



Valley Water

Clean Water • Healthy Environment • Flood Protection



Guadalupe and Upper Pajaro Watershed Plans

Board of Directors

April 9, 2024



Presentation Outline

- Watershed planning process
- Flood vulnerability assessment
- Priority actions



Watershed Master Planning engages the community and uses equitable metrics to identify flood protection and stream stewardship priority actions for a sustainable future.



Planning Framework: Objectives and Metrics

Water Supply



- Reservoir capacity
- Recycled water production
- Managed recharge capacity
- Annual water conservation

Water Quality



- Chemical integrity (e.g., pH, dissolved oxygen (DO), nutrients, pesticides, regulated contaminants)
- Biological integrity (e.g., bacteria, harmful algal blooms, invasive species, toxicity, fish tissue, mercury)
- Physical integrity (e.g., temperature, turbidity, trash)

Flood Risk Reduction



- Asset management
- Emergency action plans
- Flood forecasts
- Parcels subject to frequent flooding
- Flood risk in disadvantaged communities

Natural Ecosystems



- California Rapid Assessment Method (CRAM) scores
- Protected stream buffers
- Wildlife corridor enhancements
- Natural habitat area
- Invasive plant coverage
- Fish passage barriers
- Riparian corridor connectivity

Climate Change

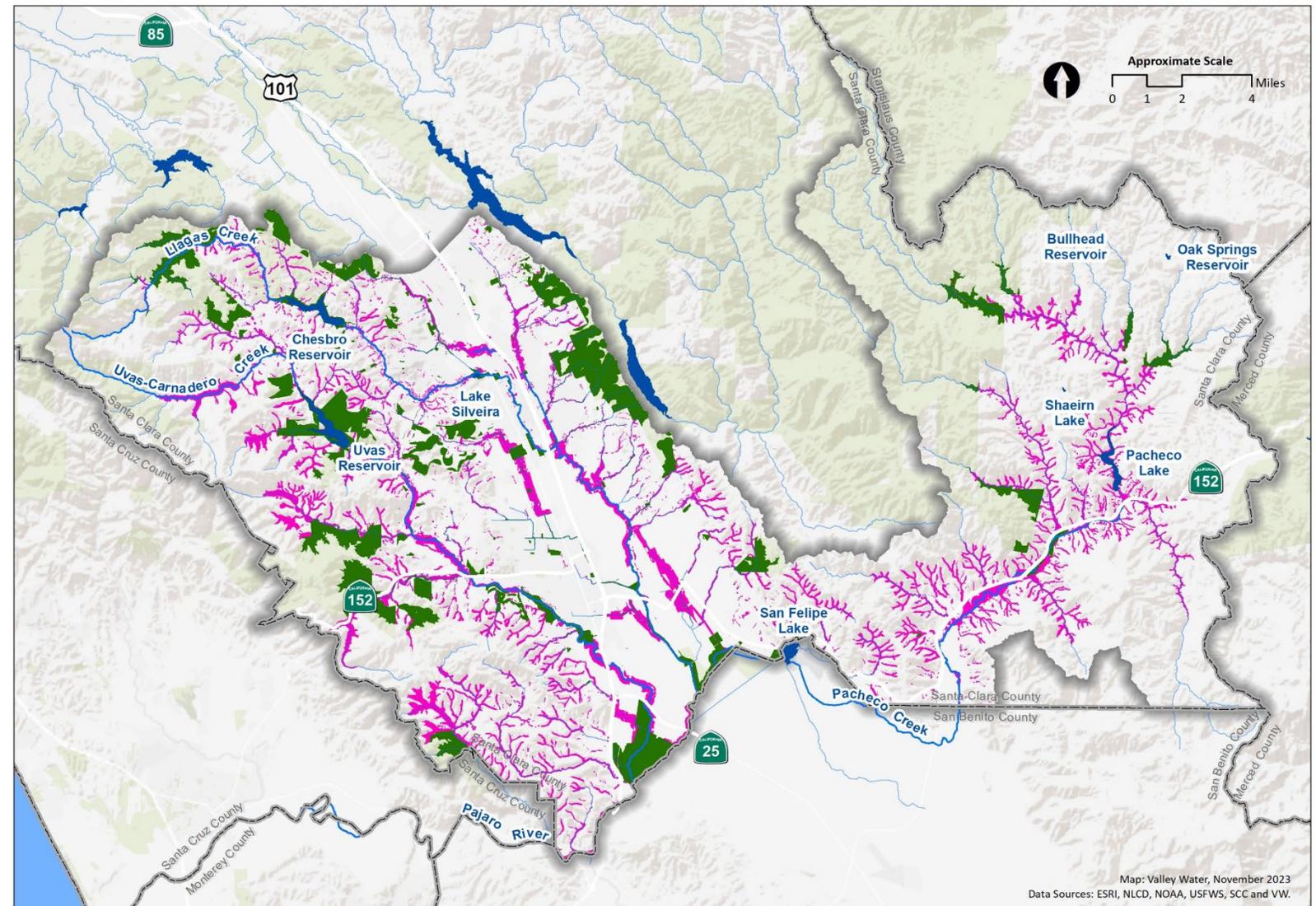


- Net GHG emissions
- Green stormwater infrastructure
- Annual water conservation
- Critical facilities subject to severe floods
- Stream channel length and connectivity

Example Metric: Stream buffers

Target: Achieve 50,000 acres
of protected land for the
mainstem and tributary
channels

- 32% Complete



Water bodies
Creeks

Upper Pajaro Riparian Area
Protected Buffer
Unprotected Buffer

Map: Valley Water, November 2023
Data Sources: ESRI, NLCD, NOAA, USFWS, SCC and VW.

**Upper Pajaro
Watershed**
Metric D.1.2: Protected Riparian Area

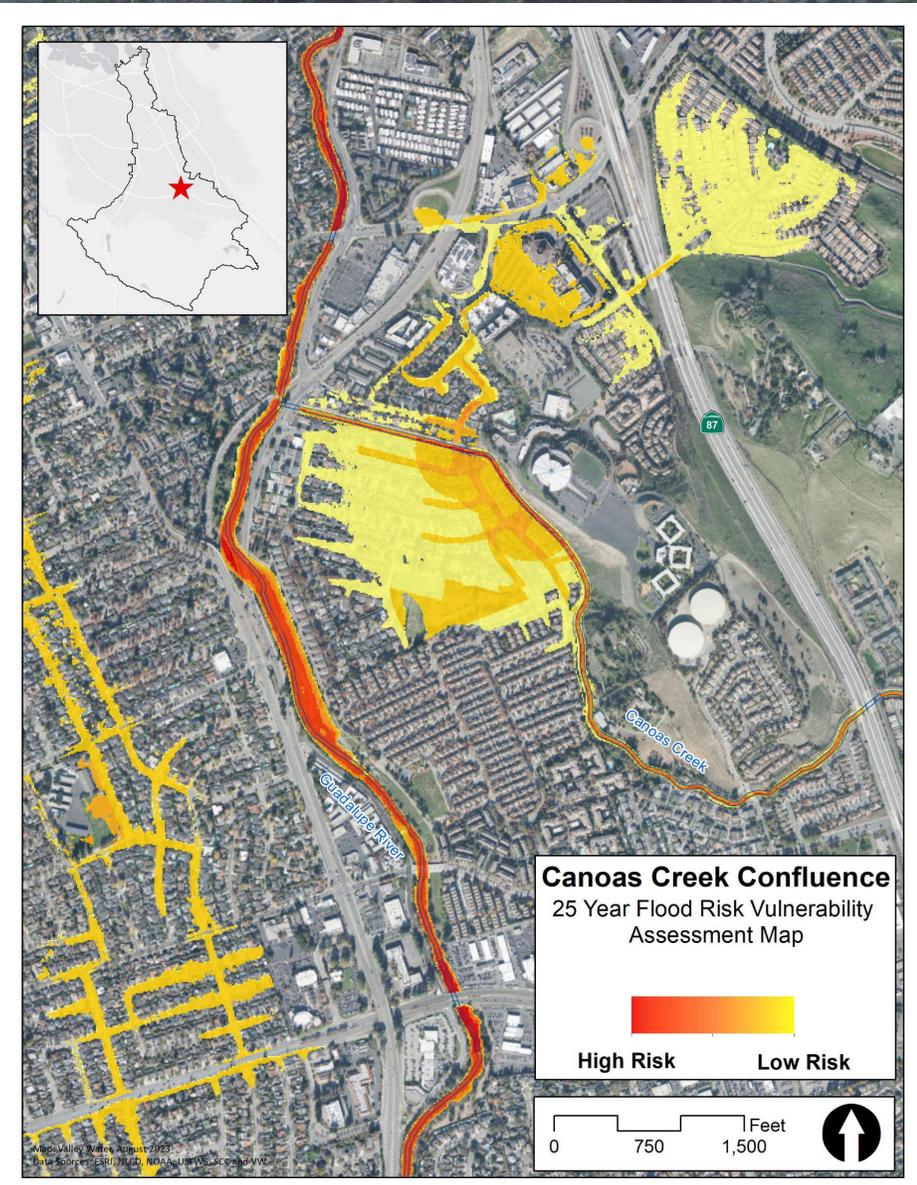
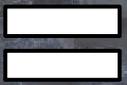
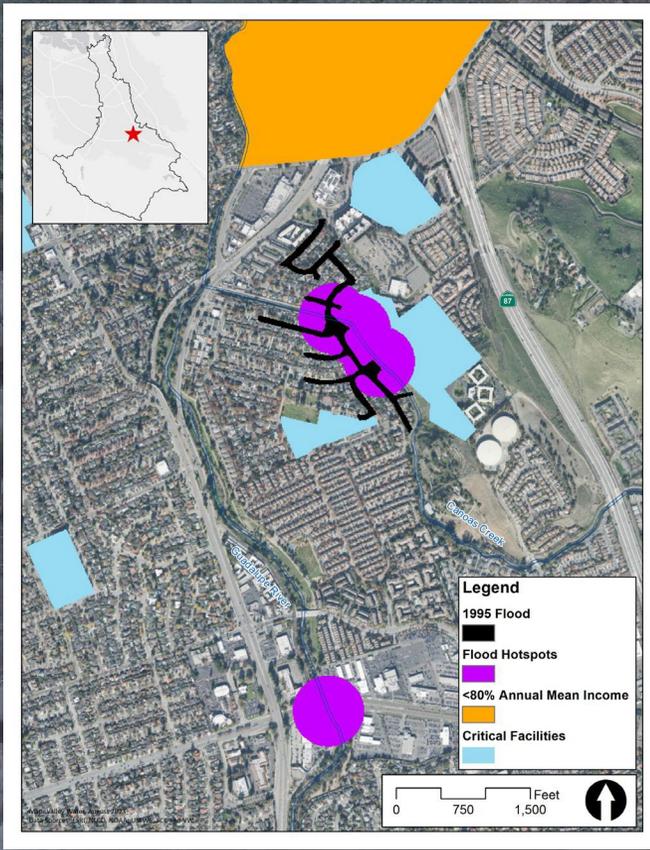
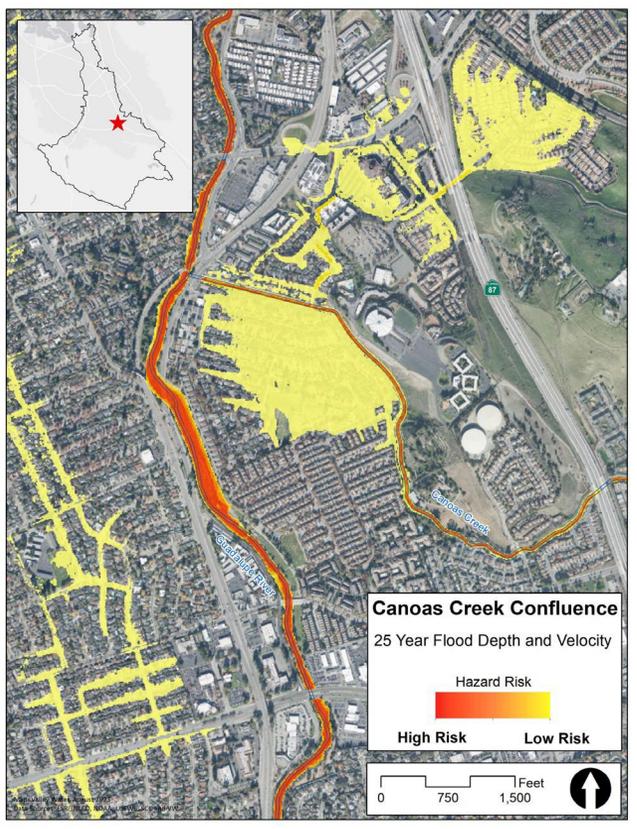


FLOOD VULNERABILITY ASSESSMENT

Physical

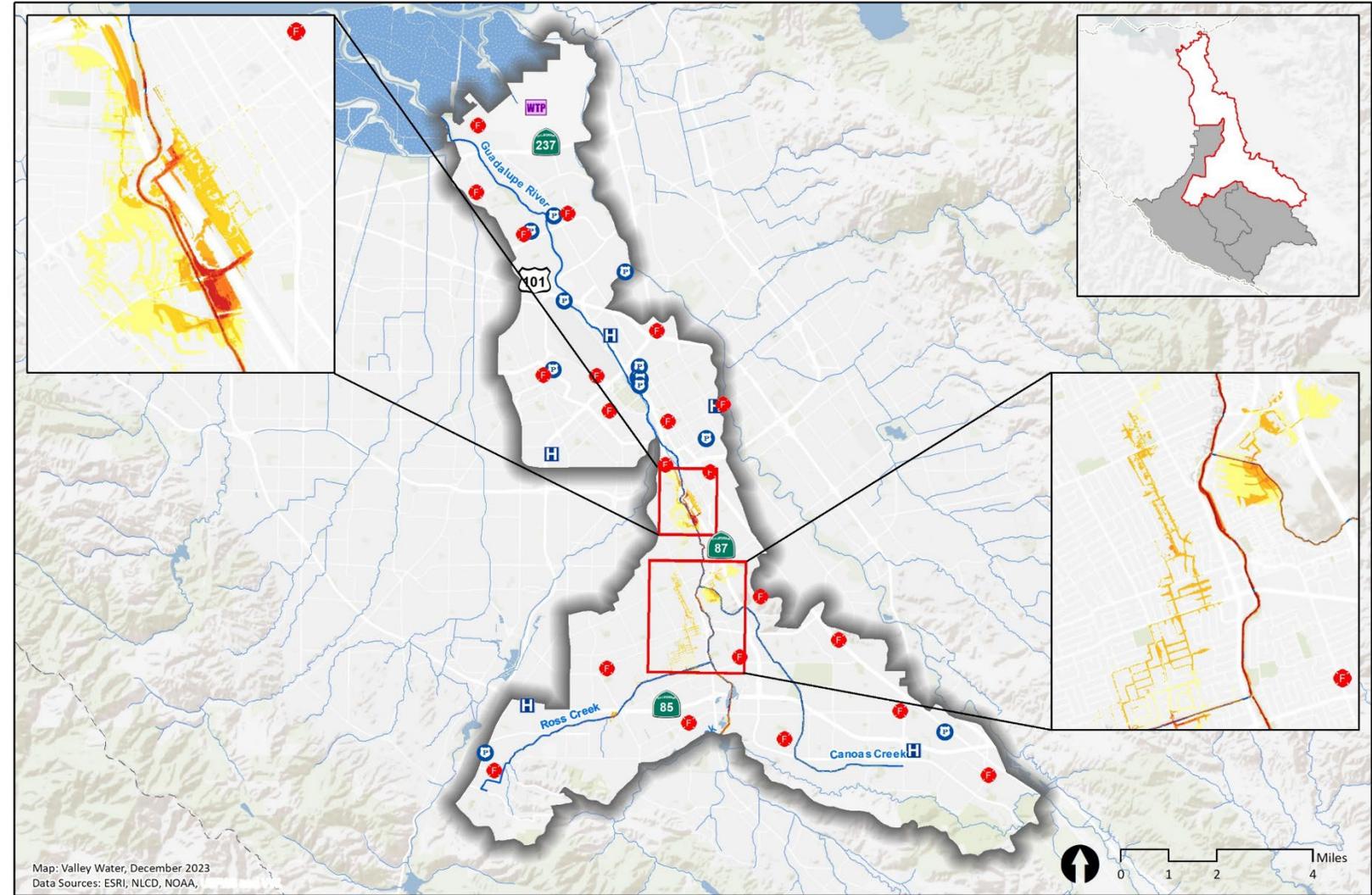
Statistical and Social

Combined Vulnerability Map



Flood-Vulnerable Areas

Guadalupe watershed



Map: Valley Water, December 2023
Data Sources: ESRI, NLCD, NOAA,

- | | | |
|-----------------------------|--------------|---------------------------------|
| Critical Facilities | Water Bodies | Flood Risk/Vulnerability |
| Police Stations | Salt Pond | High Risk |
| Hospitals | Creeks | Low Risk |
| Fire Stations | | |
| Wastewater Treatment Plants | | |

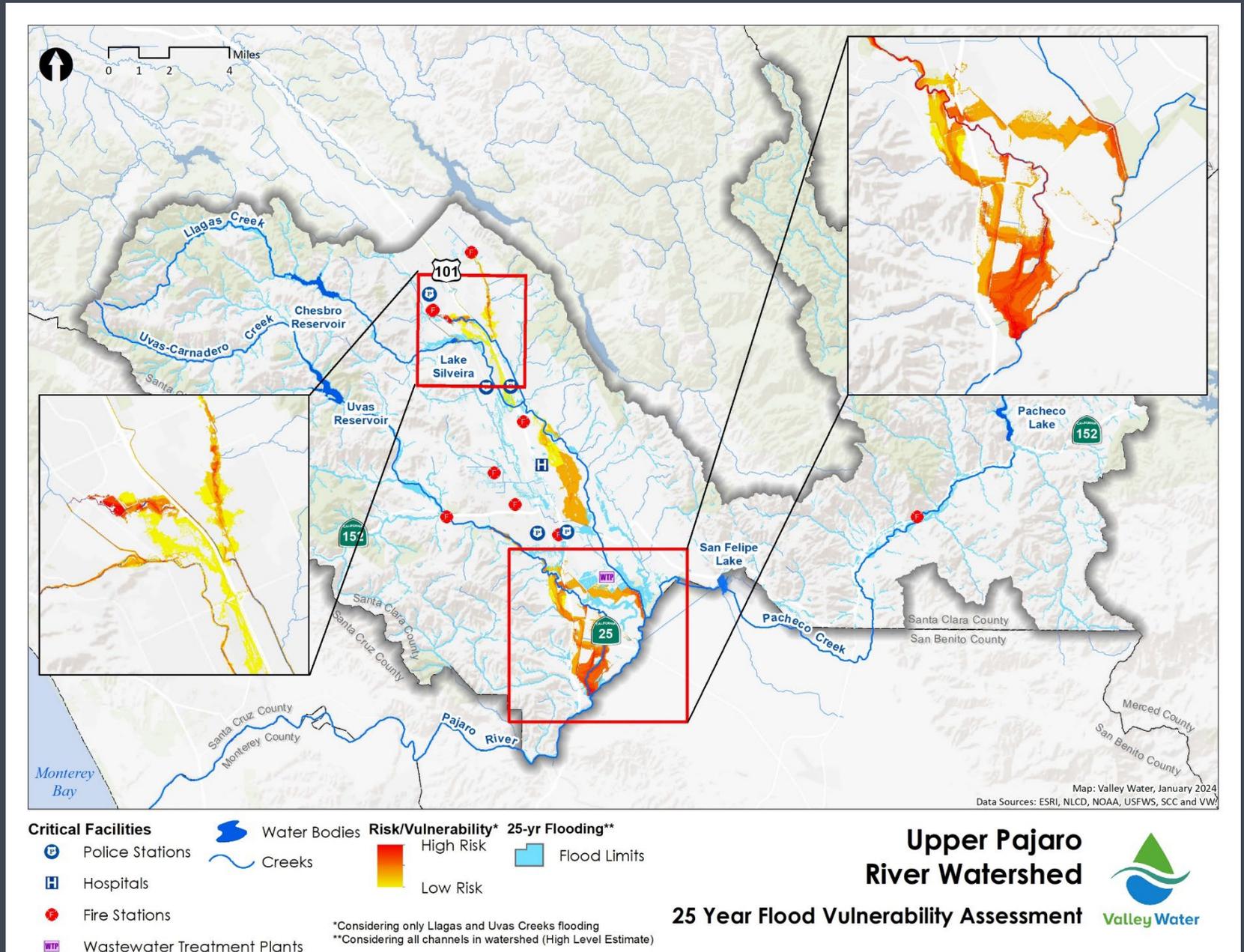
Guadalupe River Subwatershed

25 Year Flood Vulnerability Assessment



Flood-Vulnerable Areas

Uvas and Llagas Creeks



PUBLIC INPUT PROCESS

Community Input

11

COHORTS

104

ORGANIZATIONS/AGENCIES/BUSINESSES

~200

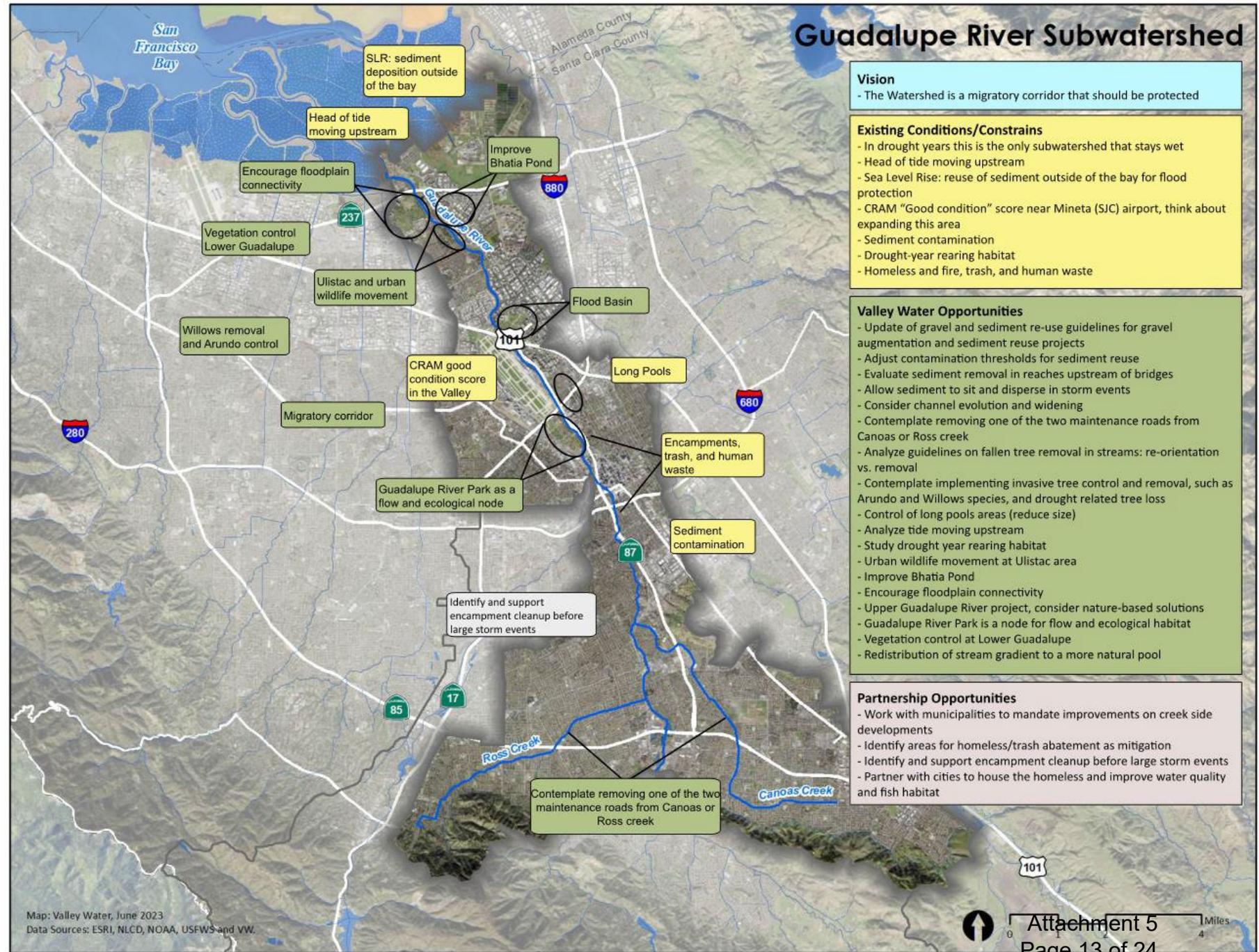
INDIVIDUAL CONTACTS

- Subject Matter Experts
- Local & County Governments
- Community Based Organizations
- Special Districts
- Regulatory Agencies
- Residents/Municipal Organizations
- Businesses
- Environmental Groups
- Farmers/Ranchers

Focus Workshop: Fish Habitat

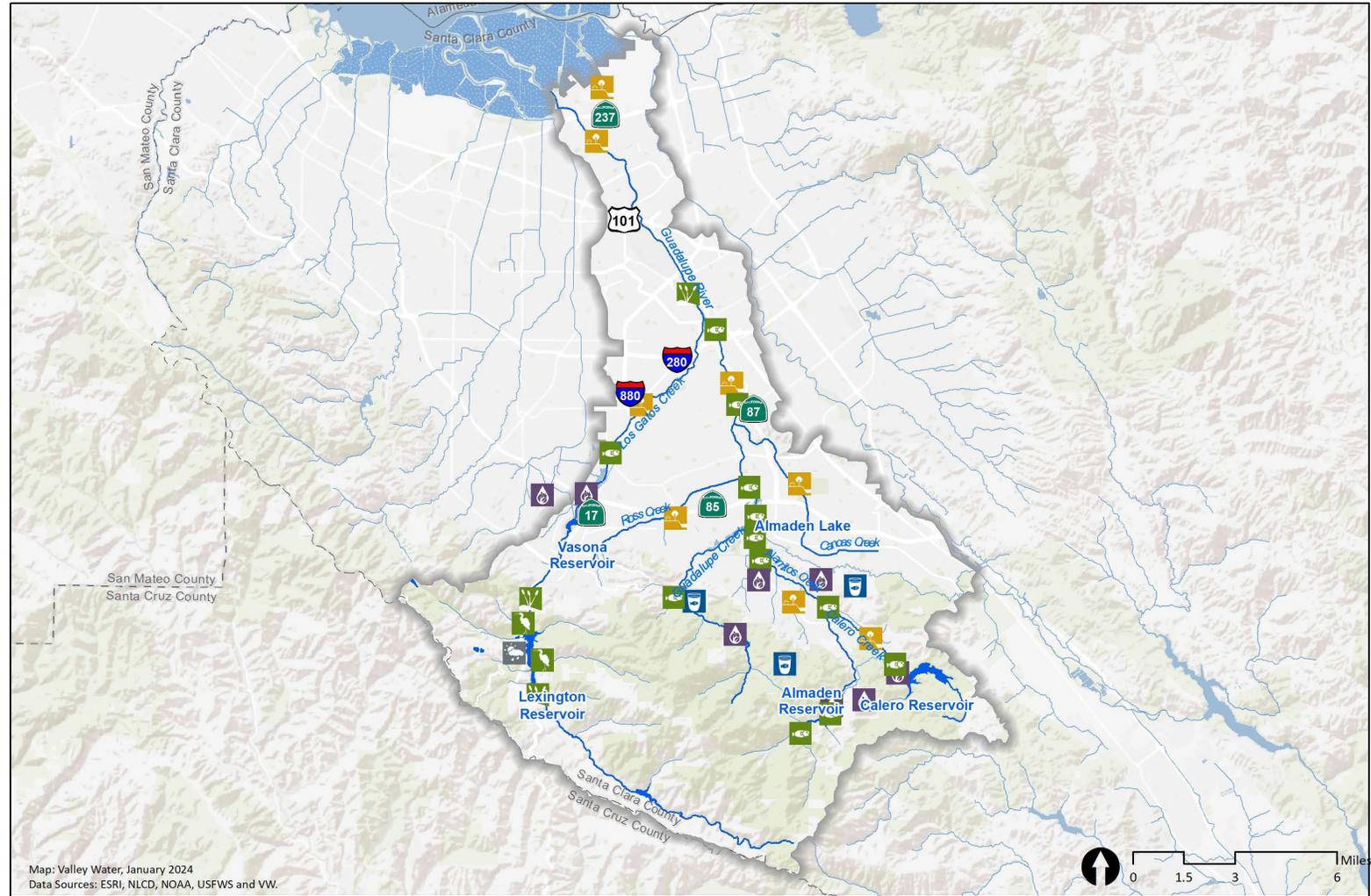


Vision
Constraints
Opportunities



PRIORITY ACTIONS

Guadalupe Watershed Priority Actions



Map: Valley Water, January 2024
Data Sources: ESRI, NLCD, NOAA, USFWS and VW.



- Climate Change
- Wildlife
- Fish
- Vegetation
- Flood Risk Reduction
- Water Quality
- Water Supply
- Water Bodies
- Salt Pond
- Creeks



Figure 4-1: Guadalupe Watershed Priority Actions

Flood Risk Reduction

- **FRR-01:** Conduct engineering assessment of rodent damage to levees
- **FRR-04:** Conduct Planning Study for Canoas Creek flood risk reduction
- **FRR-05:** Conduct engineering study to assess and repair Los Gatos Creek (asset management)
- **FRR-06:** Complete Guadalupe River Tasman Dr – I-880 Capacity Restoration Project
- **FRR-11:** Conduct Planning Study for Calero Creek flood risk reduction



Upper Guadalupe high flows

Ecological Resource Actions

- **ECO-01, 02:** Improve suitable spawning and rearing habitat for steelhead and salmon on Guadalupe, Calero, and Alamitos Creeks
- **ECO-03:** Complete Feasibility Study of fish passage at Almaden Dam
- **ECO-04:** Assess feasibility of modifying Alamitos drop structure to enhance habitat
- **ECO-05:** Coordinate with partners to improve fish passage at priority barriers owned by others
- **ECO-07:** Partner to support the Highway 17 Wildlife and Trail Crossings Project



Steelhead juvenile rearing surveys,
Guadalupe watershed

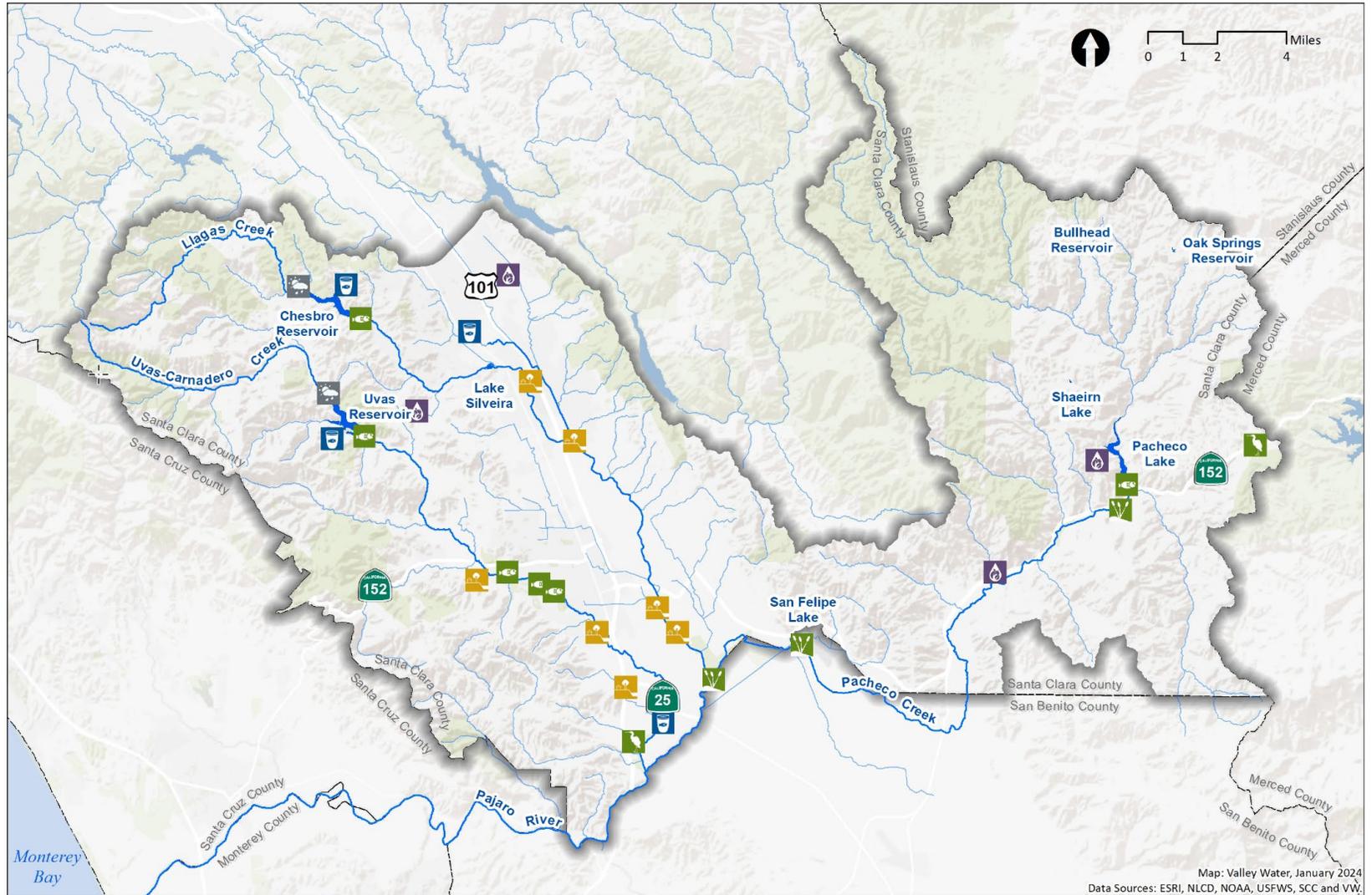
Water Quality Actions

- **WQ- 02** Partner to support Santa Clara County Parks in the remediation of legacy mercury mine waste at twenty-three high priority sites designated by the San Francisco Bay Regional Water Quality Control Board in Almaden Quicksilver County Park
- **WQ-04:** Create or expand existing water quality monitoring program
- **WQ-05:** Partner with Santa Clara County, cities, and other organizations to reach a functional zero number of unsheltered people residing on Valley Water lands along waterways.



Creek cleanup crew

Upper Pajaro Watershed Priority Actions



Map: Valley Water, January 2024
 Data Sources: ESRI, NLCD, NOAA, USFWS, SCC and VW.

- Climate Change
- Flood Risk Reduction
- Water Bodies
- Wildlife
- Water Quality
- Creeks
- Fish
- Water Supply
- Vegetation

Upper Pajaro Watershed
 Priority Actions

Figure 4-1: Upper Pajaro Watershed Priority Actions

Flood Risk Reduction Actions

- **FRR-01:** Assess open space areas compatible with flood detention
- **FRR-04:** Complete hydraulic modeling throughout watershed
- **FRR-11:** Complete Planning Study for Uvas/ Carnadero Creek from Luchessa Ave to HWY 25
- **FRR-12:** Complete Planning Study for East/West Little Llagas Creek

Lake Silveria aerial image, August 2023



Ecological Resource Actions

- **ECO-01:** Partner to expand and enhance floodplain at Pajaro River Agricultural Preserve
- **ECO-02:** Partner to conserve and enhance San Felipe Lake
- **ECO-10:** Assess fish passage barriers and impediments throughout watershed and prioritize their remediation
- **ECO-16:** Restore creeks impacted by encampments through Stream Maintenance Program



Pajaro River Agricultural Preserve

Water Quality Actions

- **WQ-01:** Support efforts led by University of California Cooperative Extension, RCDs, NRCS, and County Division of Agriculture to educate and assist farmers and landowners in implementing land management practices to improve water quality.
- **WQ-04:** partner with the Cities of Uvas-Carnadero Creek from Luchessa Avenue to Highway 25. Gilroy and Morgan Hill and Santa Clara County to identify opportunities and actions to reduce bacteria and sediment loads within the Llagas and Uvas Creeks.
- **WQ-05:** Partner with cities to reduce and prevent specific trash dumping areas.



Trash hot spot

QUESTIONS





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