



SANTA ANA WATERSHED
PROJECT AUTHORITY

4. 2025 Riverwalk Pilot Data

Santa Ana Sucker Team Meeting
March 13, 2025



Purpose of Presentation



- Provide an update on the first results of the winter pilot survey and lessons learned.

Special thanks to Orange County Water District, San Bernardo Valley Municipal Water District, Colton Police Department, Riverside County Regional Park & Open-Space District, and U.S. Fish and Wildlife Service for making the pilot survey on February 3 and 4 happen!



City of Colton
POLICE

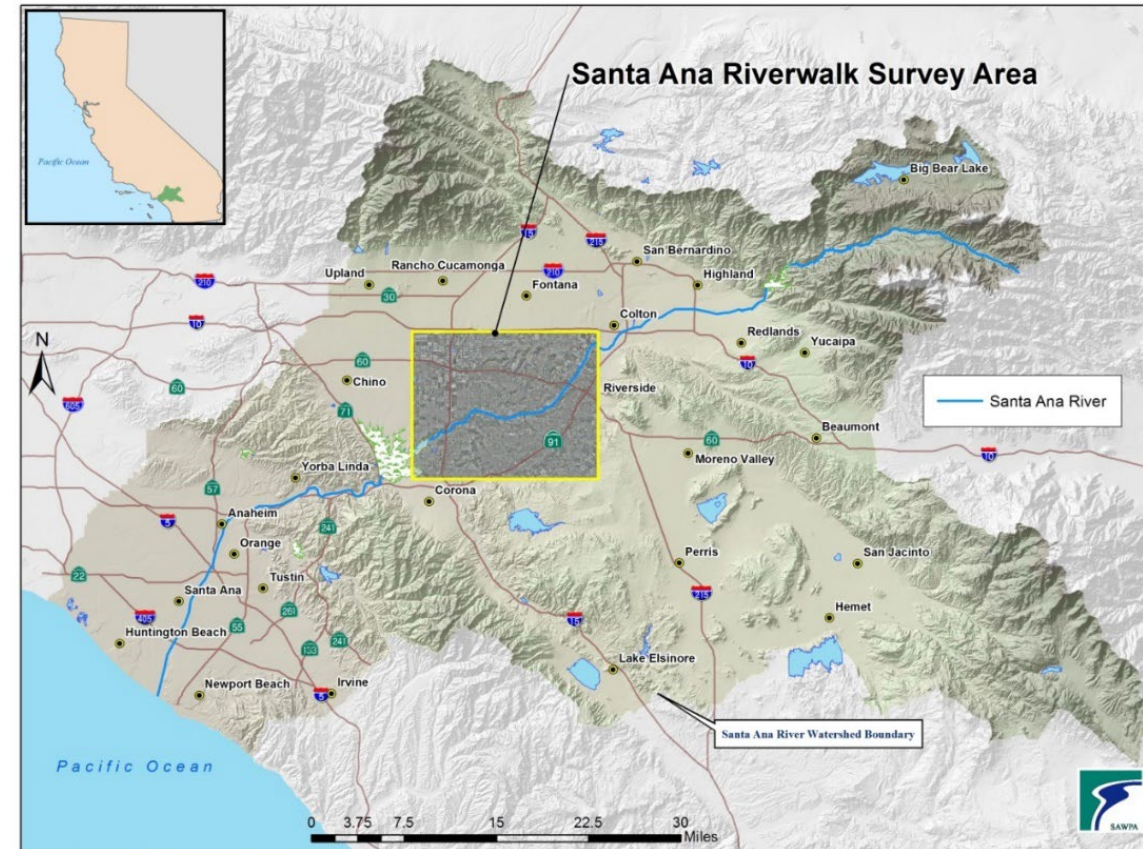
Scientific Purpose of Surveys

- Surveys are snapshots in time of vegetation canopy, river bottom substrate, river depth, and gravel bar locations during Fall (Oct/Nov) from 2006 to 2024
 - All categories are indicators of native fish habitat.
- Keep in mind these are surveys conducted by volunteers who have been trained via video and meetings with SAWPA.



Survey Location

- Since 2006, Riverwalk data has been collected during the fall at approximately the same geo-located points each year, with each point labeled with a designating number: one through 116.*
- This location was chosen because the River is perennially flowing here (i.e. downstream of Publicly Owned Treatment Works discharge points and rising groundwater).



*Points one through eight are often too dry to sample.

Substrate Analysis

- Past discussion at Sucker Team meeting was focused on understanding the possible changes in the River during other seasons, such as winter.
- Winter involves stormflows from precipitation.
- One of the conditions on the River that the Team can quantify relatively easily is the amount of surface water flowing. This is because there are several stream gages along the River that continually calculate surface water flow in cubic feet per second (CFS).



Credit: Press Enterprise

Purpose of Winter Pilot Survey

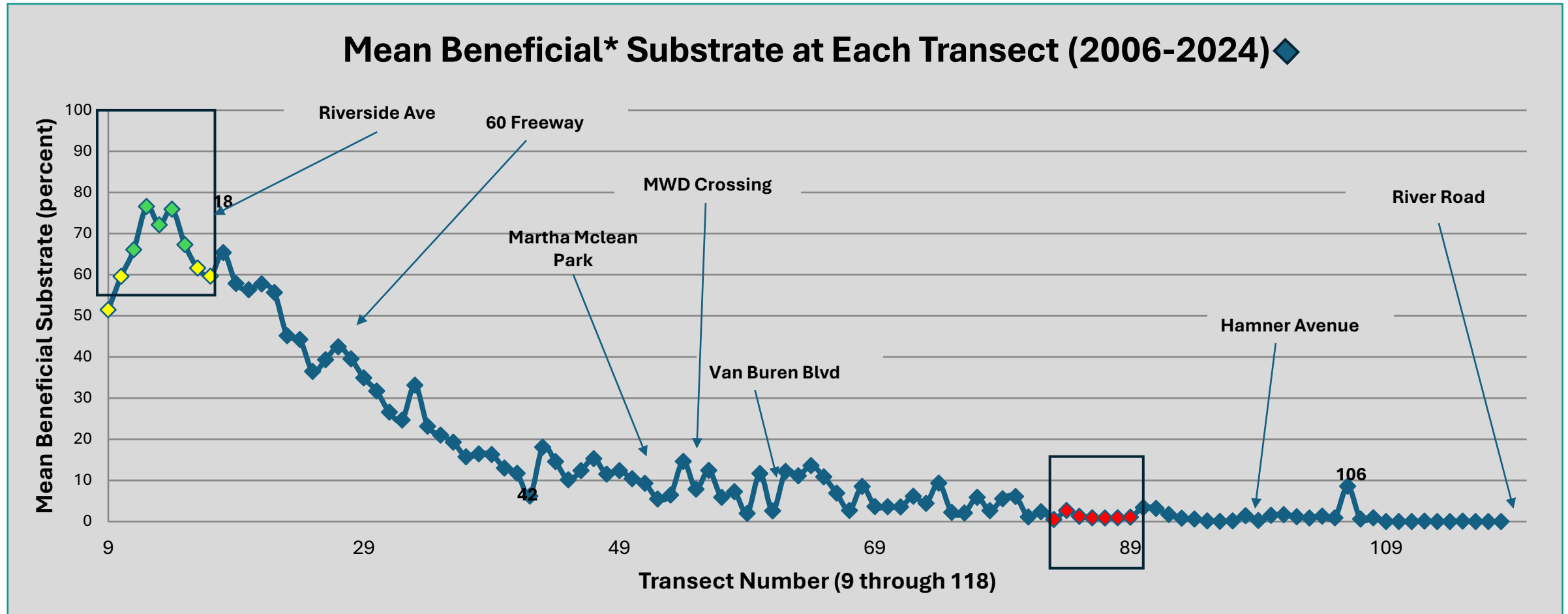
- Past surveys are snapshots in time of canopy, substrate, stream depth, and gravel bars during Fall (Oct/Nov) from 2006 to 2024
 - All categories are indicators of native fish habitat.
- A survey in the first quarter of the calendar year would provide a snapshot of those same items but **after stormflows** (if there are preceding storms in November, December, and early January)

Logistical Issues of Winter Survey

- Turbidity issues from stormflows (visually recognizing what material is on the River bottom is difficult).
 - For the last rainy season, River bottom visibility was an issue until June/July 2024 in certain sections.
- Discussed piloting sections of the River to avoid impacts to Sucker during spawning season (which can begin in February).
- Ensured surveyed sections are in locations where new river bottom material (i.e. sand, gravel, etc.) is likely entering the Riverwalk survey area and possibly creating different conditions seen in the fall-time timeframe.



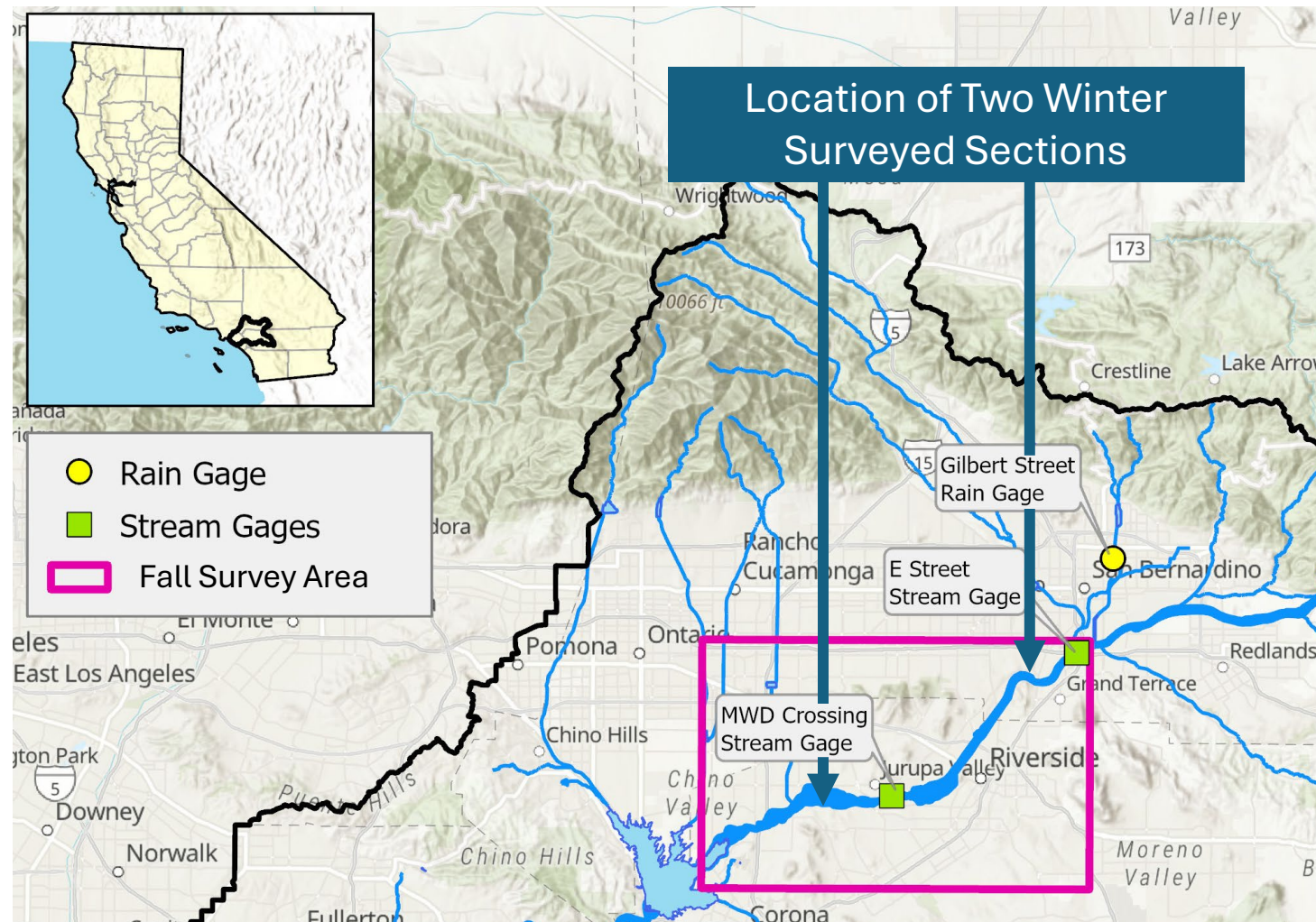
Finding the Right Sections to Survey



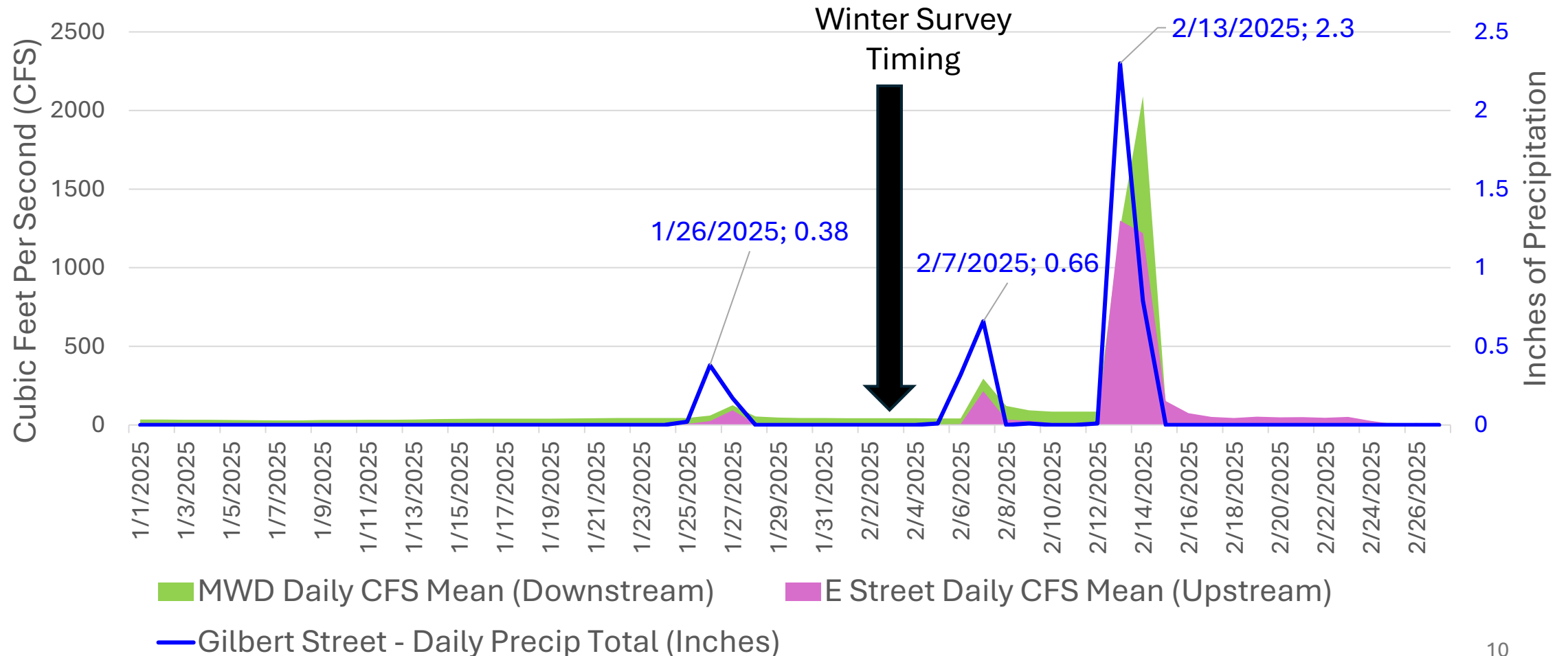
*"Beneficial" is sum of gravel, cobble and boulder detected visually at each transect point.

Survey Sections Along Santa Ana River With Nearby Stream/Rain Gages Shown

Note: Gilbert Street Rain Gage has been used as a proxy for rainfall in the area due to its use in other regional monitoring efforts. Other data sources can be used when further analysis is done.



Timing of Pilot Winter Survey

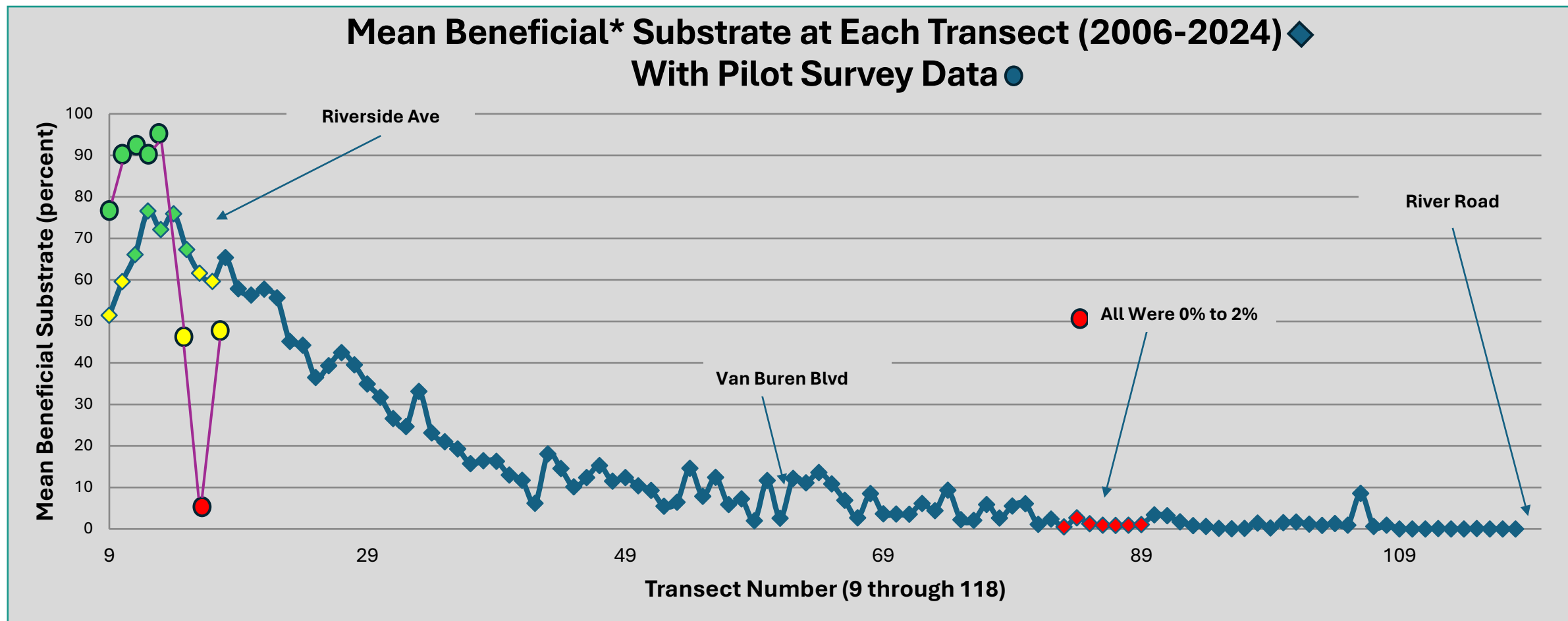


River Bottom Data Captured February 3 and 4 From Surveys



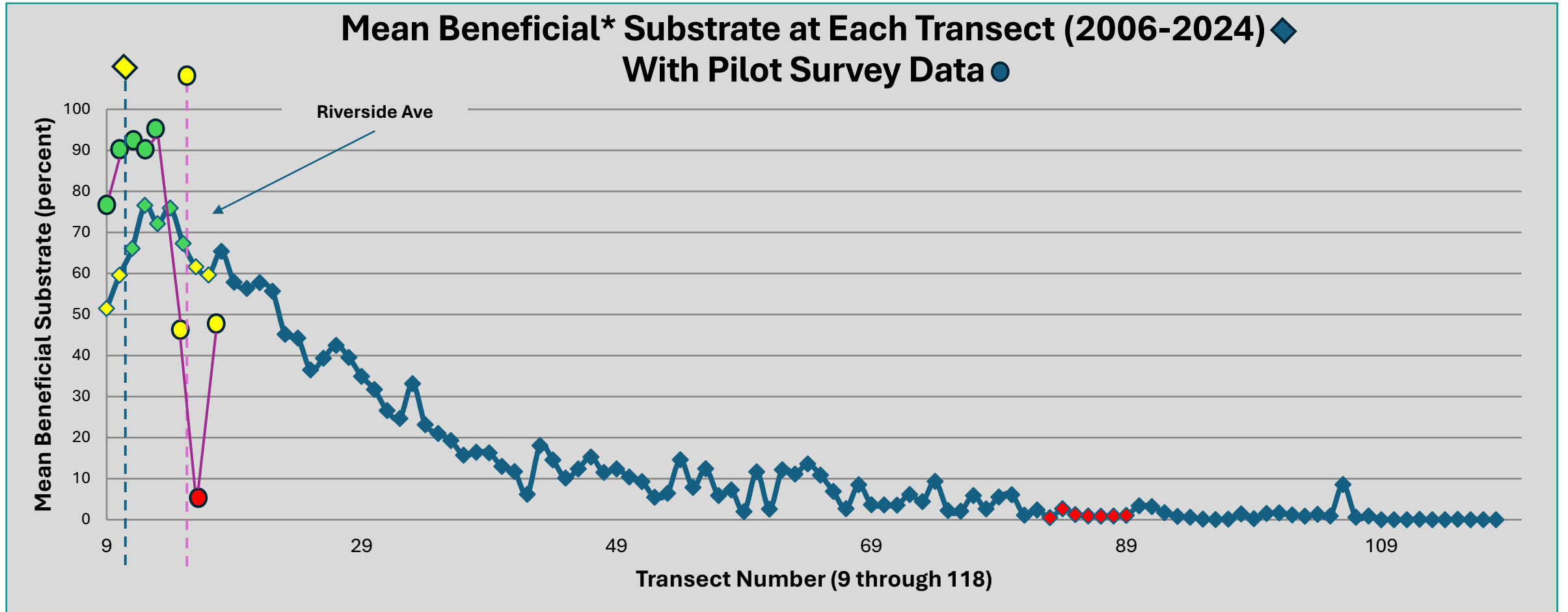
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Comparison to Pilot Survey Data



*"Beneficial" is sum of gravel, cobble and boulder detected visually at each transect point.

Change in Location of Substrate Change



*"Beneficial" is sum of gravel, cobble and boulder detected visually at each transect point.

Lessons Learned



Conservation Team

- Safety officers from Colton Police Department and Riverside County Parks were much appreciated for safety of surveyors.
- Flows from the only major storm that took place from November 2024 to January 2025 (on January 26, 2025) did not seem to move or uproot riparian vegetation.
- Turbidity was not an issue following the January 26 storm (could easily see the bottom).
- Initial conclusions are that most winter seasons have earlier larger storms
 - Team needs to possibly determine a precipitation “trigger” as well as which rain gage(s) to use.



Questions

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