highway 101 (a) culvert outlet looking upstream and (b) grouted rock veins looking downstream



a. b.



# Evelyn Avenue

## Background:

- \* Pre 2015: There were two concrete grade control weirs beneath the series of bridges.
- \* 2015: Valley Water replaced the weirs with concrete and sheet pile grade control features to improve fish passage.
- \* 2017: The project suffered loss of materials due to high flows.
- \* 2026: Valley Water will construct a new nature-like channel with bank stabilization and rootwad habitat features.



# Evelyn Avenue

## Objectives:

### \* Nature-Like Channel

Place approximately 7,000 tons of boulders and native creek bed materials for a 650-foot-long roughened channel.

### \* Slope Protection

Includes flattening the slope, placing rock, and planting new grass on the upper slope area.

### \* Fish Habitat Structure

Includes two rootwads and a footer log anchored with cables at the slope stabilization location.

### \* Boulder Bypass Weir Rebuild

Will divert high flows during storms and repairs to the boulder weir.



# Moffett Avenue

## Project Goals

- \* Improve the drop structure for fish passage.
- \* Construct a fishway with minimal operational and maintenance work requirements.
- \* Minimize impacts to Stevens Creek Trail users.



# Moffett Avenue

## Staff-Recommended Alternative

- \* A series of vortex weirs with a high flow bypass bench
- \* Based on the Gage 35 design with improvements in leaping heights and energy dissipation.
- \* Minimizes the need for in channel maintenance work which would be difficult given site utilities.

