RISE Planning Committee

MICHELLE NOVI
Industry Relations and Regulatory Affairs Director, Napa Valley Vintners

DAN PETROSKI
Winemaker, Massican Winery and Board Member, Napa Valley Grapegrowers

MOLLY (SHEPPARD) BURROUGHS
Assistant Winemaker & Environmental Manager at Spottswoode Estate Vineyard & Winery

EVYN CAMERON
Consulting Winemaker

MARTIN REYES, MW
Partner, WineWise; Founder, Reyes Wine Group and Co-Founder, Wine Unify

TOD MOSTERO
Director of Viticulture & Winemaking at Dominus Estate

Napa Green Team

ANNA BRITTAIN
Executive Director

MEGAN SCOTT
Winery Program Manager

BEN MACKIE
Vineyard Program Manager

SIERRA MINCHACA
Climate & Soil Specialist

MARISA TAYLOR
Program Coordinator

MEGHAN VERGARA
Social Media Manager

BILL BENNETT
Winery Program Engineer


If not here,
WHERE?
If not now,
WHEN?

MARQUEE ADDRESS:

PAUL MULLER, CO-OWNER
FULL BELLY FARM

Learn More
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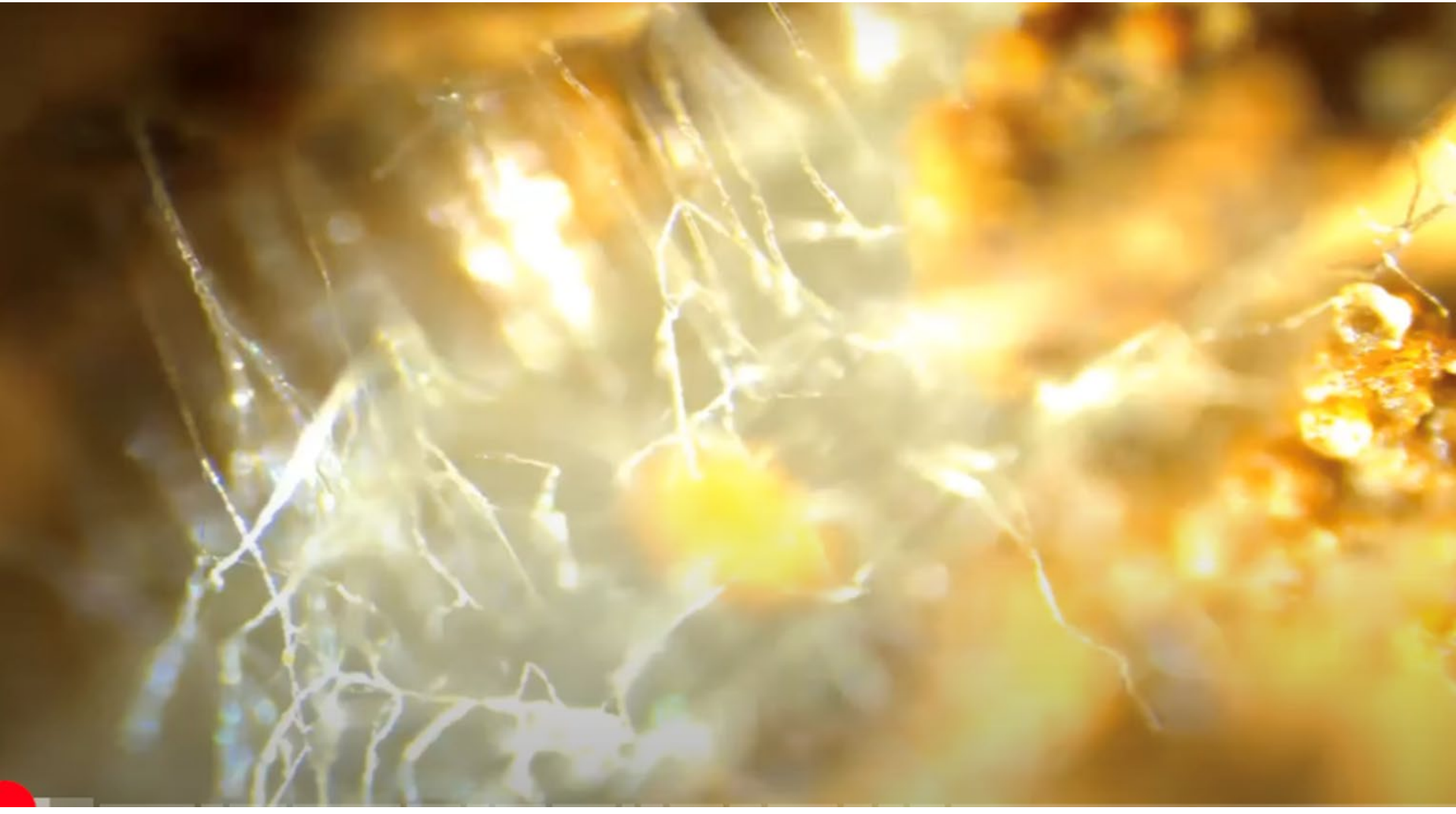
YOUR LAND AS ONE ORGANISM

PERSPECTIVES FROM AN OVER THE HILL ORGANIC FARMER

RISE WINE AND CLIMATE SYMPOSIUM

APRIL 6, 2023




EGGSCARGOT


TOYOTA

Inoculate the people touched by the land with the vitality of the place

Understanding Basic Principles

LIVING ROOM SALON

THE INEXTRICABLE LINKS BETWEEN FOREST HEALTH, WATER, FIRE & CLIMATE CHANGE

Expert Speakers:

- **Sarah Keiser**, Chief Executive Officer, Wild Oat Hollow
- **Dr. Tosha Comendant**, Conservation Science Director, Pepperwood Preserve
- **Chris Ott**, CEO, Eaton Drilling and former Environmental Director, Dry Creek Rancheria Band of Pomo Indians
- **Patrick Spencer**, Executive Director, Cork Forest Conservation Alliance

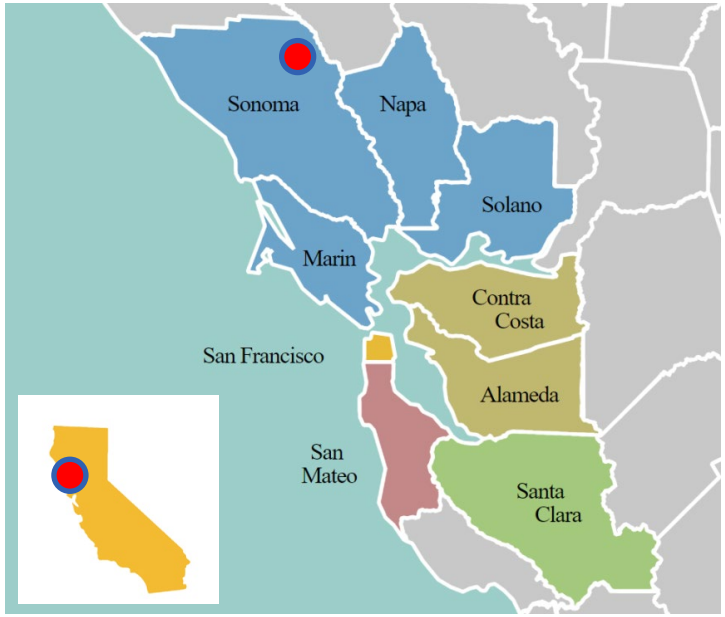
RISE
RESILIENCE • INNOVATION • SUSTAINABILITY • EMPOWERMENT
CLIMATE & WINE SYMPOSIUM

Pepperwood

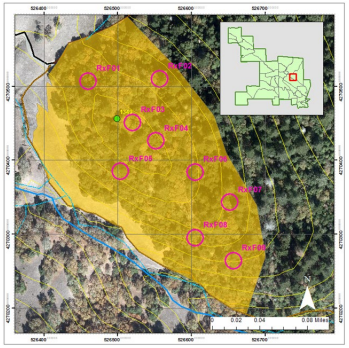
Restoring and monitoring post-fire forests to enhance watershed health

Tosha Comendant, Ph.D
Pepperwood
April 6, 2023

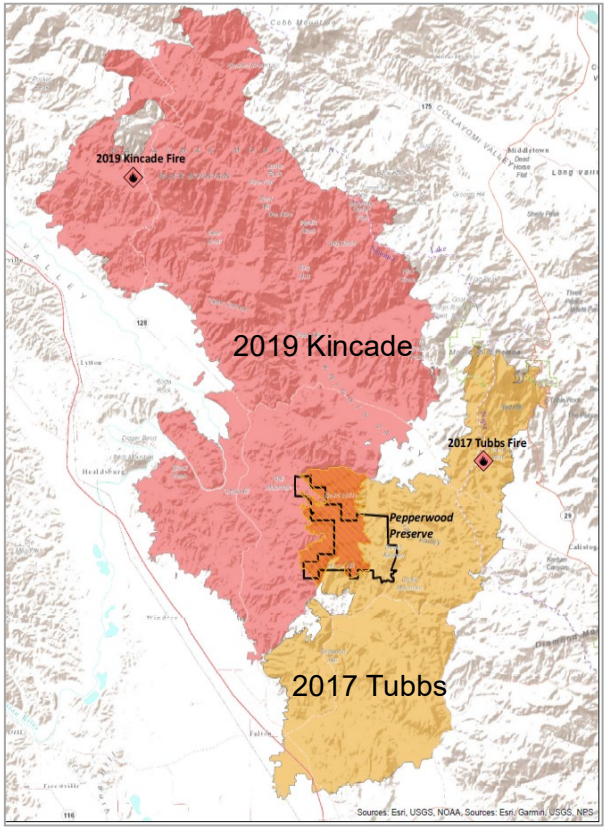
RESILIENCE · INNOVATION · SUSTAINABILITY · EMPOWERMENT
RISE



Dwight Center
for Conservation Science



RESILIENCE • INNOVATION • SUSTAINABILITY • EMPOWERMENT
RISE

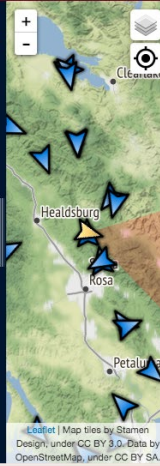


Pepperwood

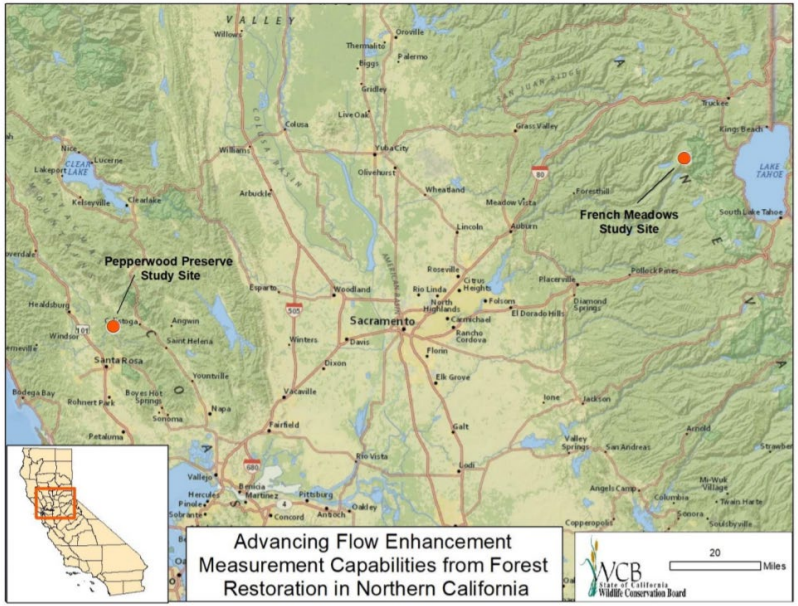
RISE


CAL FIRE


Sonoma Water
Axis-PepperwoodEast X:+104.80 Y:-9.36 Z:1.0 NSL dslater 10-27T22:46 © Nevada Seismo Lab 2019/10/27 22:54:06.05


Healdsburg
Kosa
Petalu
Leaflet | Map tiles by Stamen Design, under CC BY 3.0. Data by OpenStreetMap, under CC BY SA.

How does forest restoration benefit Northern California streams?

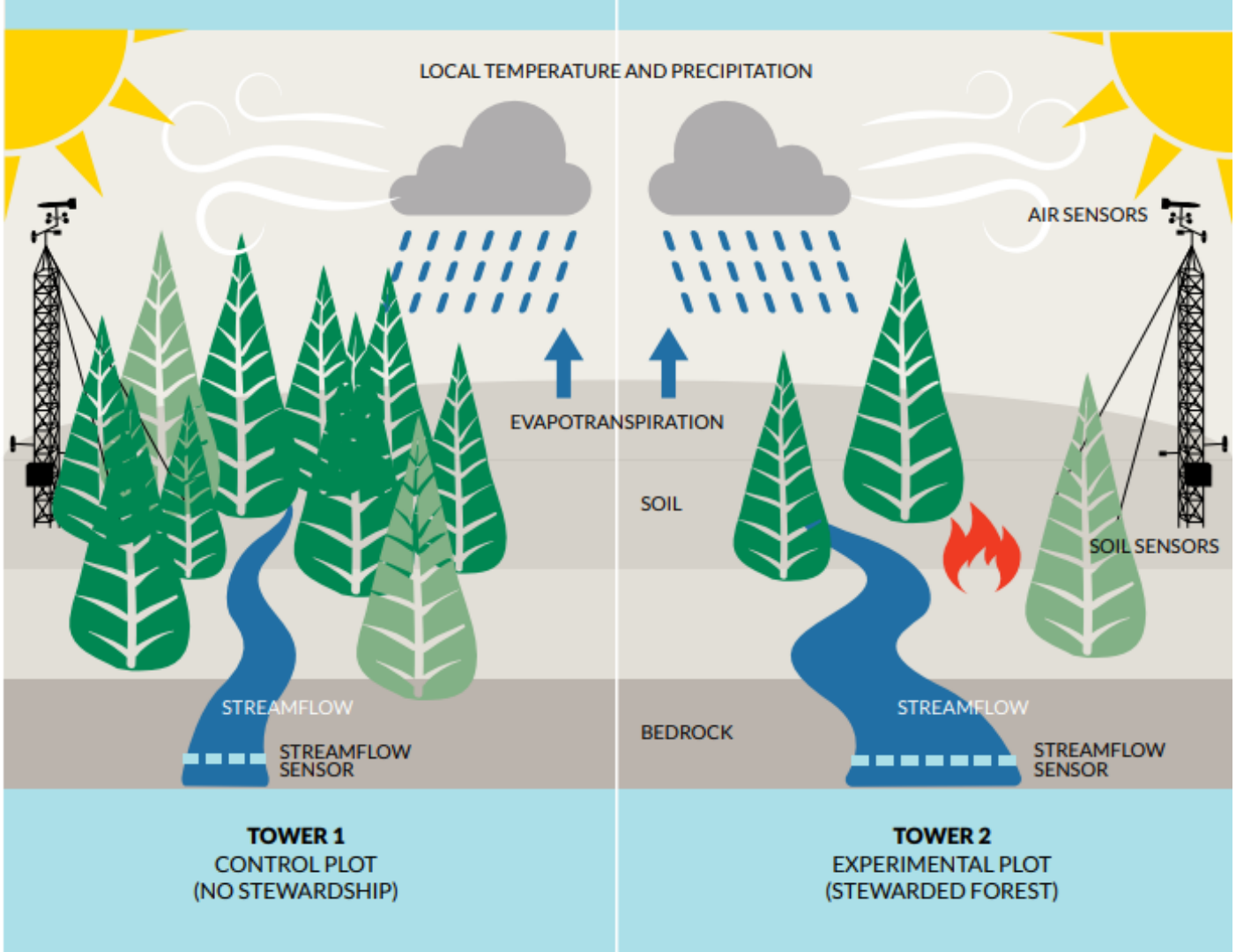


WHY? Improve predictions and provide technical assistance to water utilities on streamflow enhancement potential from forest restoration

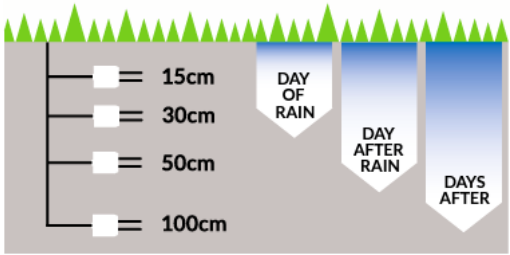
WHAT?
Monitor impacts of restoration on vegetation evapotranspiration, streamflow, soil moisture, and water supply

HOW?
Expand existing instrumentation network to fill data gaps in new forest types

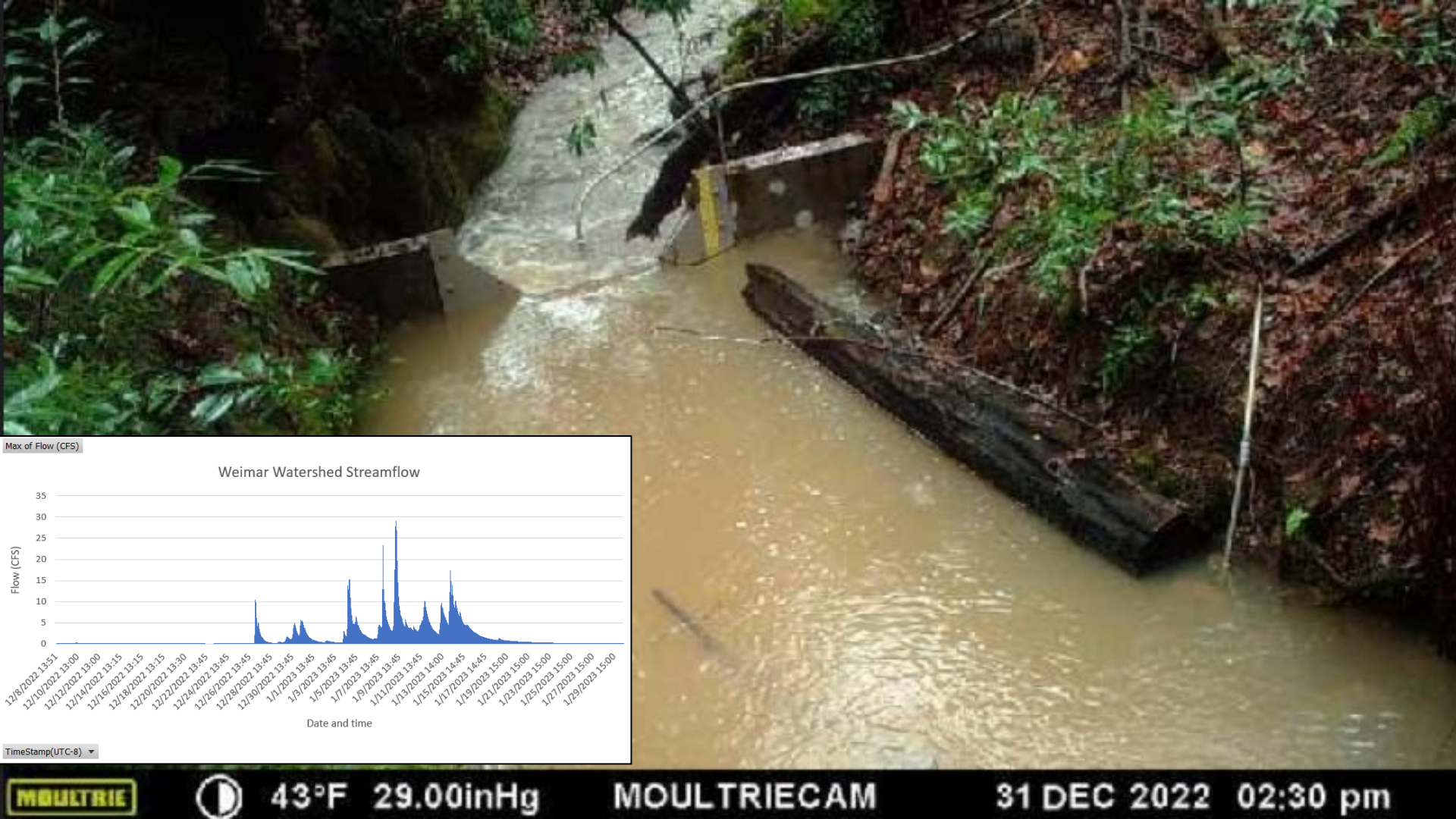
Pepperwood



Paired watershed experiment to measure key aspects of the water balance



Pepperwood


Max of Flow (CFS)
Weimar Watershed Streamflow
Flow (CFS)
35
30
25
20
15
10
5
0
12/8/2022 13:51
12/10/2022 13:00
12/12/2022 13:00
12/14/2022 13:15
12/16/2022 13:15
12/18/2022 13:15
12/20/2022 13:30
12/22/2022 13:45
12/24/2022 13:45
12/26/2022 13:45
12/28/2022 13:45
12/30/2022 13:45
1/1/2023 13:45
1/3/2023 13:45
1/5/2023 13:45
1/7/2023 13:45
1/9/2023 13:45
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1/21/2023 15:00
1/23/2023 15:00
1/25/2023 15:00
1/27/2023 15:00
1/29/2023 15:00
Date and time
TimeStamp(UTC-8)
MOULTRIE
43°F 29.00inHg
MOULTRIECAM
31 DEC 2022 02:30 pm

Key Points

- Support forest stewardship and restoration
- Amplify Indigenous practices
- Better technology, forecasting, alert systems, data, and tools are game changers
- Increase the pace and scale of actions that help us all predict, prepare and adapt to climate change

Pepperwood

RISE

Fire & Water: A Journey in Land Stewardship to Flood-Managed Aquifer Recharge

Christopher R. Ott, P.E

CEO, Eaton Drilling Co, LLC

Eaton Drilling

Dry Creek Rancheria
Band of Pomo Indians

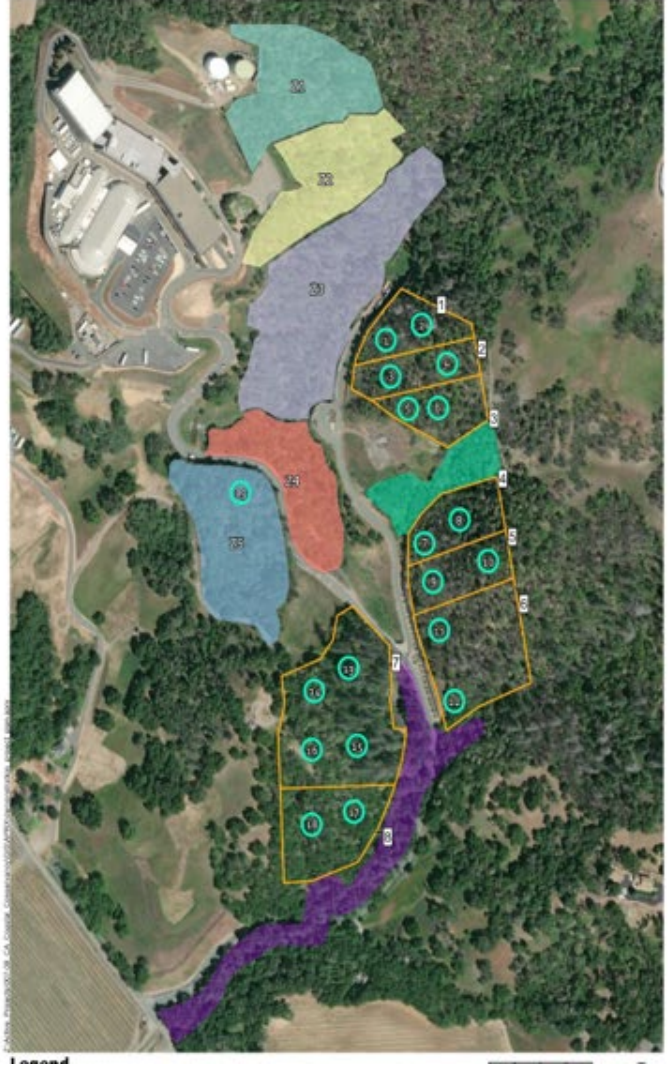
RISE

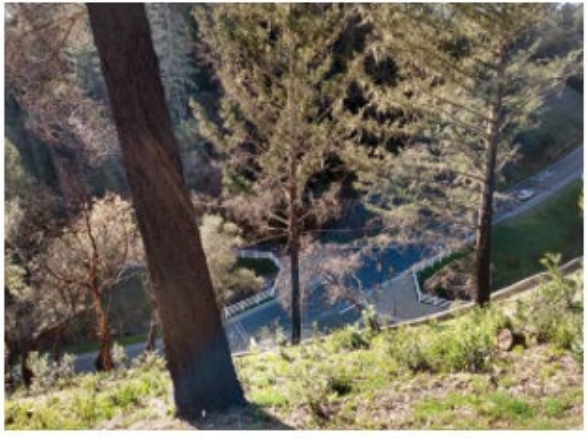
Kincade Fire 2019

Dry Creek Rancheria
52 Acres Severely Burned

Forest Resiliency

Reforestation and fuel treatments in the burned areas to reduce the probability and intensity of future fires.





- Traditional Ecological Knowledge (TEK) is commonly defined as the evolving knowledge acquired by indigenous and local peoples over hundreds or thousands of years through direct contact with the environment (Rinkevich et al 2011).
- Cultural Burning was used to: put nutrients back into the soil, kill off certain plant species, clearing (for passage and site lines to see game for hunting), timing was important for the diversity of plants, which in turn increase the diversity of animals and enable succession of plant species.
- **All modern methods used in this project were consistent with TEK.**

- When fuel is chipped and left on site, the fire risk is reduced but the fuel is not removed from the forest.
- Decomposition of wood chips removes fuel by returning biomass to the soil.

Native vegetation thrives!

Invasive species are slowed!

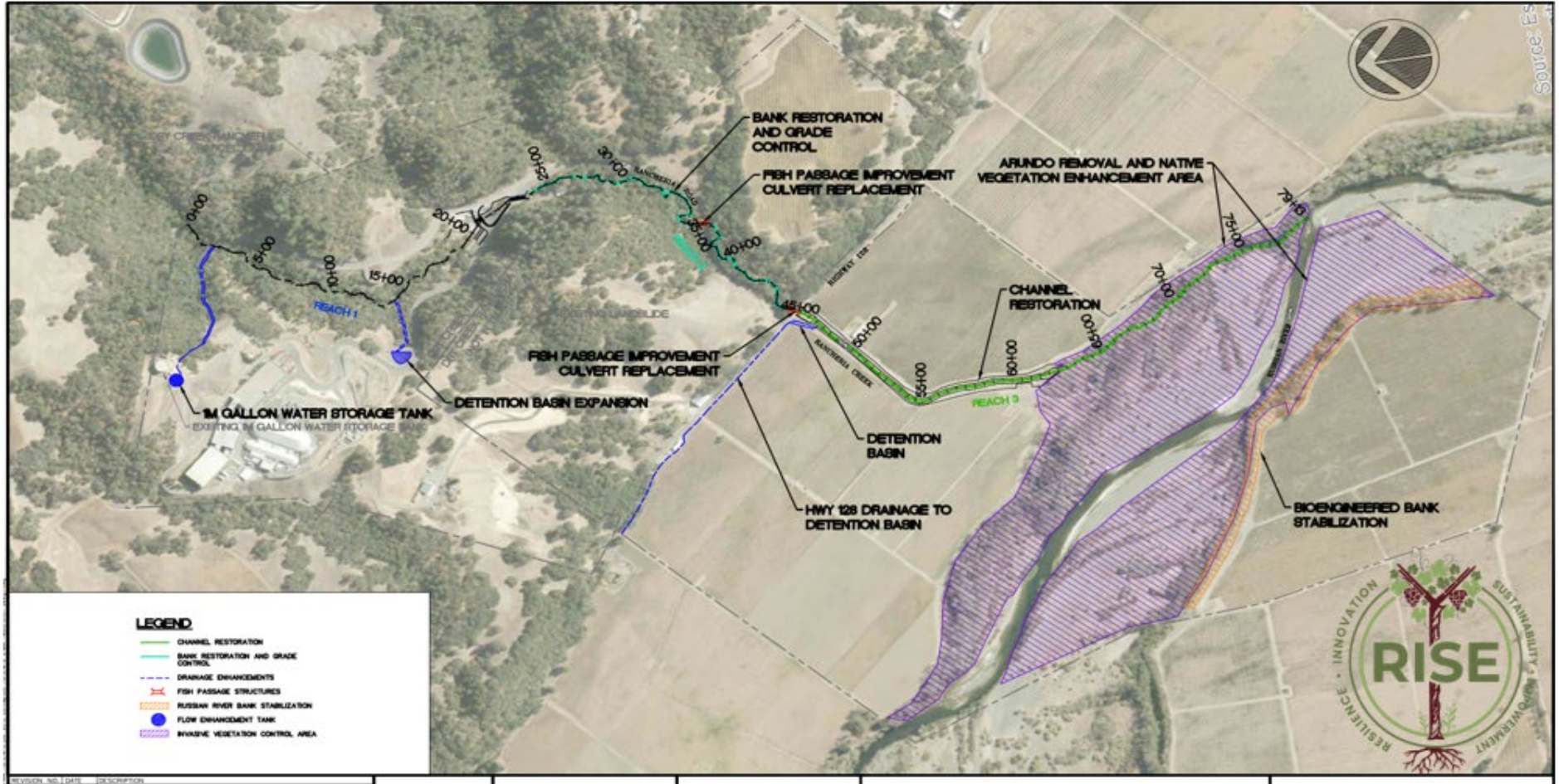
Moisture content is doubled!

- Decomposition of wood chips was accelerated using fungus.
- Biomass returning to the soils helped regenerate scorched and sterilized soils, therefore reestablishing the nitrogen cycle.

Restoration

Stream flow enhancement in cooperation with Federal, State and local governments.

The Rancheria Creek restoration has dramatically restored habitat necessary for the return of fish to this ancient spawning ground.



REVISION NO.	DATE	DESCRIPTION

FlowWest

SCALE: 1" = 250'
0 125 250' 500'

DRAWN BY: HANLEY

DATE: 08/2016

SHEET:

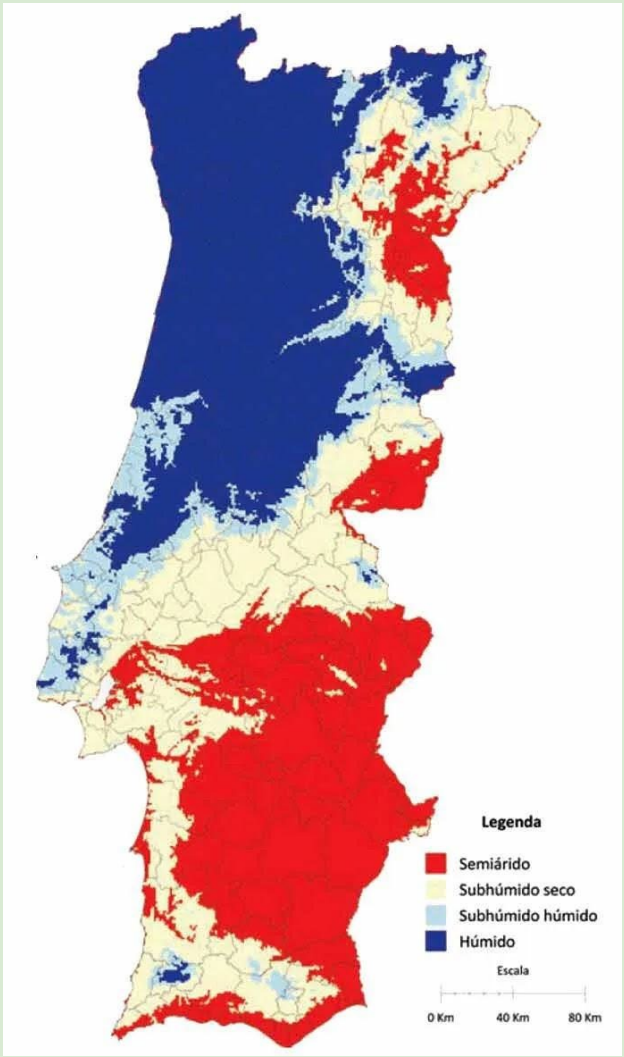
Alexander Valley Flood-MAR

A Community

Watershed Enhancement & Management Project


LYNDA HOPKINS
SUPERVISOR
Jackson
FAMILY WINES
BACHAND & ASSOCIATES
James GORE
SUPERVISOR
FFW
FOLEY FAMILY WINES
Real Vineyards. Real Wineries. Real Wines.
TROUT UNLIMITED
ROBERT YOUNG
DRY CREEK RANCHERIA
BAND OF POMO INDIANS
Sonoma County, California
Jim WOOD
State Assembly
CALIFORNIA DEPARTMENT OF
WATER RESOURCES
AVA
Alexander Valley Association
SONOMA COUNTY CALIFORNIA
SONOMA COUNTY
18 50
AGRICULTURE
INDUSTRY
RECREATION
CALIFORNIA
ALEXANDER VALLEY
WINEGROWERS
SONOMA COUNTY
SONOMA COUNTY
FARM BUREAU
MIKE McGUIRE
STATE SENATOR
RUSSIAN RIVER
confluence
David
Rabbitt
SANTA ROSA PLAIN
GROUNDWATER
SUSTAINABILITY AGENCY
CALIFORNIA
WATER BOARDS
North Coast - R1
Jared
Huffman
U.S. CONGRESS
NOAA
NOAA
FISHERIES
PETALUMA VALLEY
GROUNDWATER
SUSTAINABILITY AGENCY
Sonoma
Water

By the Community for all Communities



Portugal,
Hot Spots for Desertification

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INNOVATION · SUSTAINABILITY · EMPOWERMENT · RESILIENCE
CLIMATE & WINE SYMPOSIUM


LATESTLY
World Day
to
Combat
Desertification
and
Drought