



CUPERTINO PUBLIC SAFETY FORUM- OCTOBER 19, 2023

Using AI to detect wildfires – San Jose Water Installation

Presenters:

- Debra Deininger, N5 Sensors, Chief Revenue Officer
- Jared Lewis, San Jose Water, Manager, Environmental Planning and Natural Resources
- David Fernandez, San Jose Water, Director of Emergency Management, Security, and Business Resiliency
- Seth Schalet, CEO, Santa Clara County FireSafe Council



Agenda

- Santa Clara County FireSafe Council-Quick Snapshot
 - Community Wildfire Protection Plan (CWPP)
 - County Coordinator Role
 - Discuss San Jose Water Project Genesis:
 - Early wildfire detection network concept: FireSafe & San Jose Water
 - SCCFSC Role
- N5 Sensors-Their Story (Deb)
- San Jose Water-Goals & Plans
- Audience Q&A

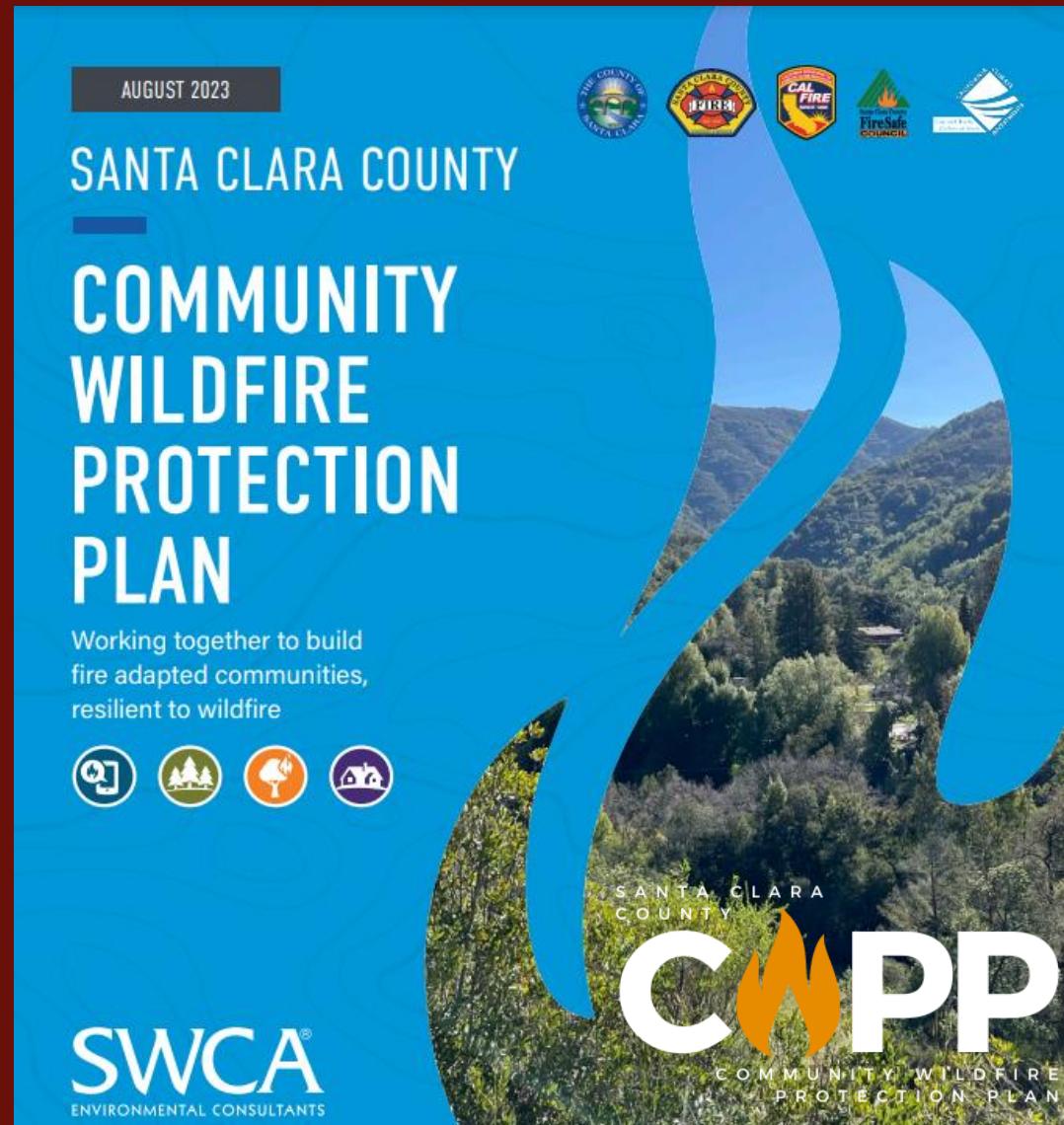


County Wildfire Coordinator

Create, Maintain & Update CWPP

As the County Coordinator, the FireSafe Council will

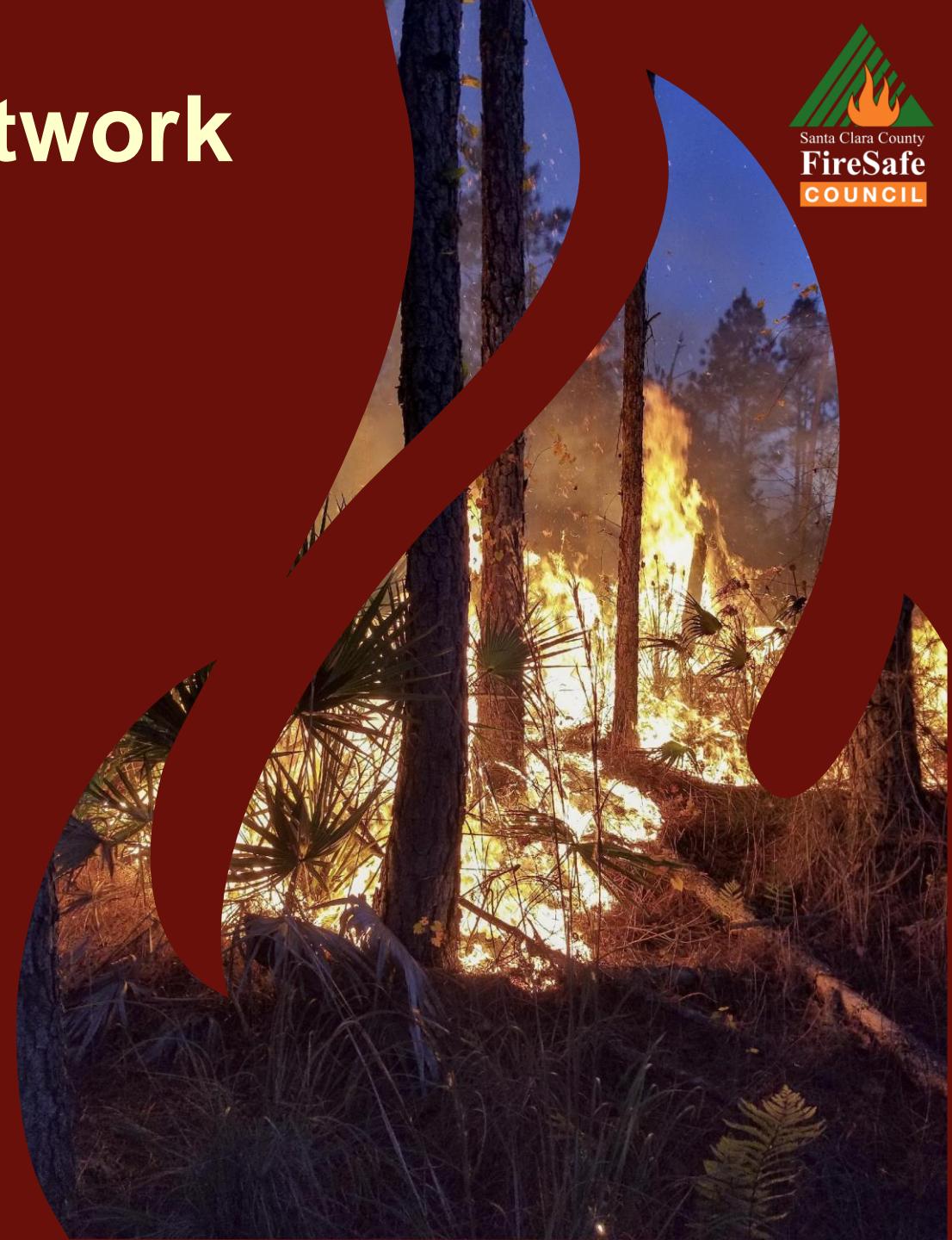
- Incorporate Annexes when complete
- Continue to engage with partners to evaluate and update when appropriate
- Present County CWPP to Board of Supervisors for adoption



Early Wildfire Detection Network



- Detect Wildfire at earliest opportunity
- Utilize Deep Learning ML/AI technologies
- Start with Wildfire Sensors (Earliest Detection)
- Integrate (bundle) Other Solutions via API:
 - ▶ Wildfire cameras from ALERTCA & Pano
 - ▶ Lightning Detection Sensors (FNN)
 - ▶ Drone Based First Response
- SCCFSC Role: VAR
 - ▶ System Specification Design With Client
 - ▶ Matrix Weighted Evaluation Criteria
 - ▶ Pilot Testing & Scaling
 - ▶ Solutions Procurement
 - ▶ Installation & Maintenance of Solutions



Weighted Matrix Evaluation Criteria



Cost-TCO

Upfront purchase, maintenance, upgrades



Battery Life & Charge Time

Low light time, recharge time, solar panel, average life & replacement plan



Delivery Time

How fast from PO to onsite shipment



Sensor Specifications

8 Various Parameters



Implementation

Ease of training/Time to install/Ease of setup & system calibration/Standard report pkg

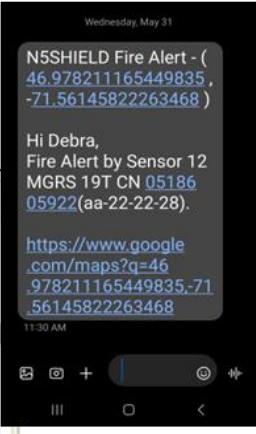
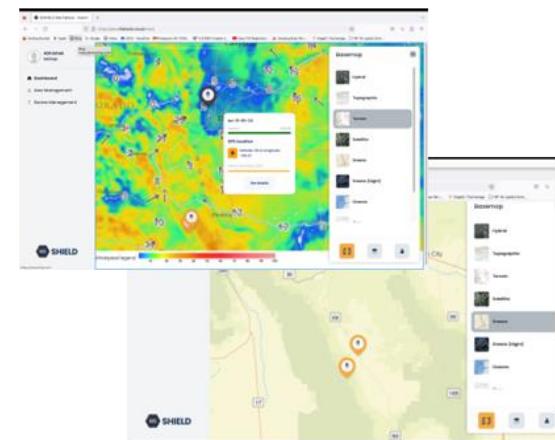
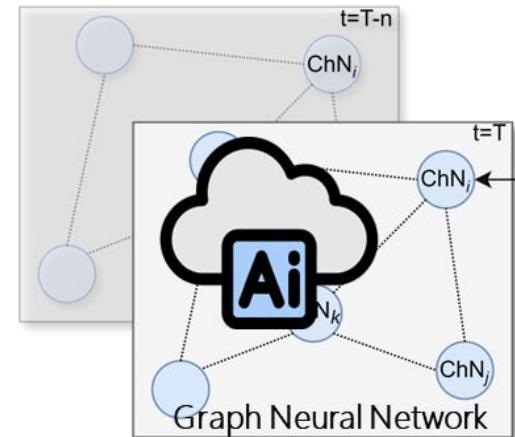
N5 Sensors, Inc.

- Founded 2012
- Commercial & Government Sales
- Invited to DHS S&T Smart Cities Internet of Things Innovation (SCITI) Labs Wildfire Program
- 2 years of wildfire detection in field, proven performance
- Sole source contract with DHS for 2024 deployments

Sensors + AI → **Environmental Intelligence**
Platform



Solution – N5SHIELD™



Multimodal Sensor Network

- ❑ Orthogonal Sensor Fusion
- ❑ Massive Environmental Data
- ❑ Minimal Infrastructure Requirement

Powerful Edge and Cloud AI

- ❑ Fast Detection, Day/Night
- ❑ Low False Alarm
- ❑ Network Based Detection

Human-Centric Data and Alert Management

- ❑ 24/7 Text, Email Alert Notification
- ❑ AI+ Human Intelligence for Alert Processing
- ❑ API Based Real-time Data Access

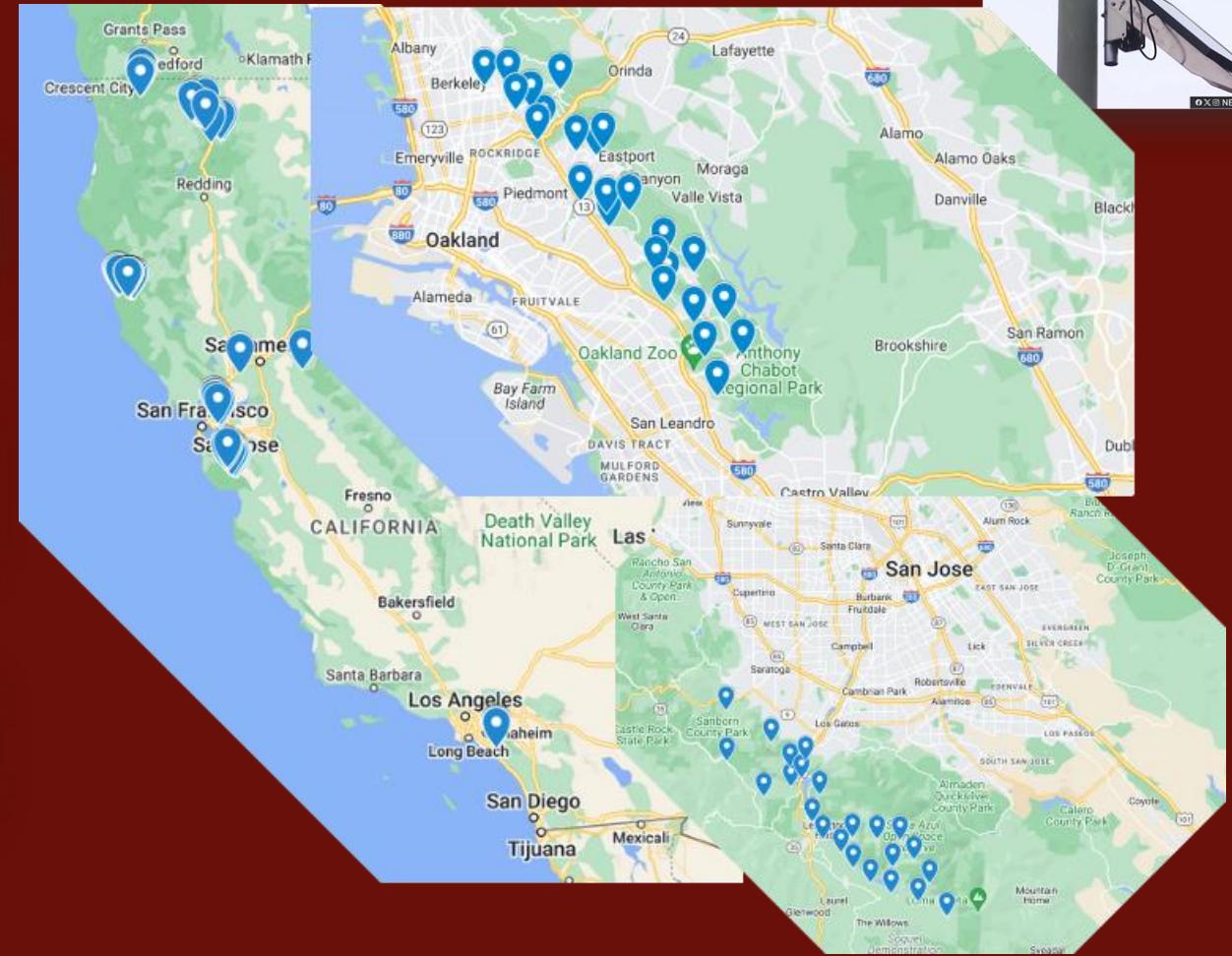
Solution – N5SHIELD™

No Camera

No Microphones

Your privacy is always protected.

Success – N5SHIELD™



Significant Partners and Collaborators

California Existing N5's Network Coverage Map

Deployments



10 US States

Deployed + 4 Provinces Canada

> 1 Million Acres Protection

100+

Number of Events Detected

~2 Terabyte

Environmental Data Logged

Presenter

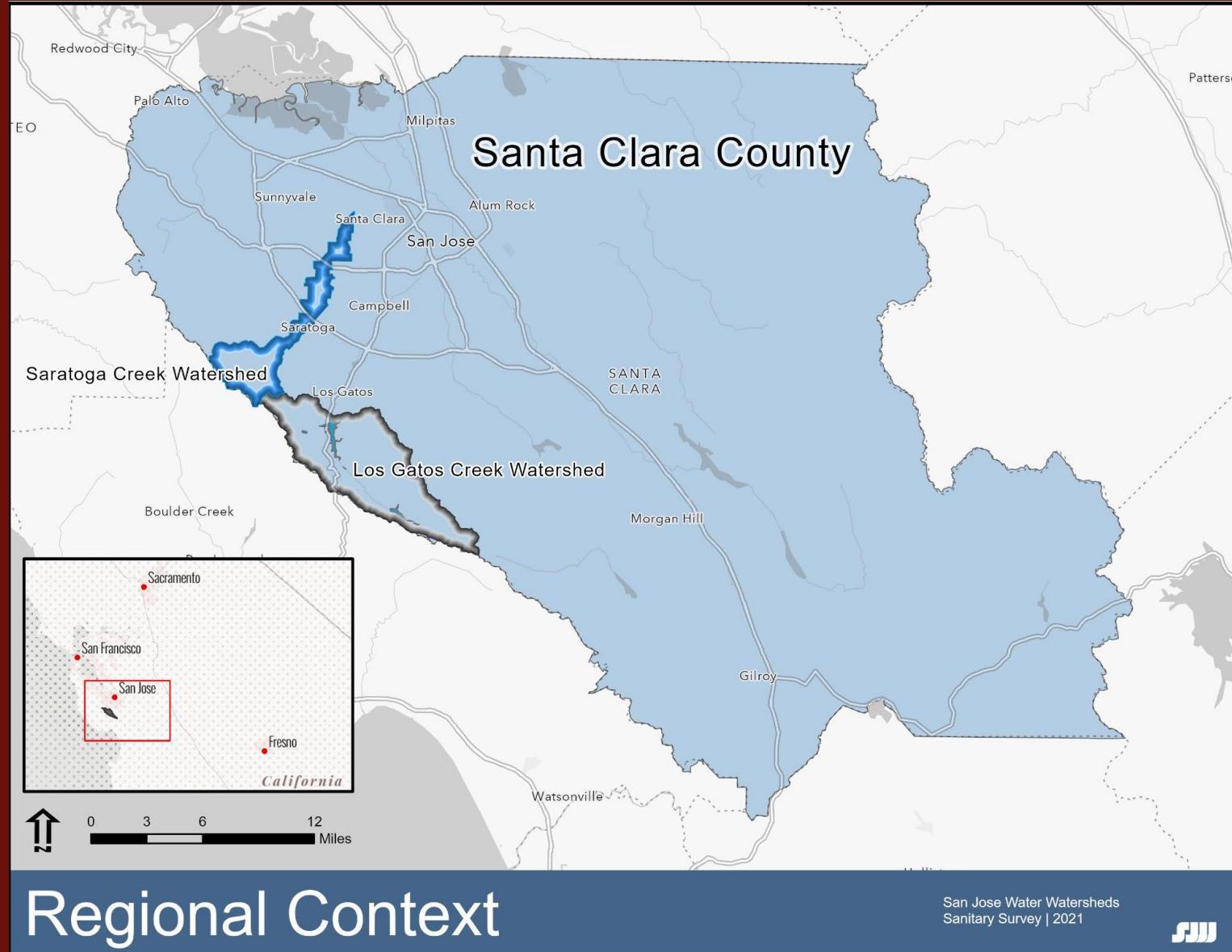


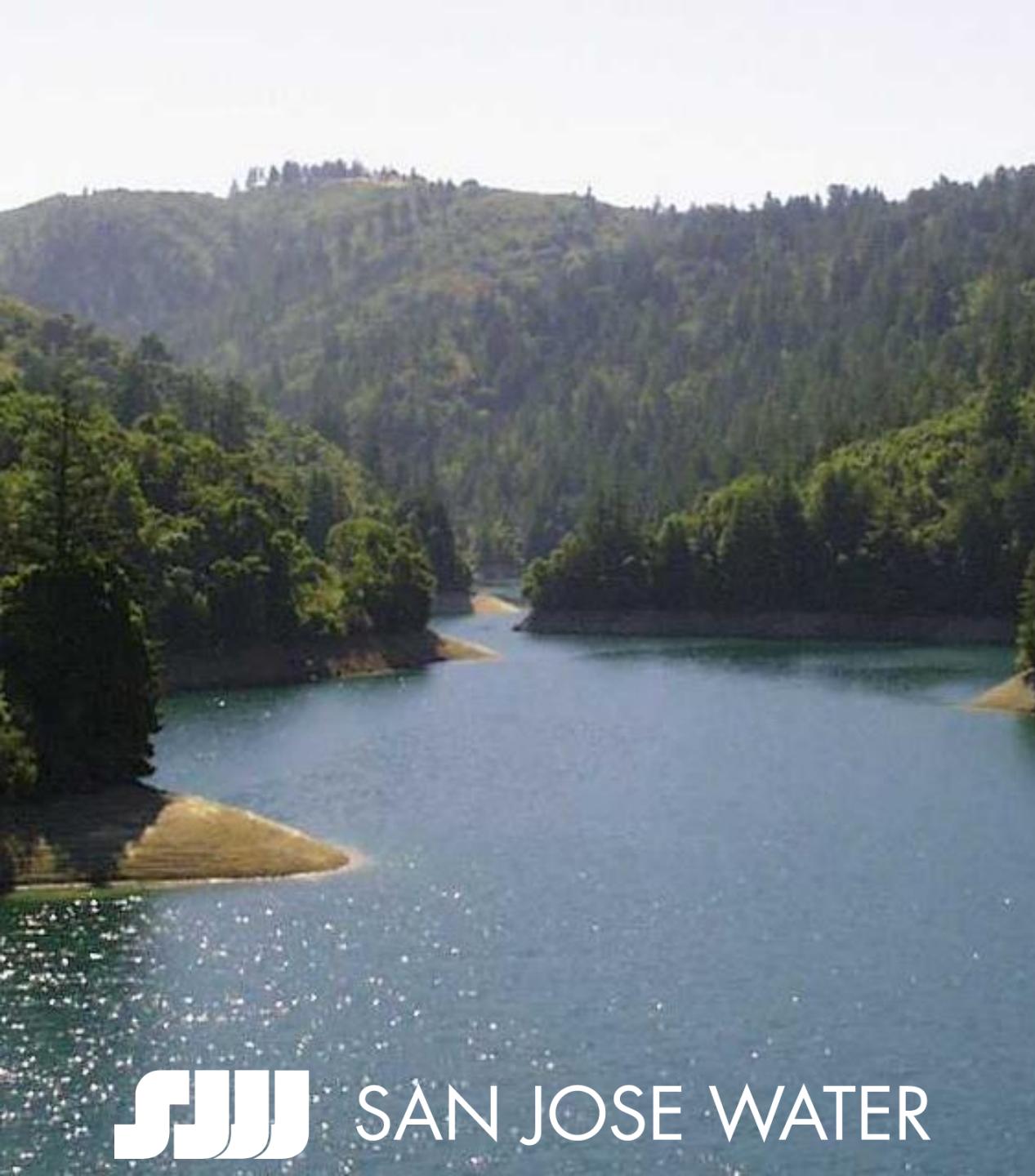
**Jared Lewis • Manager, Environmental
Planning and Natural Resources**



SAN JOSE WATER

Watersheds and Regional Context





SAN JOSE WATER

Focus Areas



CLIMATE ADAPTATION

Reduce vulnerability to climate impacts such as drought, flooding and wildfire.



WILDFIRE RESILIENCY

Protect infrastructure and natural resources, and prevent water supply disruptions during and after wildfires.



ENVIRONMENTAL WATER

Ensure long-term sustainability of water supply and support the health of local ecosystems.



ECOSYSTEM MANAGEMENT

Provide ecological benefits, water quality improvement, carbon sequestration, and recreational opportunities.

Wildfire Resiliency

Building resilient landscapes to ensure water system **reliability and sustainability** of water resources.



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Core Objectives



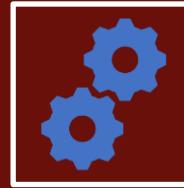
Reduce risk of catastrophic wildfire, protect source of supply and water quality



Provide resources to support existing detection and rapid response efforts



Increase the accuracy and precision of wildfire detection



Streamline allocation of resources for monitoring and suppression



Improve interagency coordination and response



SAN JOSE WATER

Audience Q&A

