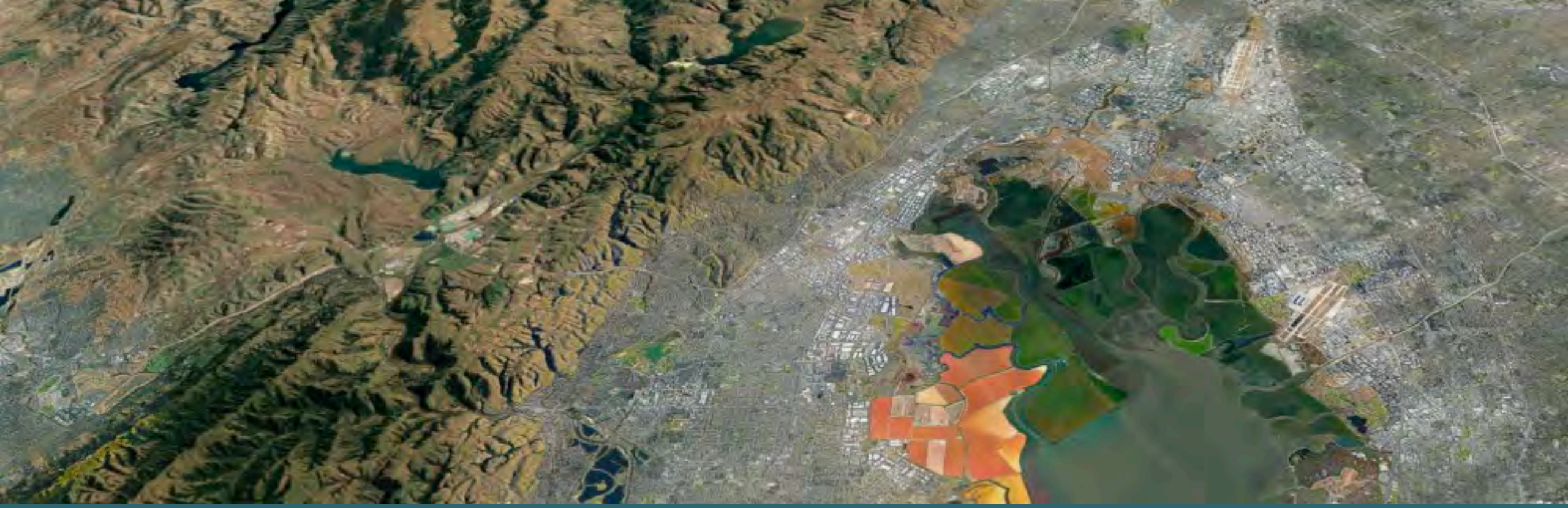


Flood and Sea Level Rise Work Group

Santa Clara County
Climate Collaborative

March 4, 2025

Welcome!

Please introduce yourself in the chat:

- Name
- Organization
- Icebreaker: TBD

Meeting Objectives

- Review the methodology for the Community Driven Planning tool for the Watershed Resilience Project

- Healthy Watersheds & Thriving Cities (HW&TC) Project
  - Discuss barriers to collaboration and current priorities for nature-based urban greening projects
  - Provide input to guide the benefits analysis

Agenda

- Welcome and Introductions
- NFWF Watershed Resilience Tool Update
- Healthy Watersheds & Thriving Cities Project
  - *Project overview*
  - *Barriers to collaboration and landscape-scale planning*
  - *Current priorities for nature-based urban greening projects*
  - *Recently completed nature-based urban greening projects*
- Next Steps

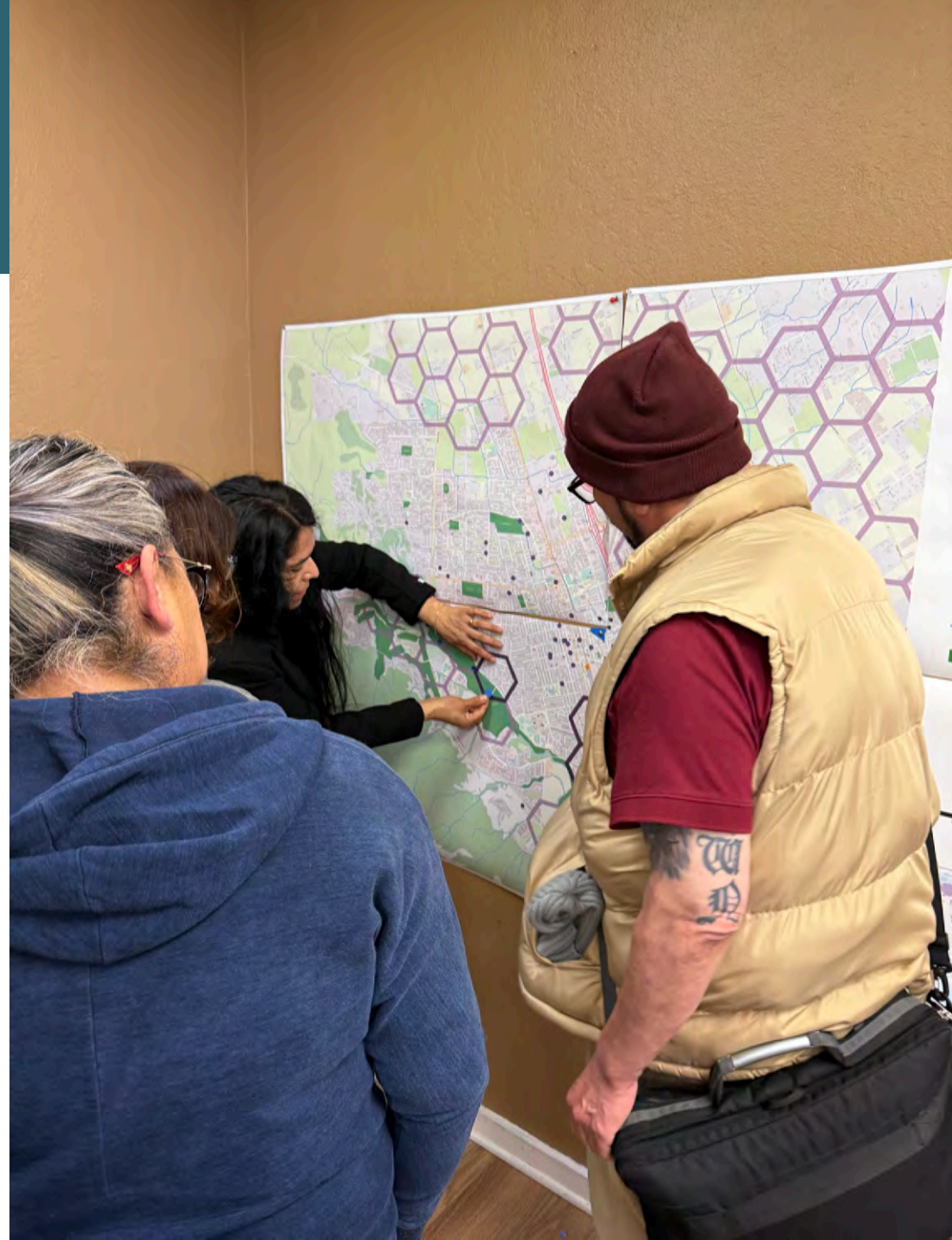
October Meeting Recap

- Update from BCDC on the Regional Shoreline Adaptation (RSAP) project and map tool
- Reviewed and provided input to the mapping methodology for the Watershed Resilience Tool
- Introduction to the Healthy Watersheds & Thriving Communities (HW&TC) project

NFWF Watershed & Community Resilience Project

Fall/Winter Activities Update

- Finalized methodology for the mapping tool
- Conducted two of four community workshops in Gilroy with CARAS and CRC
- Creating Community Driven Planning map tool to imbed on the Collaborative website



Identifying a High Value Intervention Area (HVIA)

Geographic, mappable elements that help us focus on a project area

Incorporate climate hazards

Multiple data layers are used to pinpoint HVIA

Prioritize Social Vulnerability and Hazards

Final Mapping Methodology

Social Vulnerability

Moderate (+1) to High Level (+2)

+

Natural Hazards

Riverine Flooding (+1)

OR

Extreme Heat (+1)

=

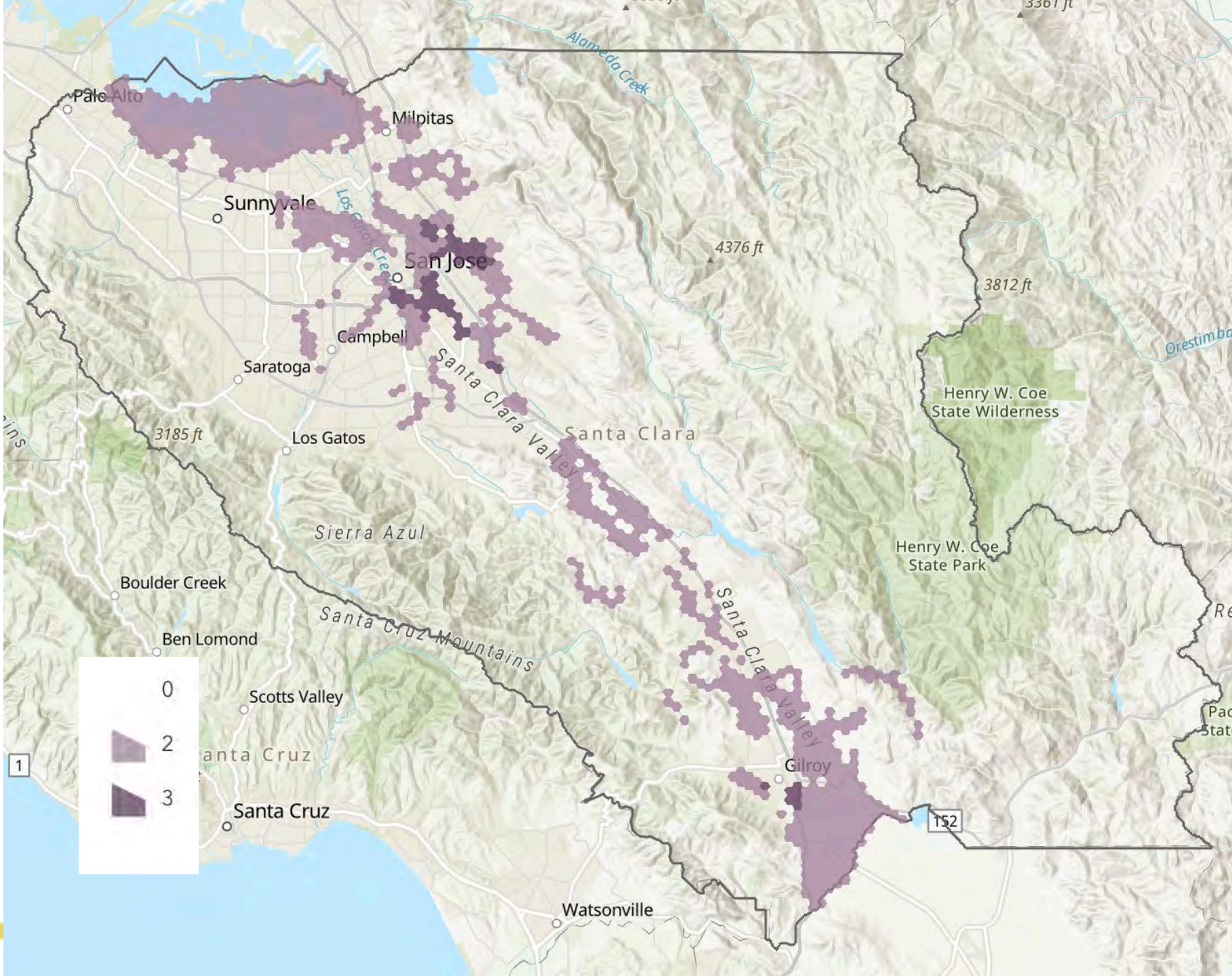
HVIA Score from 0 to 3

Final Mapping Methodology

Flooding Risk	Extreme Heat Risk	Combined Flood + Heat Risk
100-year flood risk + Social Vulnerability (Moderate or High)	Extreme Heat Exposure Risk + Social Vulnerability (Moderate or High)	100-year flood risk + Extreme Heat Exposure Risk + Social Vulnerability (Moderate or High)
Score of 0 - 3	Score of 0 - 3	Score of 0 - 4

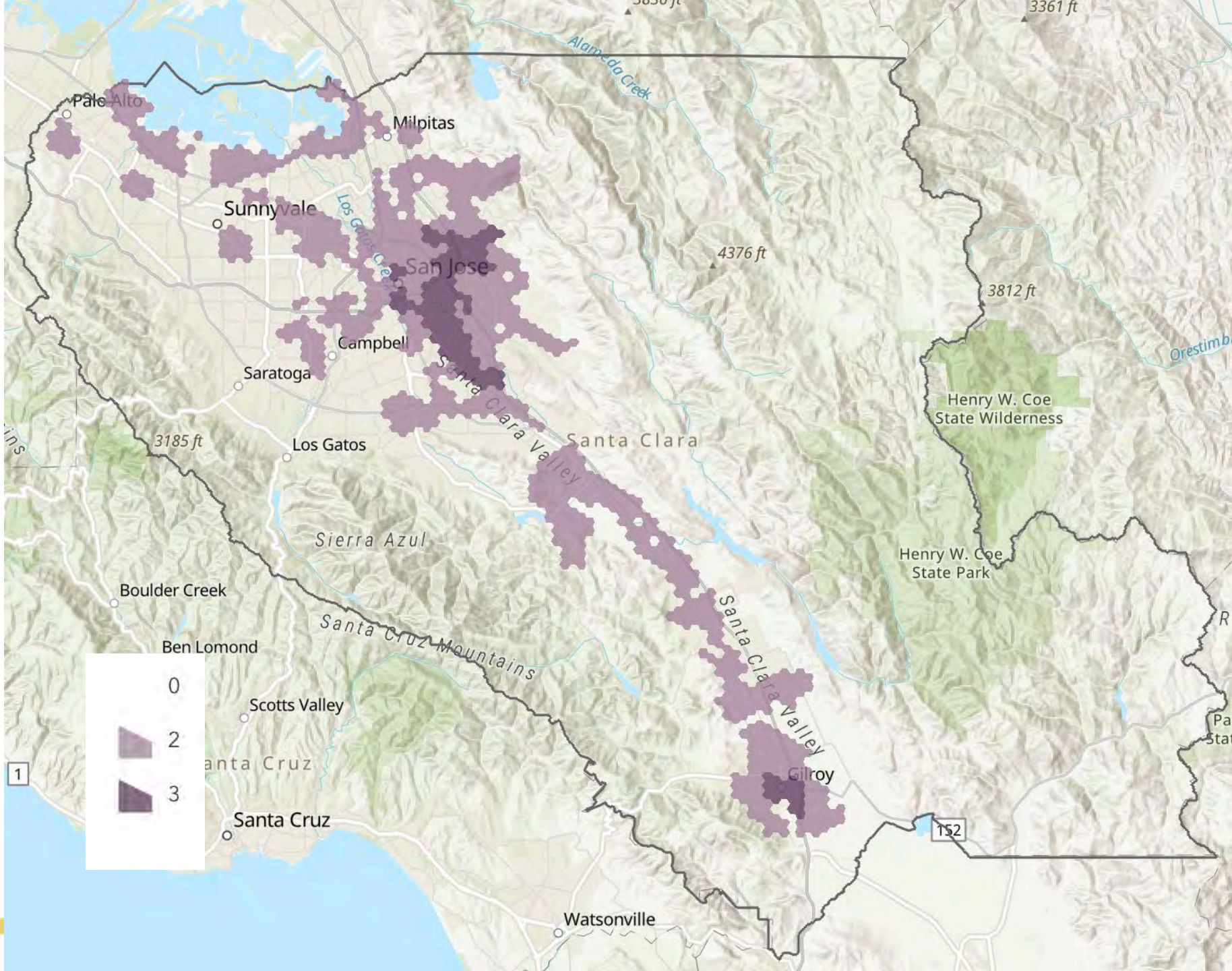
Flood Risk

- Filtered to show HVIA scores of 2 - 3



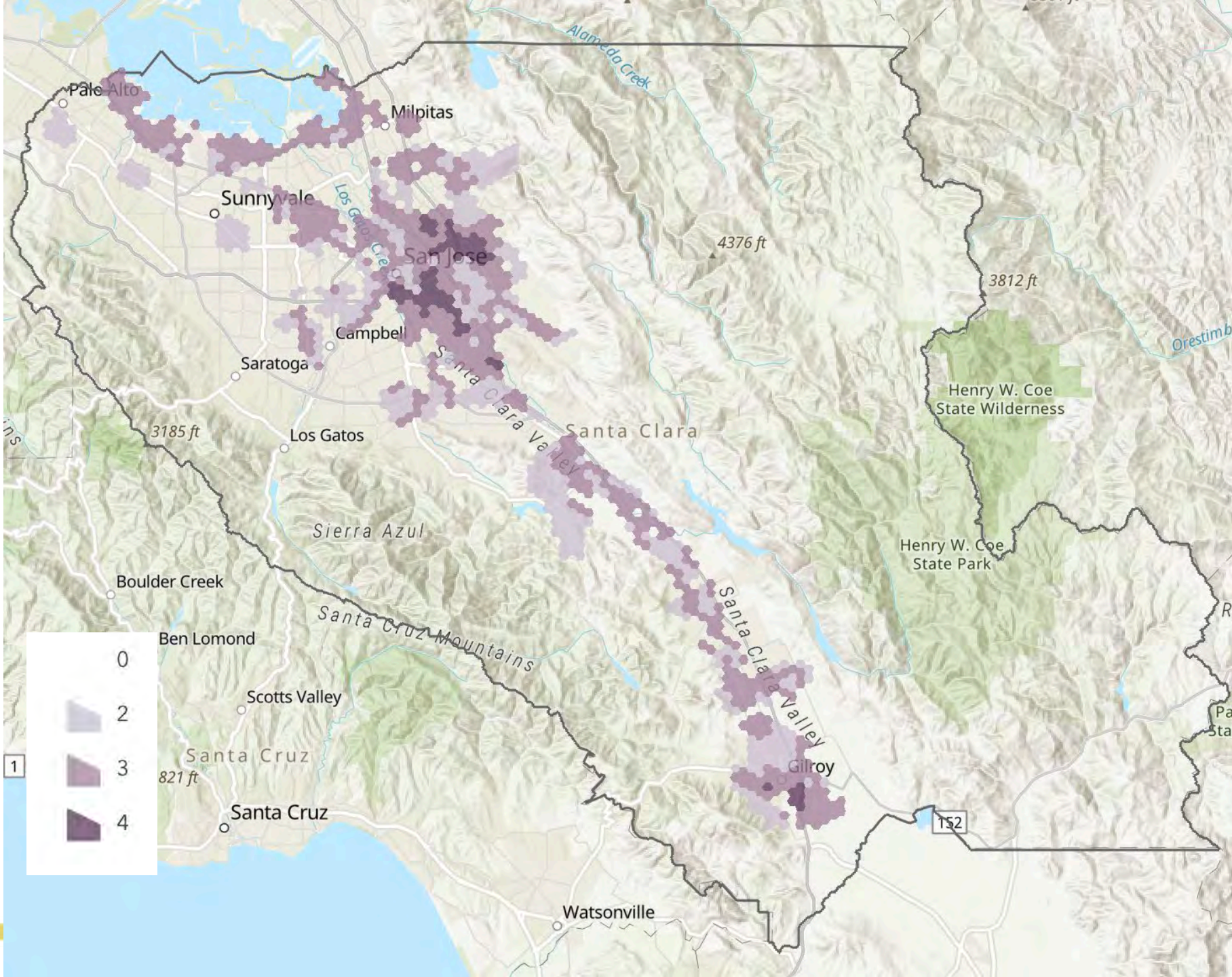
Heat Risk

- Filtered to show HVIA scores of 2 - 3



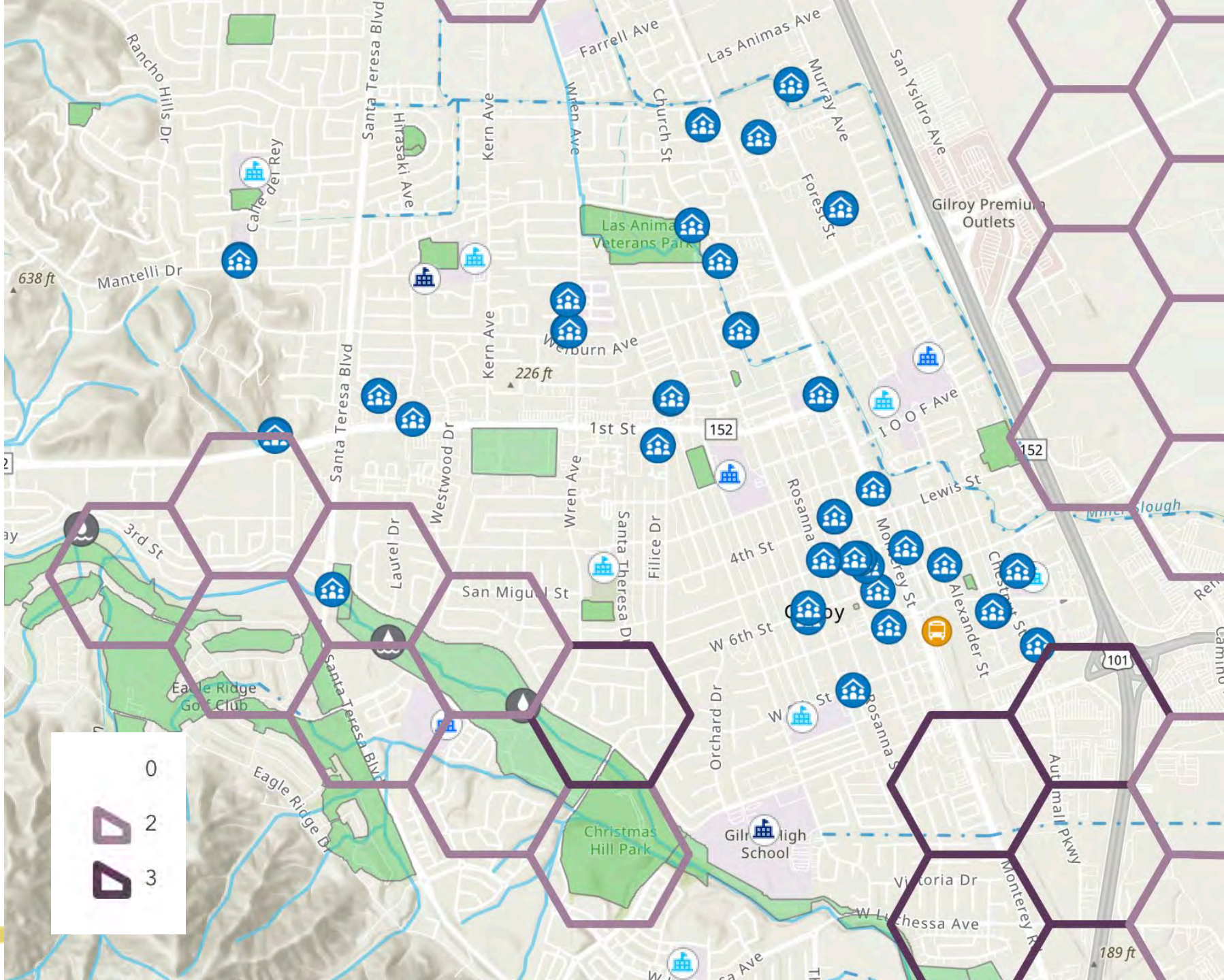
Combined Flood + Heat Risk

- Filtered to show HVIA scores of 2 - 4



Flood Risk

- Parks/protected areas
- Transit Stations
- Valley Water One Water Priority Areas
- Santa Clara County Schools
- Santa Clara County CARI Streams



Healthy Watersheds & Thriving Communities Project

Healthy Watersheds & Thriving Cities

Regional Working Group Meeting #1

SFEI
SAN FRANCISCO ESTUARY INSTITUTE

March 4, 2025

Funded by US EPA Region IX Water Quality Improvement Fund

HW&TC Project Team

Cate Jaffe

Kelly Iknayan

Sacha Heath

Anthony Khalil

Melissa Foley

Kendall Harris

SFEI

Agenda

- Project overview
- Benefits analysis overview & questions
- Breakout groups - current barriers & priorities for urban greening
- Urban greening scenarios

Definitions

- **Landscape-scale planning**: coordination and collaboration at scales beyond single agency jurisdictions
- **Nature-based urban greening:** projects that incorporate natural features to provide multiple benefits in urban areas
- **Multiple benefits**: projects that incorporate more than one benefit that improves *ecological* health, *human* health and/or *climate* resilience

Healthy Watersheds & Thriving Cities

Project overview

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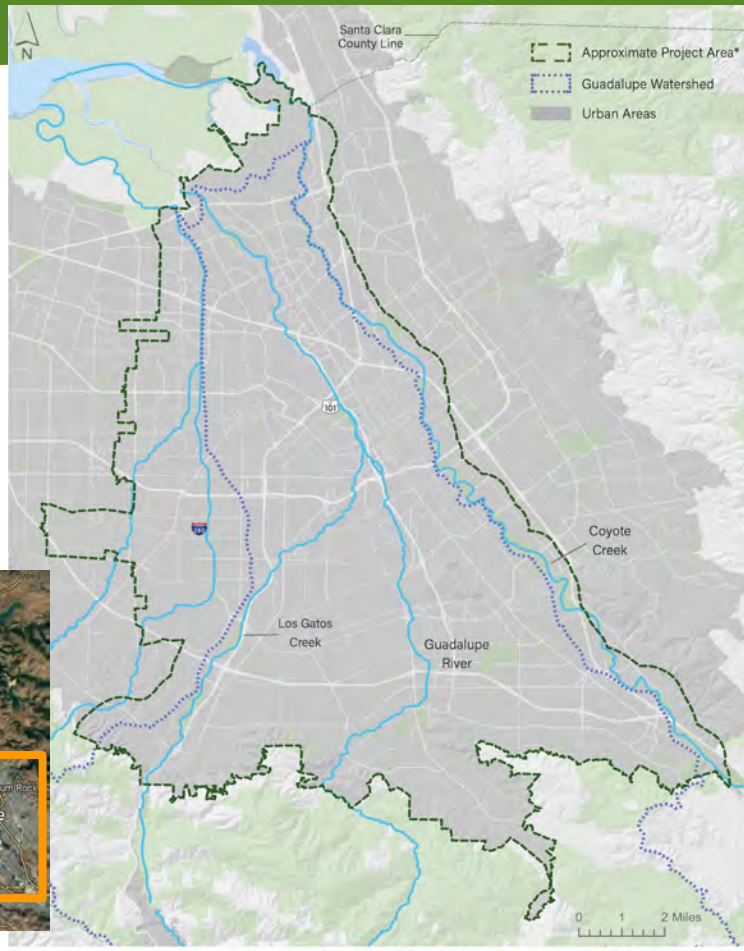
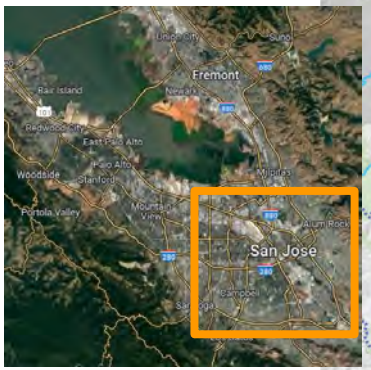
Project goals

- Advance **landscape-scale** coordination and planning of multi-benefit nature-based urban greening projects
- Co-develop a model of lasting **coordination** for the region
- Develop strategies for incorporating multiple benefits into urban greening project **design and maintenance**
- Enhance **fundraising opportunities** for coordinated urban greening projects

Project area

- Urban portion of the **Guadalupe River watershed**
- Urban riparian corridor of **Coyote Creek**
- **Cities** included in project footprint**:**
  - San José
  - Santa Clara
  - Campbell
  - Los Gatos
  - Milpitas

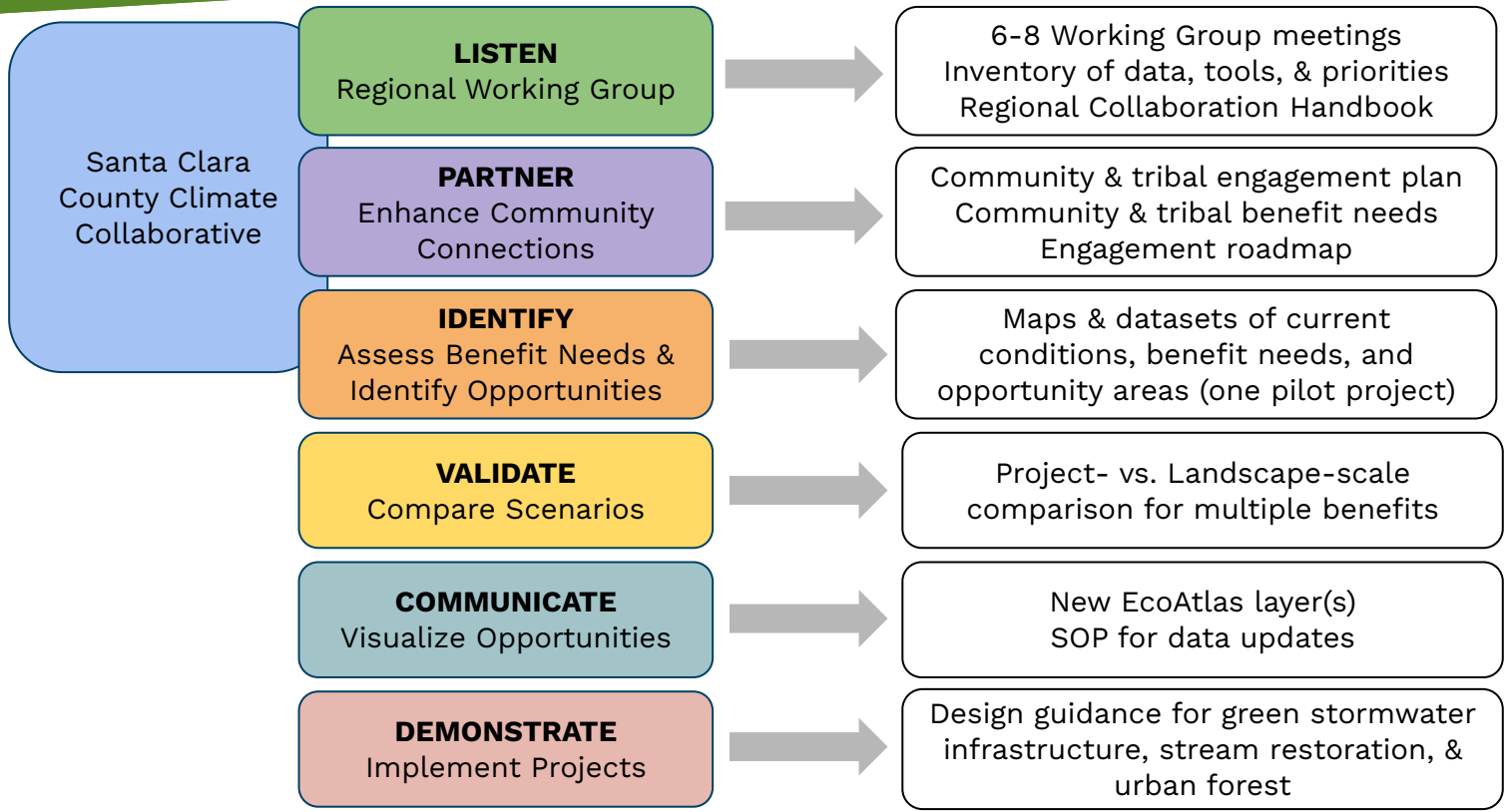




HW&TC Regional Working Group

- **Input on benefits analysis** outputs
- **Inventory of data, tools, and gaps** to support collaboration
- Identify **priority areas** for urban greening projects
- Identify **collaborative pilot project**
- **Inform** tool/data layer development
- Develop **Regional Collaboration Handbook**

Project scope



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Assess Benefit Needs & Identify Opportunities

An Overview

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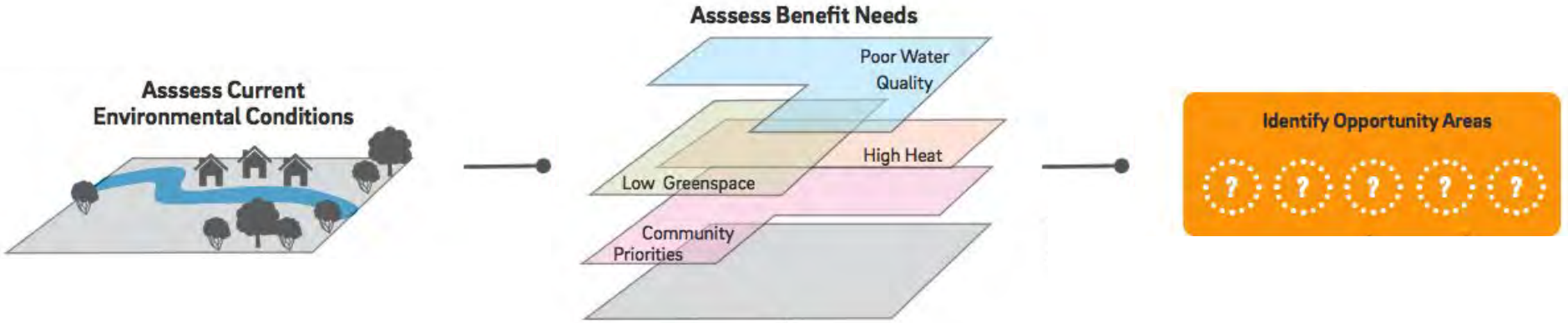
Assess Benefits & Identify Opportunities



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What types of Green Infrastructure are Included?

Included

- Stormwater Tree Pits
- Flow-through Planter
- Green Roof
- Rain Garden
- Bioswale
- Urban Forest
- Creek Daylighting
- Retention/Detention Ponds
- Constructed Inland Wetlands
- Increasing River Floodplain

Not included

- Pervious Pavement
  (minimal multi-benefit value)
- Mudflat Augmentation
  (largely outside study area)
- Polder Management
  (largely outside study area)

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What Analyses are Included?

- Historical Ecology
- Urban Heat
- Carbon
- Biodiversity
- Human Dimensions
- Stormwater Runoff & Pollution Reduction
- Riparian Ecosystem Health

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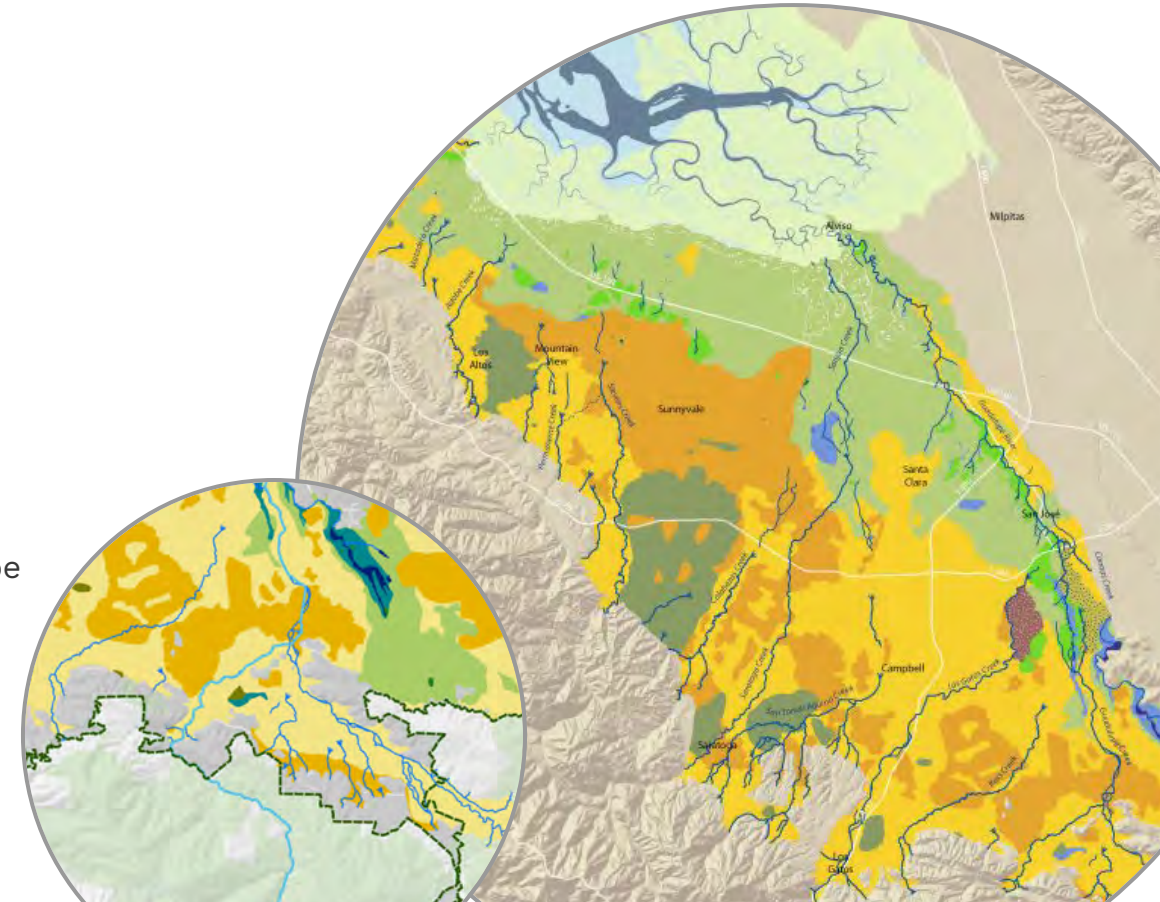
Historical Ecology

Potential Approach:

- Review un-analyzed data from past mapping, focusing on priority areas
- Targeted collection of new data
- Limited synthesis on topics like historical hydrology, riparian vegetation, etc

Key Potential Outputs:

- Updated maps of historical landscape patterns
- Summarized habitat types, species lists, and other data useful for implementation projects



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Urban Heat

Potential Approach: UMEP Toolset (urban multi-scale environmental predictor): Measures street-level thermal comfort, energy use, tree planting benefits

Scale: Neighborhood to City (1-meter resolution)

Key Potential Outputs:

- Street-level temperature changes from land cover & tree planting
- Tree planting prioritization
- Building cooling cost impacts

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Carbon

Potential Approaches:

- Estimate carbon sequestration & cooling cost benefits using tools (i-Tree, CREEC, Bay Area Greenprint, etc.)
- Estimate carbon costs & recovery timelines for different urban greening projects

Key Potential Outputs:

- Carbon stock and sequestration estimates for current conditions
- Carbon cost projections & benefits over time for typical project types

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Biodiversity

Potential Approach:

- Analyze individual components of biodiversity support in the landscape
- Prioritize urban greening by site and intervention type

Key Potential Outputs:

- Identification of important existing biodiversity-supporting features
- Prioritized areas with high need for additional biodiversity support

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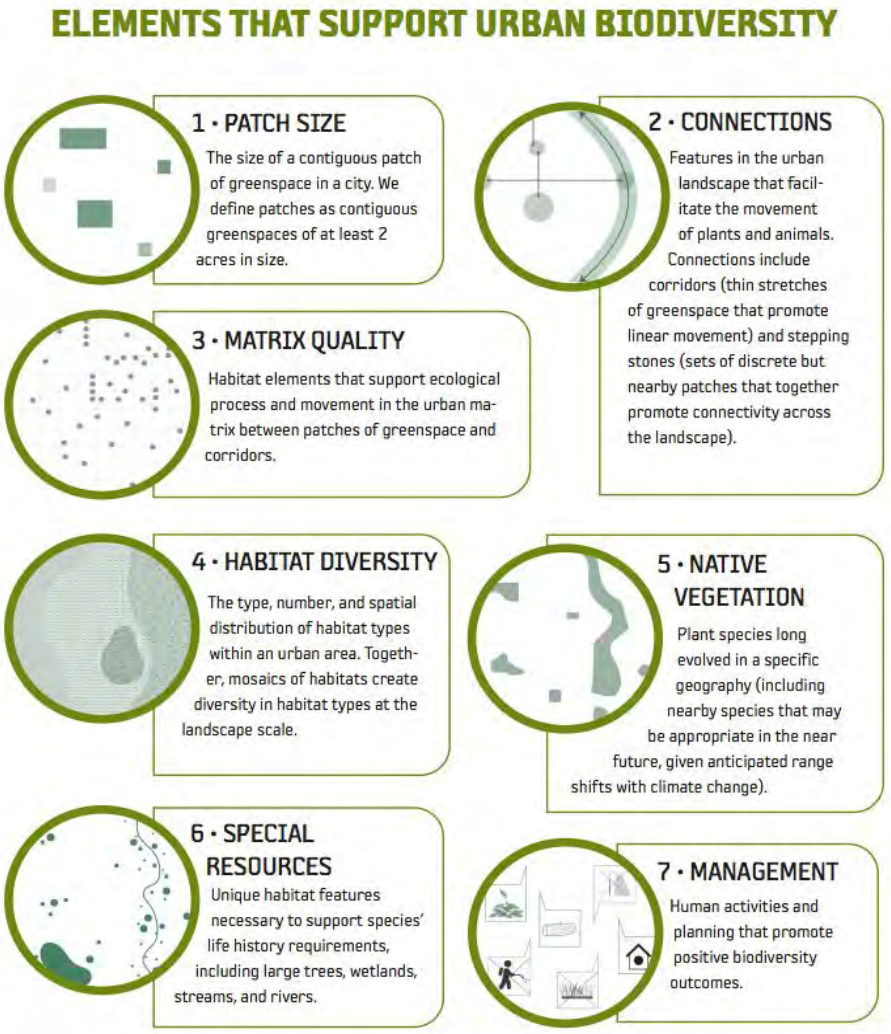

Human Dimensions

Potential Approach

- Approach still in development, pending interests of partners, local practitioners (this group), community leaders, etc.
- Could focus on regionally relevant metrics for urban greening that support human health (e.g., access, walkability, shade availability)

Key Potential Outputs:

- Map of current urban greening opportunities for human health support
- Identify high-priority areas with deficiencies in health supportive urban greening

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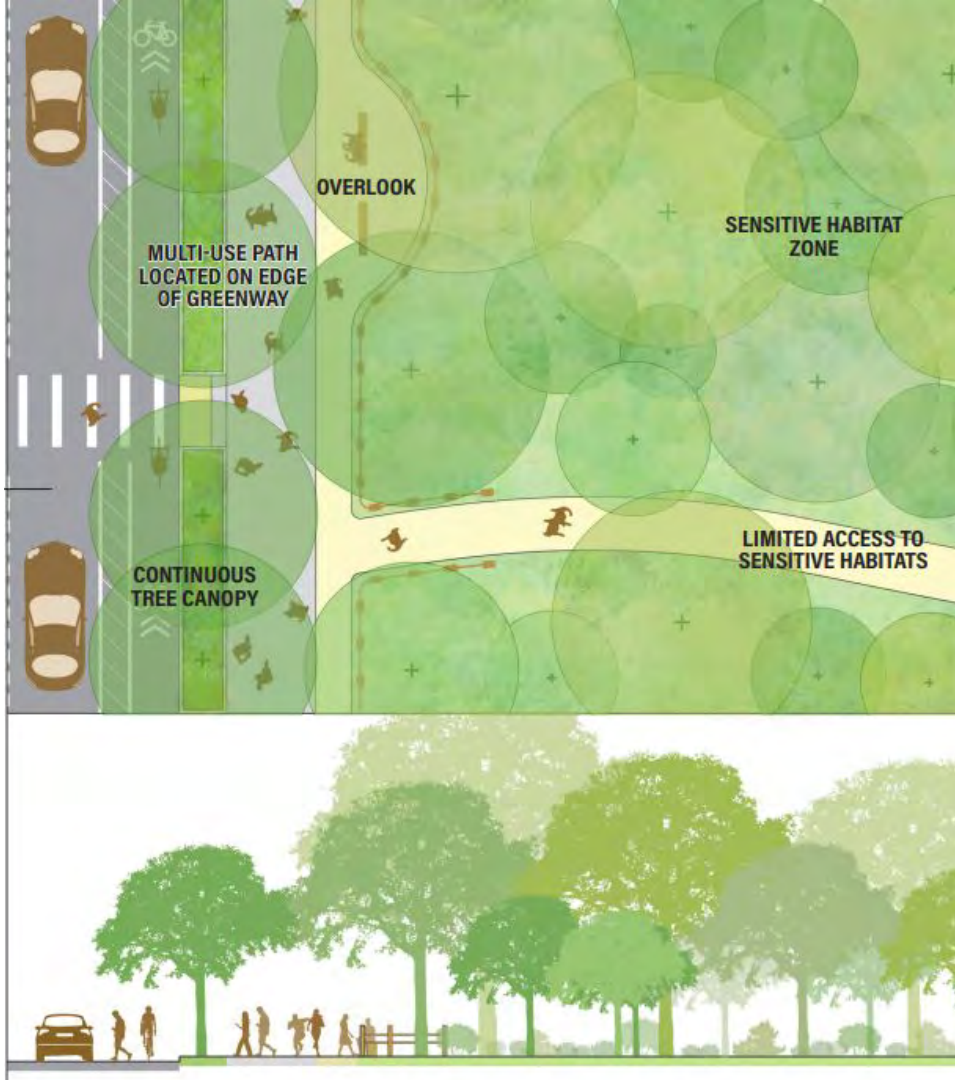
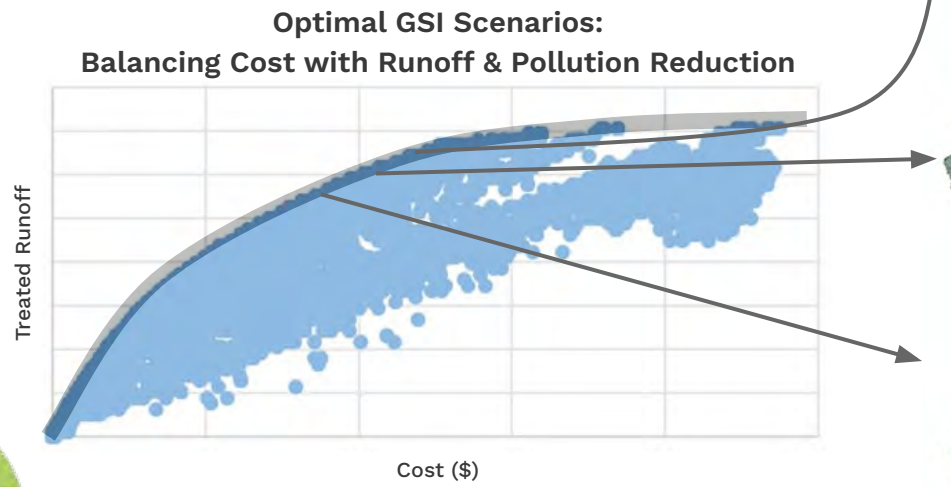
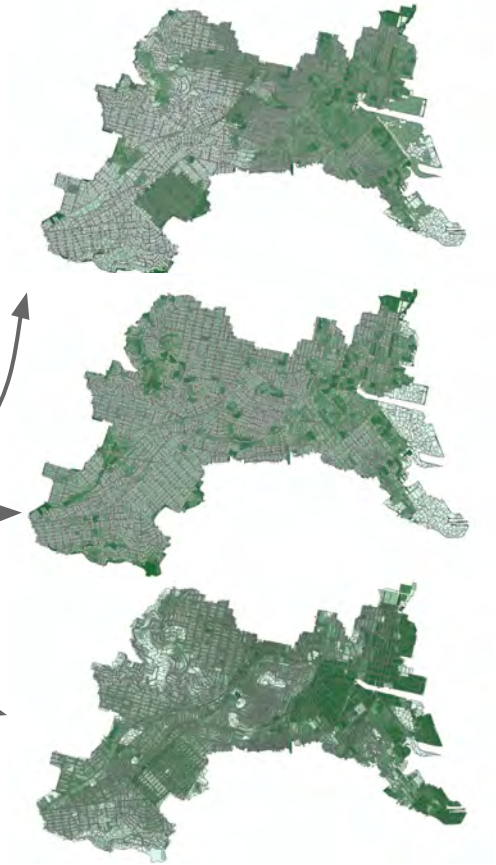


Stormwater Runoff & Pollution Reduction

- **Build on existing efforts:** Use regional stormwater models to integrate benefits.
- **Implement GreenPlan-IT:** Use new modeling to identify optimal cost-effect GSI installation locations





GSI by Subcatchments

GreenPlan-IT

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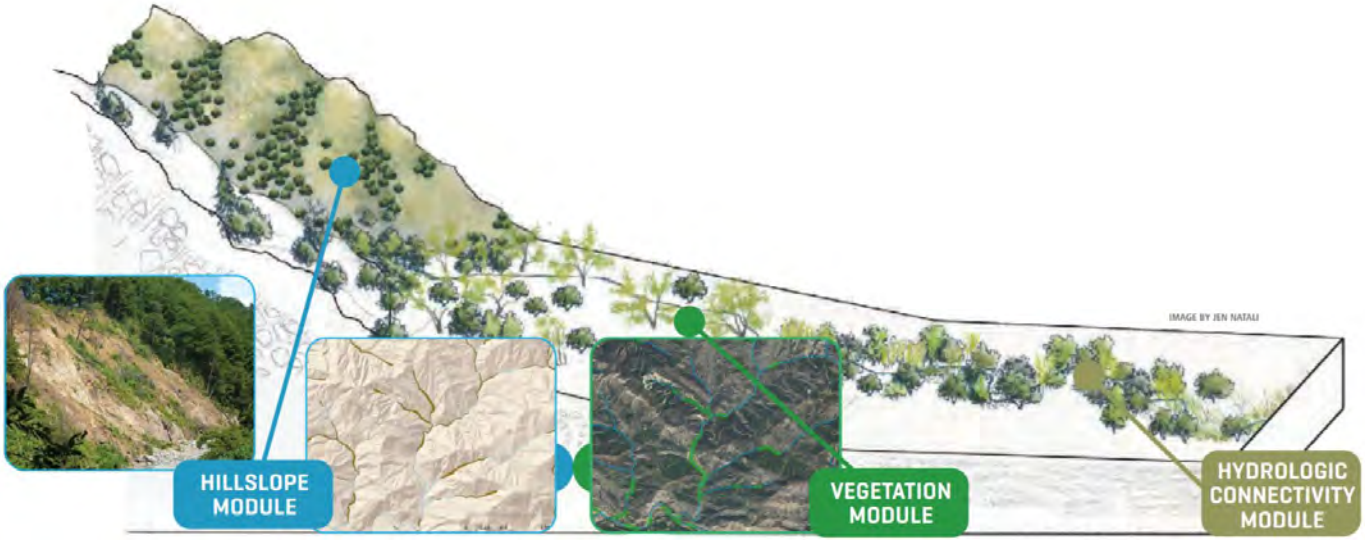
Riparian Ecosystem Health

- **Build on existing efforts:** build on regional riparian efforts (e.g., CCNEET) to integrate benefits
- **Use RipZET (Riparian Zone Estimator) Tool:** Delineate functional riparian zones and identify benefits from buffers and improved hydrological connectivity.



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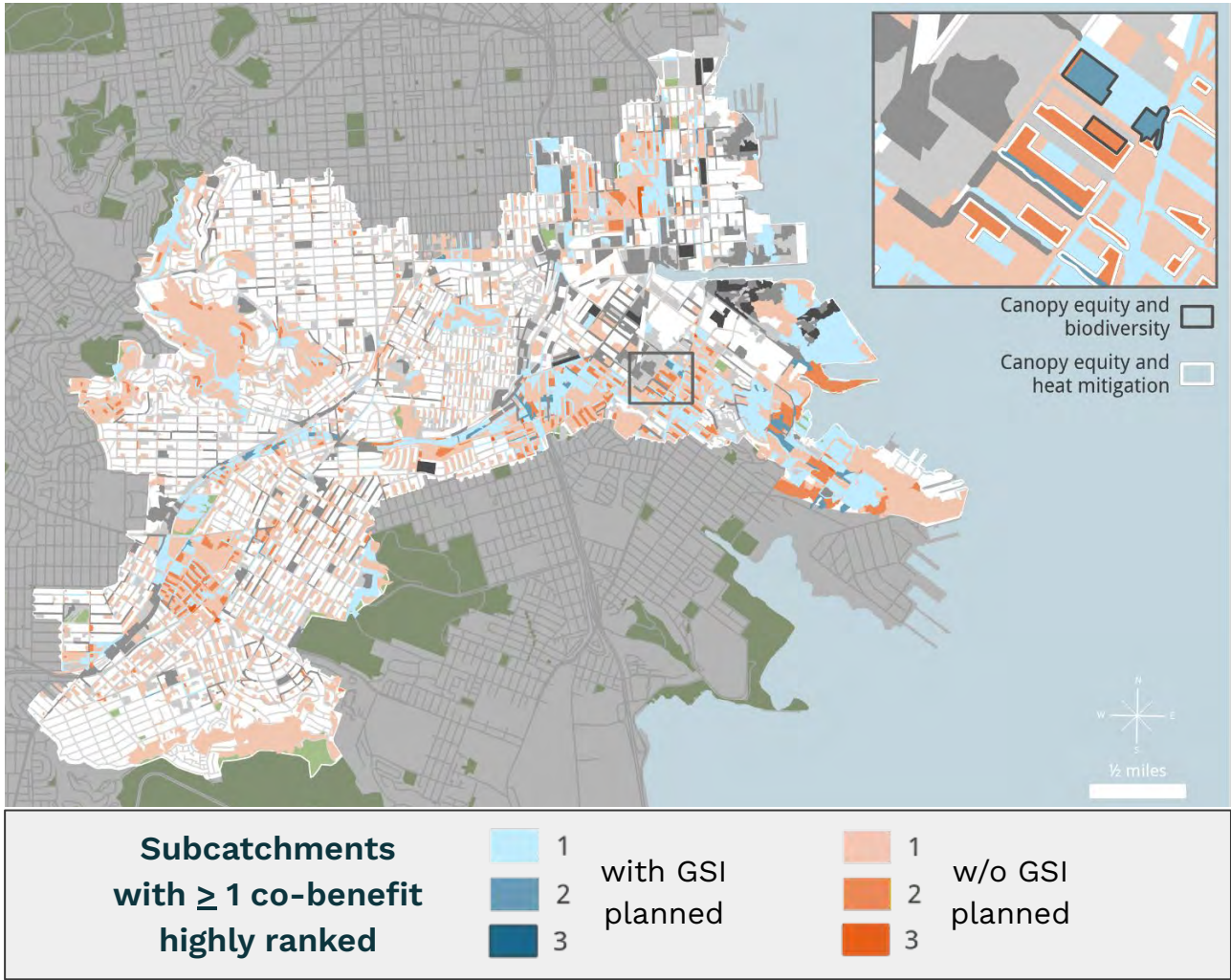
HW&TC Priority Areas & Pilot Project

Use benefit analysis to identify **priority areas** for multi-benefit, nature-based urban greening (example from SF)



Benefits analysis needs poll

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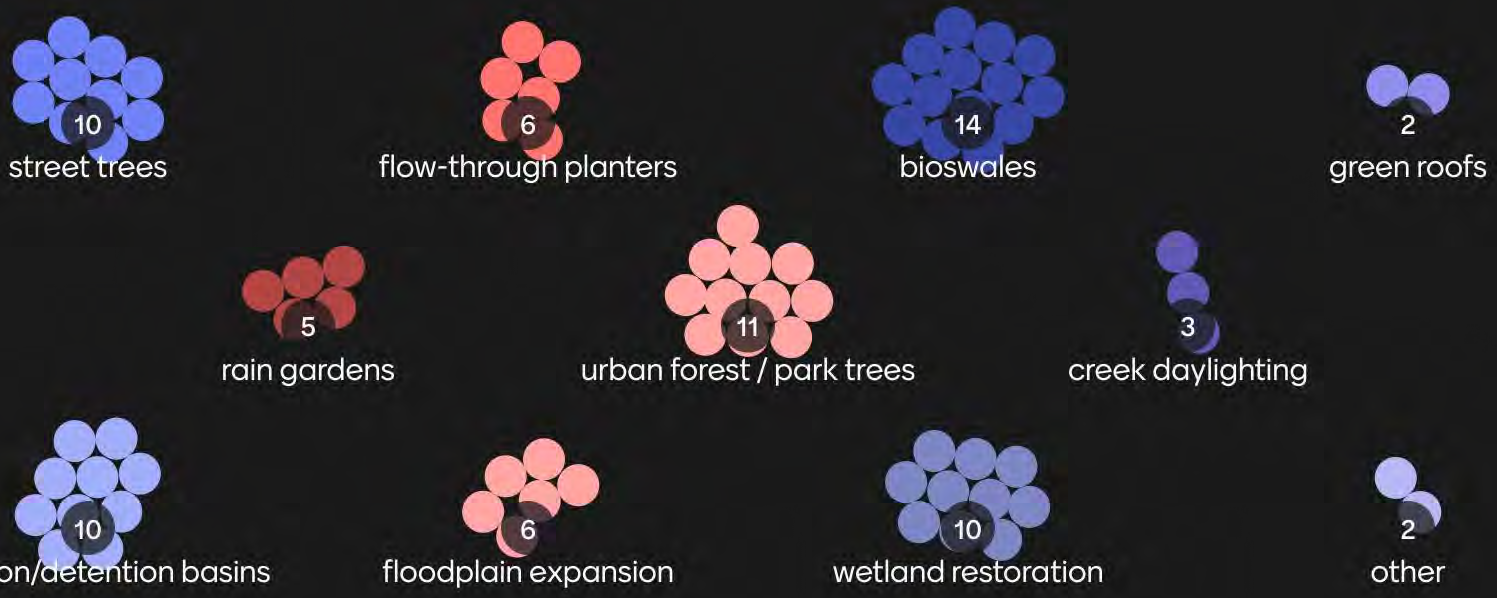
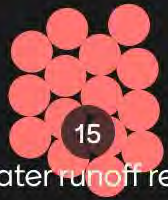
What are the key nature-based urban greening features your entity uses in their work (select multiple types)?



Which benefit assessments are of most value to you (select multiple types)?

flood mitigation



stormwater runoff reduction

heat mitigation

biodiversity support

carbon sequestration

human health support

other

What scale for the benefits analysis is most helpful to facilitate collaboration, planning, fundraising, and implementation?

Are there particular parcel types that are of interest to you (e.g., schools, parking lots, private land, right of ways)?

Publicly owned parcels

Schoolyards and parks

Schools, parking lots, ROW

undeveloped areas along or adjacent to creek channels

ROW's, schools

Lands suited for use for flood diversion or retention

Riparian corridor, properties owned by public entities

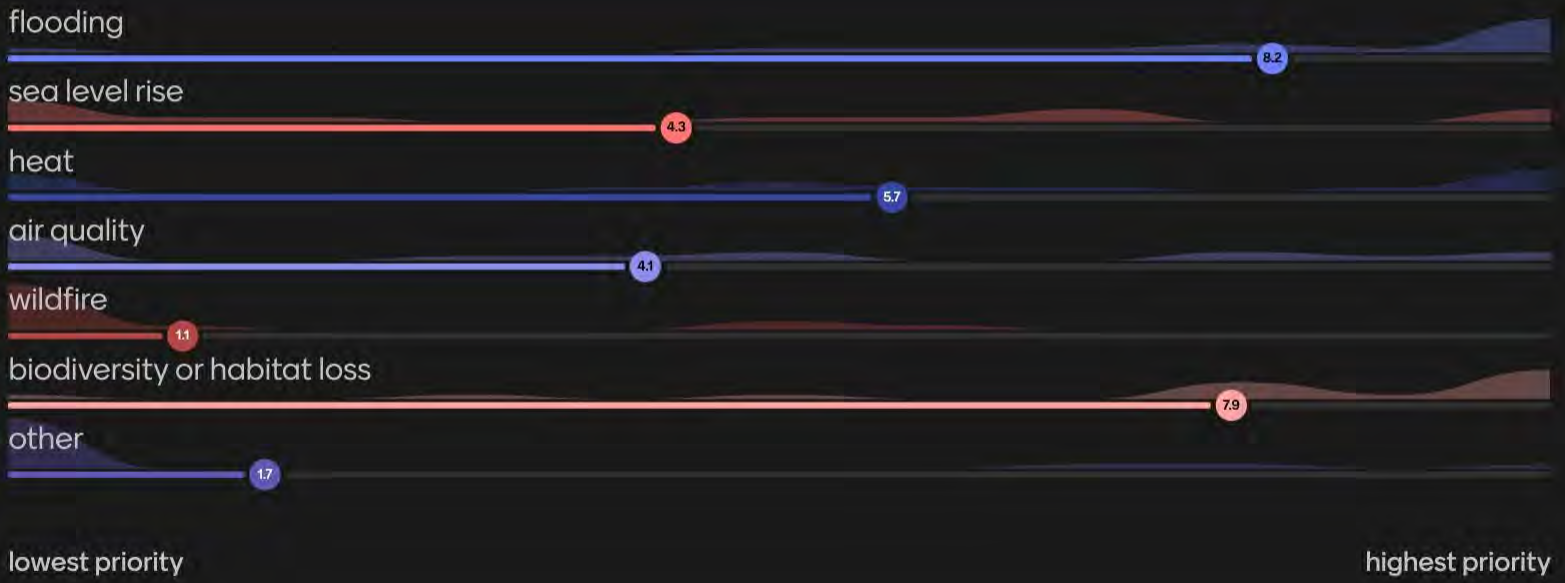
Land use designations marked for development that probably shouldn't be developed.

Are there particular parcel types that are of interest to you (e.g., schools, parking lots, private land, right of ways)?

Underutilized parking lots and vacant parcels

Corridors connecting two types of nearby areas (eg river and park, school and park)

What are the risks you are trying to mitigate with urban greening projects?



Breakout room topics

- Barriers to collaboration and landscape-scale planning (15 min)
- Current priorities for urban greening projects (10 min)

Compare Urban Greening Scenarios

An Introduction

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Proof of concept exercise

- Does a landscape vs. project-by-project approach to urban greening maximize co-benefits in the ways we expect?

- Compare number and spatial distribution of benefits between two scenarios

Recent urban greening projects

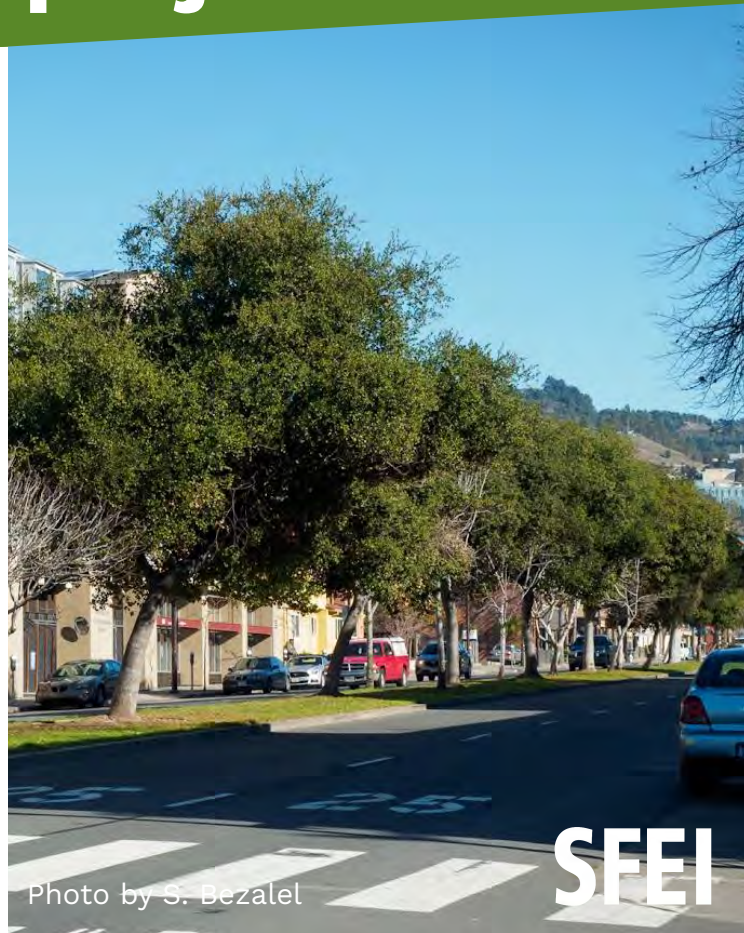
- Step 1: Retrospective inventory of recently completed urban greening projects in the study area

- Types of project information
  - ID/name
  - Years range
  - Project Type
  - Area footprint & Location
  - Benefits provided/planned for

- We'll ask for this info in upcoming survey and August meeting

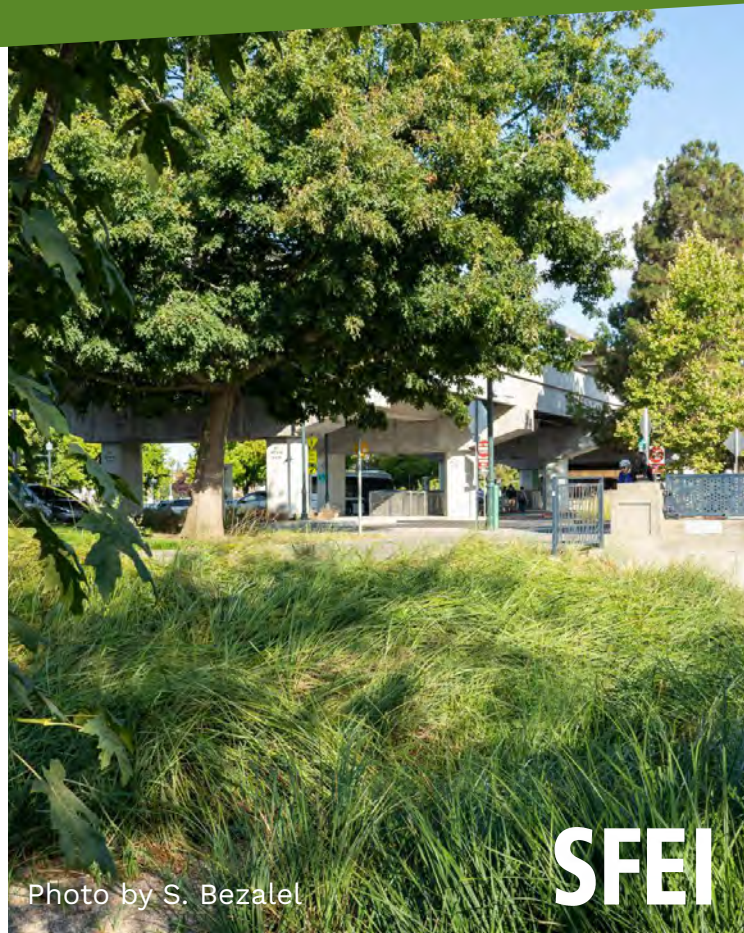
Recent urban greening projects

- What time frame for recently completed projects makes sense to you for this comparison?
- Are there other compilations of completed projects we should know about (e.g., Santa Clara Valley Urban Runoff Pollution Prevention Program)?
- Are there other efforts using landscape approaches to urban greening that we should know about (e.g., Green Print)?



Next steps

- Follow-up survey - please distribute!
- Meeting summary
- Benefits analysis
- Community partnerships
- Next meeting - August 26, 2025



Thank you!

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Meeting Wrap Up

Next Steps

- Next Work Group meeting: June 3, 2025

- Work Group document share: **climatecollaborativescc.org/resources**