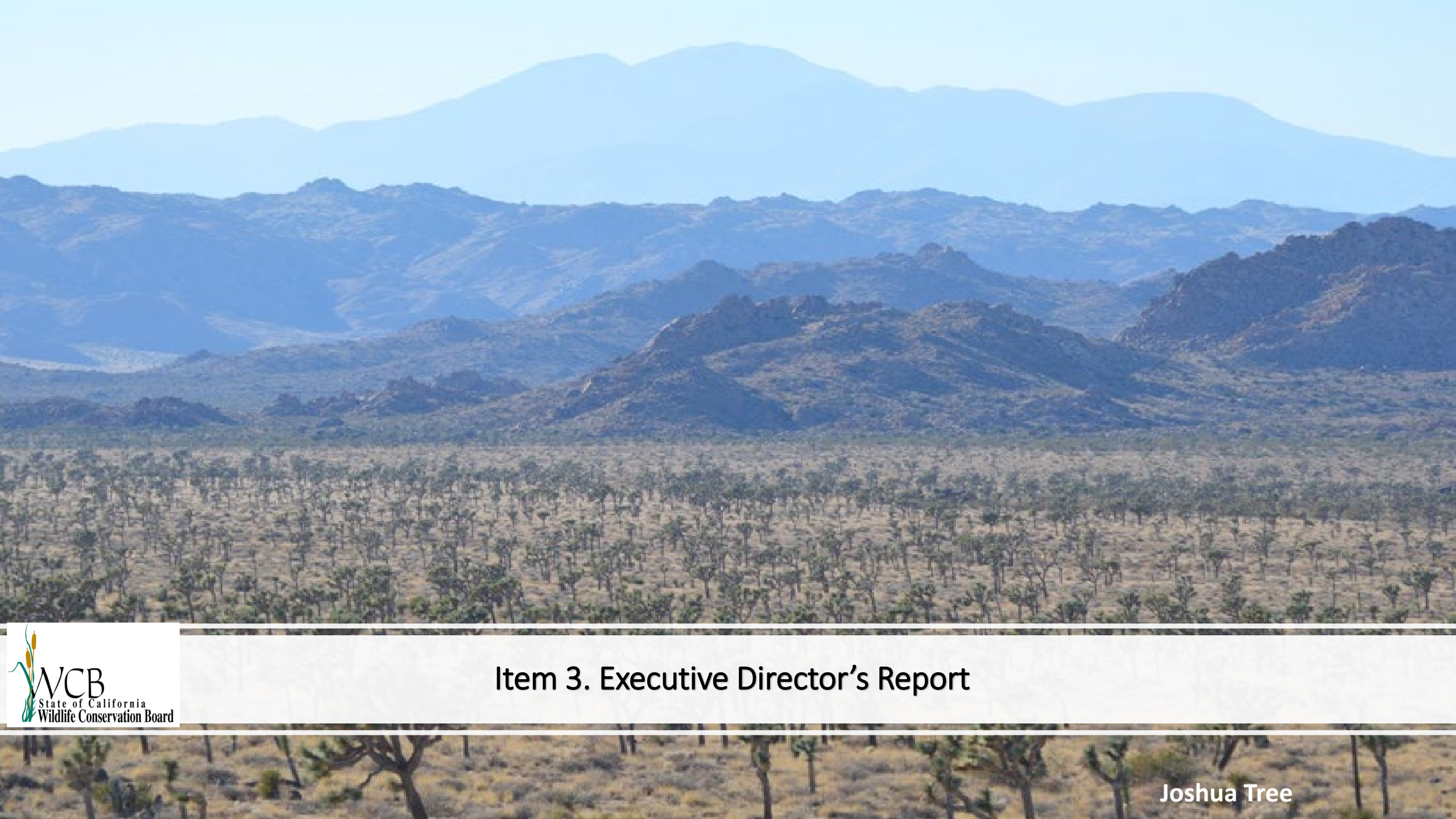
WCB State of California Wildlife Conservation Board

Wildlife Conservation Board
February 15, 2024, 9:00 am Board Meeting
First Floor Auditorium, CNRA Headquarters Building

Mountain Meadows

Item 2. Approval of Agenda

Van Arken



WCB State of California Wildlife Conservation Board

Item 3. Executive Director's Report

Joshua Tree

WCB State of California Wildlife Conservation Board

Item 4. Board Member Updates and Reports

Malech Ranch

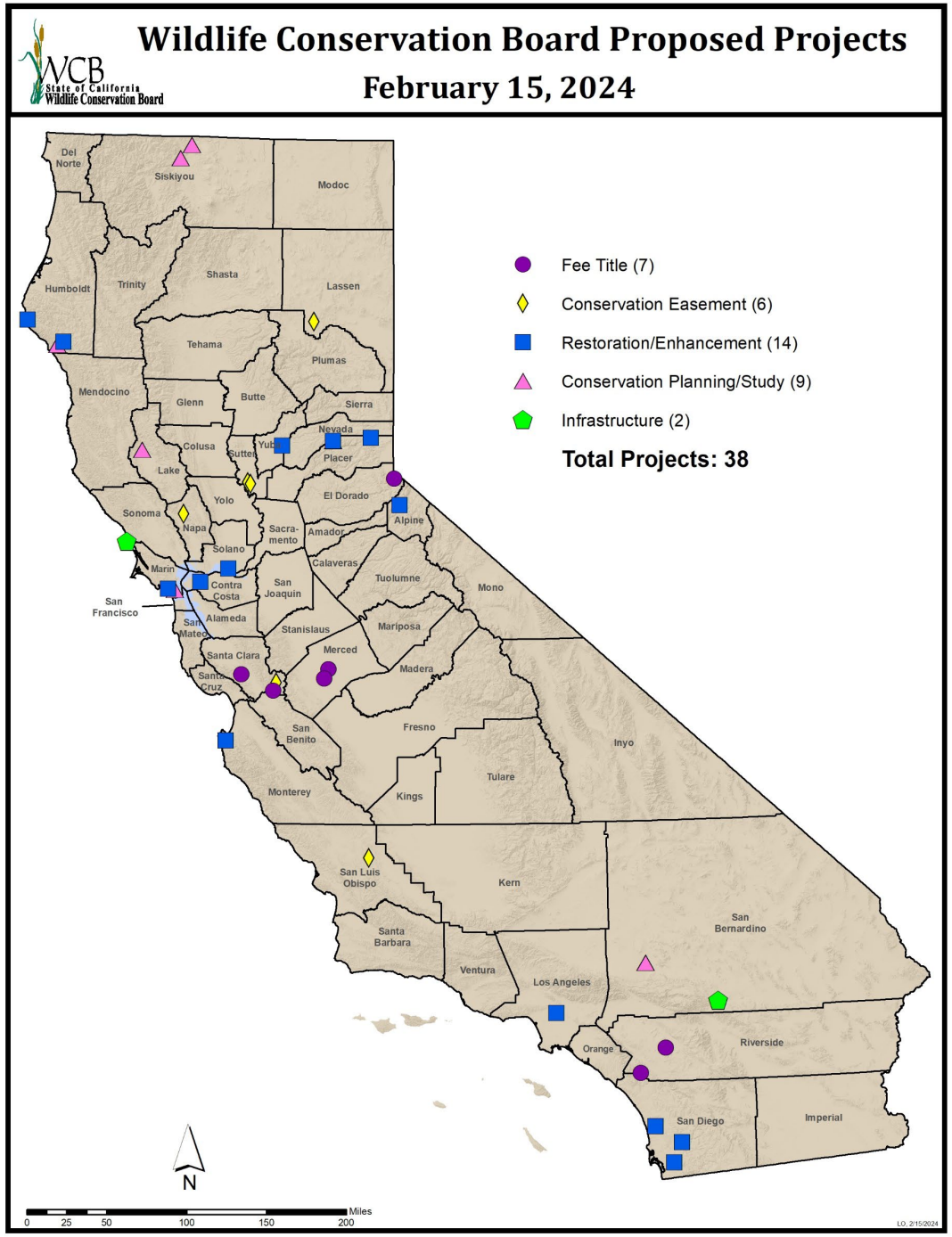
Item 5. Discussion and Election of Board Chair

Upper Rose Bar

WCB
State of California
Wildlife Conservation Board

Item 6. Funding Status - Informational

Pacific Union College Forest



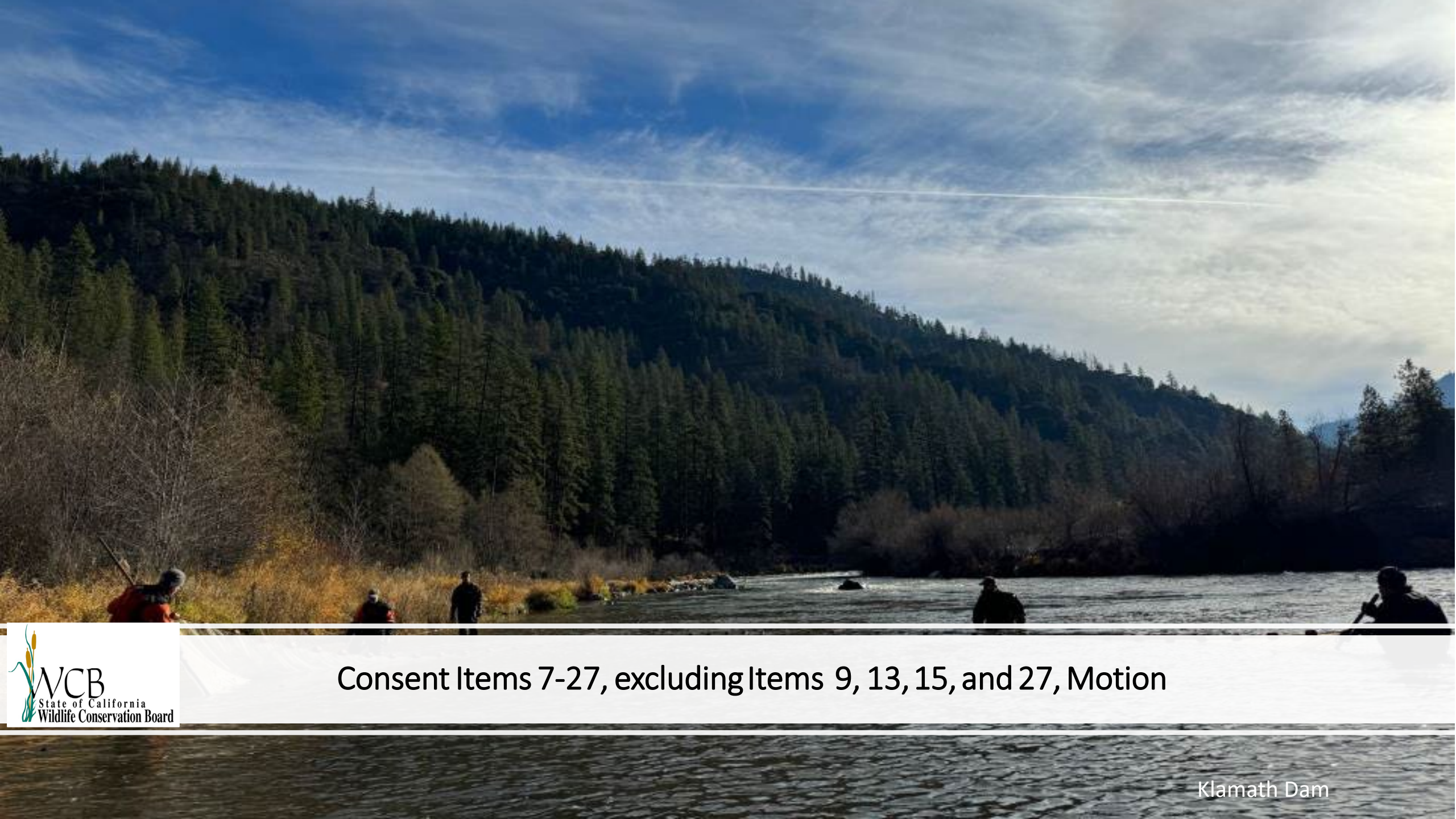
Wildlife Conservation Board Meeting February 15, 2024 Project Map

Consent Items 7-27

Western Riverside MSHCP (Samrith)

Item 7. Recovery of Funds

Fund Name	Amount
General Fund	$142,987.00
Habitat Conservation Fund	$27,413.00
California Clean Water, Clean Air, Safe Neighborhood Parks, and Coastal Protection Fund	$1.92
Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Fund of 2006	$0.00
Water Quality, Supply, and Infrastructure Improvement Fund of 2014	$0.00
The California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Act of 2018	$10,926.53
Total Recoveries for All Funds	***$181,328.45***



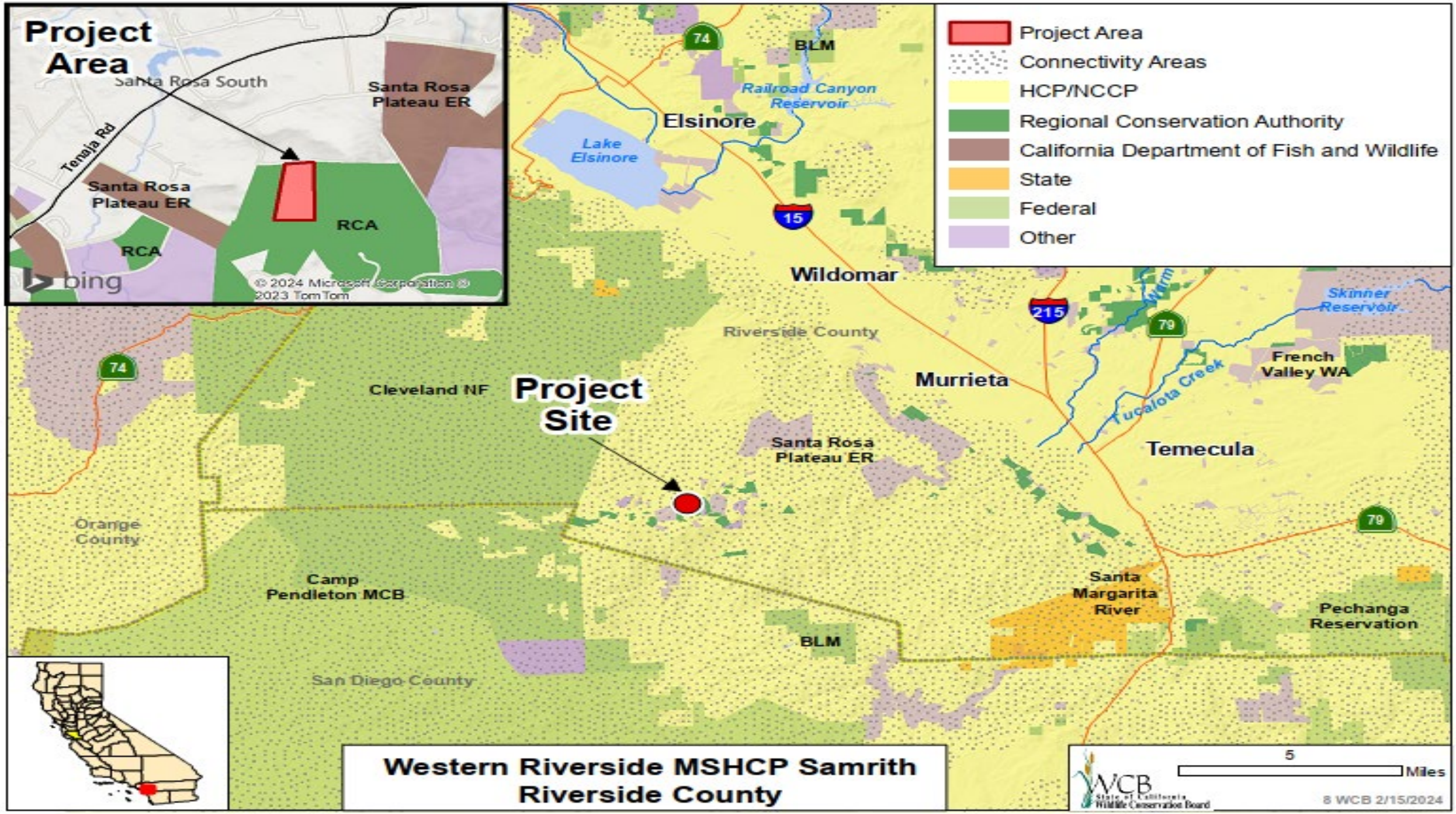
WCB State of California Wildlife Conservation Board

Consent Items 7-27, excluding Items 9, 13, 15, and 27, Motion

Klamath Dam

Presented Items 28-48

Western Joshua Tree



Western Riverside MSHCP Samrith Riverside County

Western Riverside MSHCP Samrith

Slide 1

Northern portion of the property with oak trees along the horizontal center.

Western Riverside MSHCP Samrith

Slide 2

Left: View of chaparral and woodland habitats with trail in the central portion of the Property.

Right: View of chaparral habitat in the southern portion.

Photos by Western Riverside County Regional Conservation Authority.

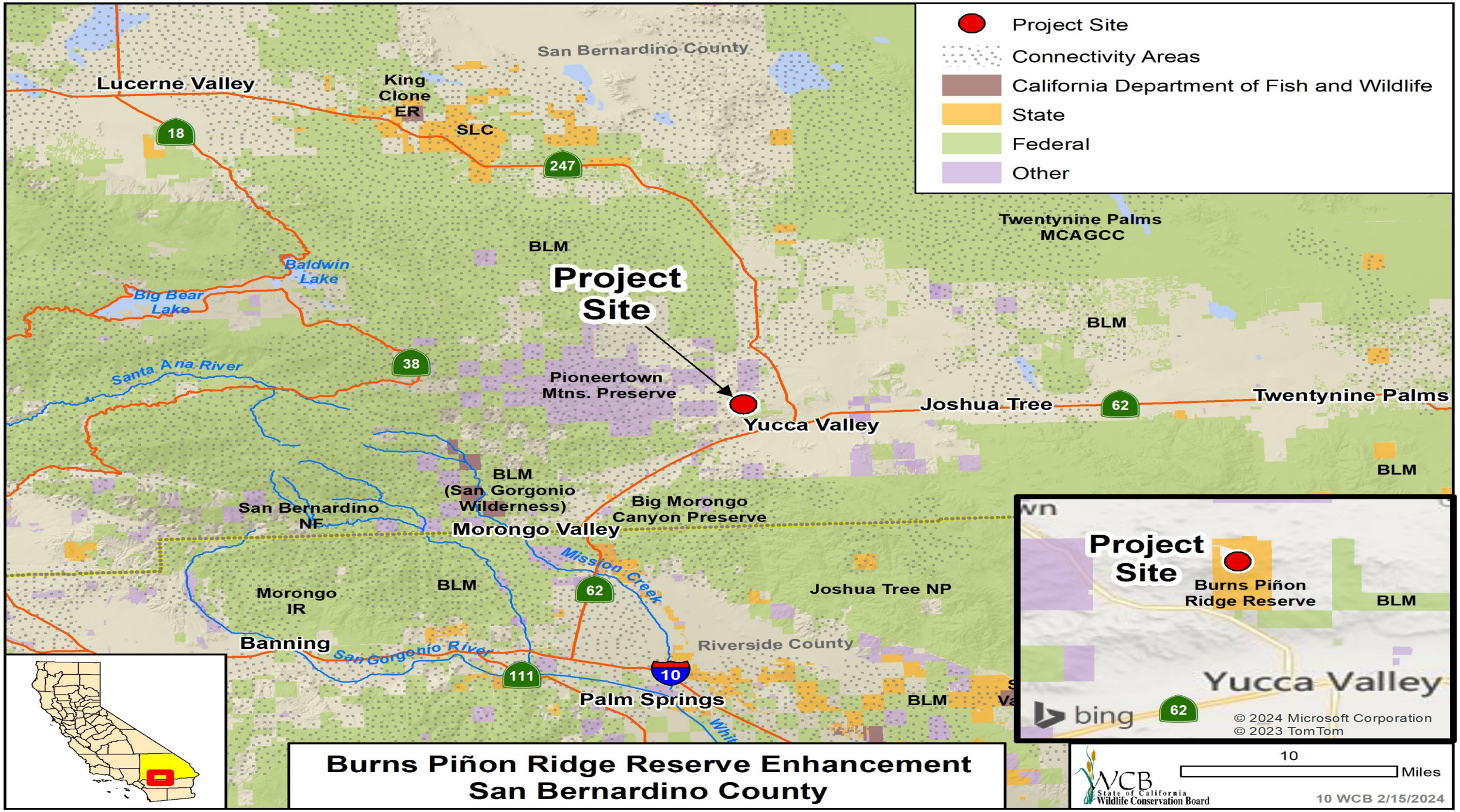
Western Riverside MSHCP Samrith

Slide 3

Ground level view of oak woodland habitat in the northern portion.

Western Riverside MSHCP Johnson

Withdrawn from consideration at this time



Burns Piñon Ridge Reserve Enhancement
San Bernardino County

Burns Pinon Ridge Reserve Enhancement

Slide 1

- Field station residence in foreground and workshop in background on left.

Burns Pinon Ridge Reserve Enhancement

Slide 2

- Front of field station residence

Burns Pinon Ridge Reserve Enhancement

Slide 3

- Workshop facility

Burns Pinon Ridge Reserve Enhancement

Slide 4

- Kitchen

Burns Pinon Ridge Reserve Enhancement

Slide 5

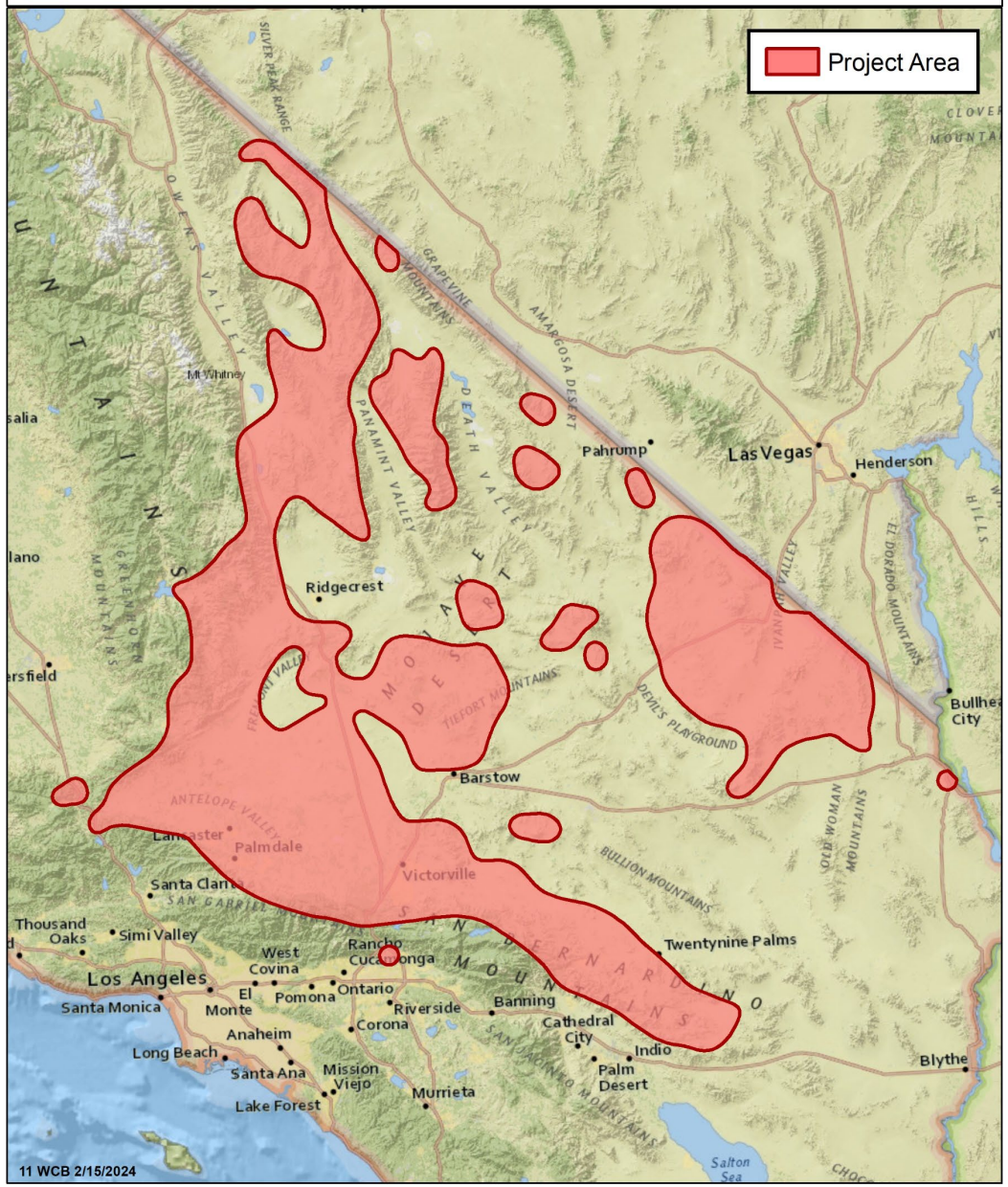
- Kitchen breezeway

Burns Pinon Ridge Reserve Enhancement

Slide 6

- Single pane windows to be replaced

Joshua Tree Conservation Coalition and Monitoring
Multiple Counties



11 WCB 2/15/2024

Photo: Ella DeMaria, MDLT

Western Joshua Tree Conservation Coalition and Monitoring

Slide 1

Goals:

- Assist the California Department of Fish and Wildlife in development of the Western Joshua Tree Conservation Plan
- Form the Joshua Tree Conservation Coalition
- Conduct a study using a standardized method for range-wide monitoring of western Joshua Tree

Western Joshua Tree Conservation Coalition and Monitoring

Joshua Tree Conservation Tribal Engagement
Multiple Counties

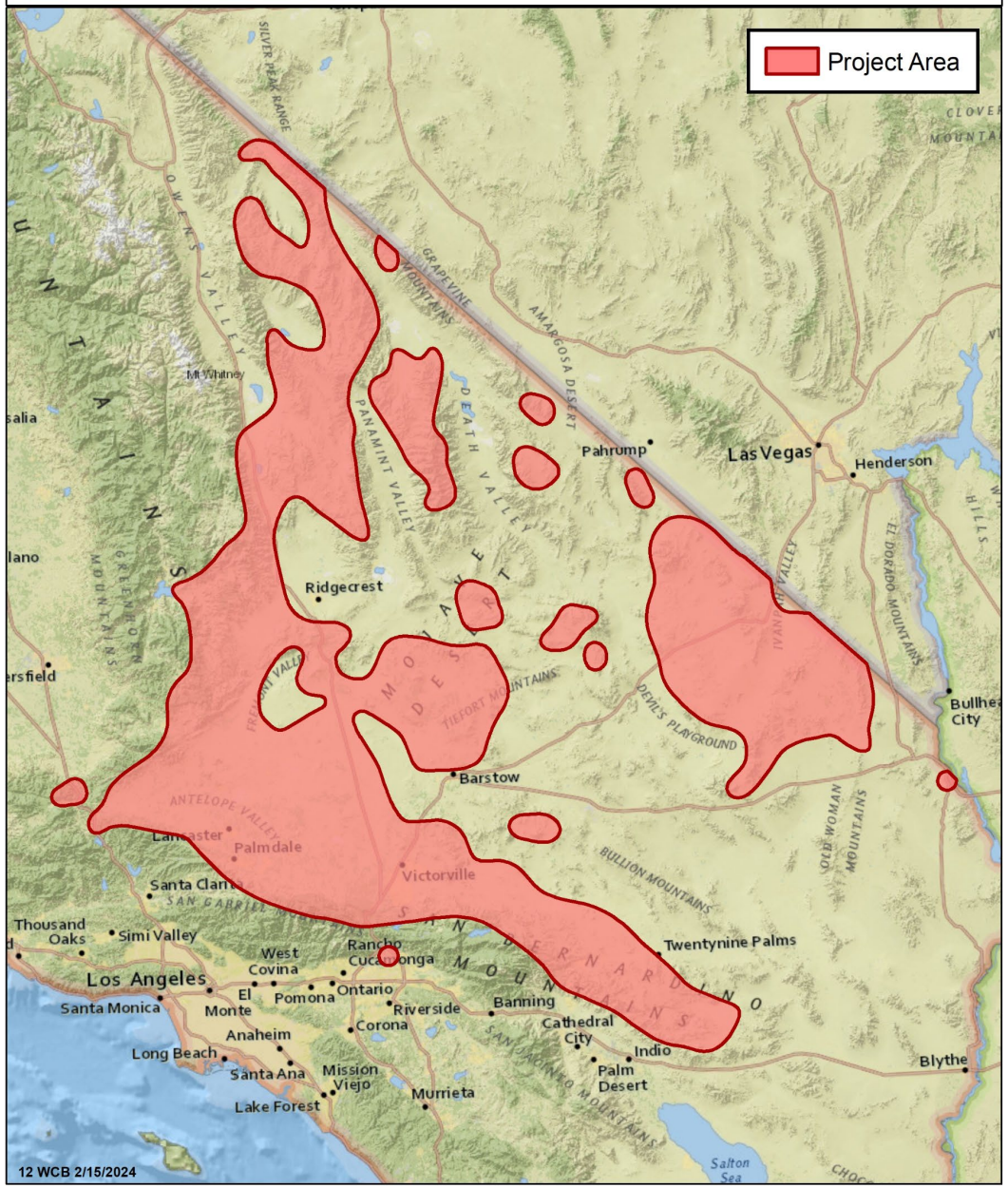


Photo by Wendy Walker, Transition Habitat Conservancy

Western Joshua Tree Conservation Tribal Engagement

Slide 1

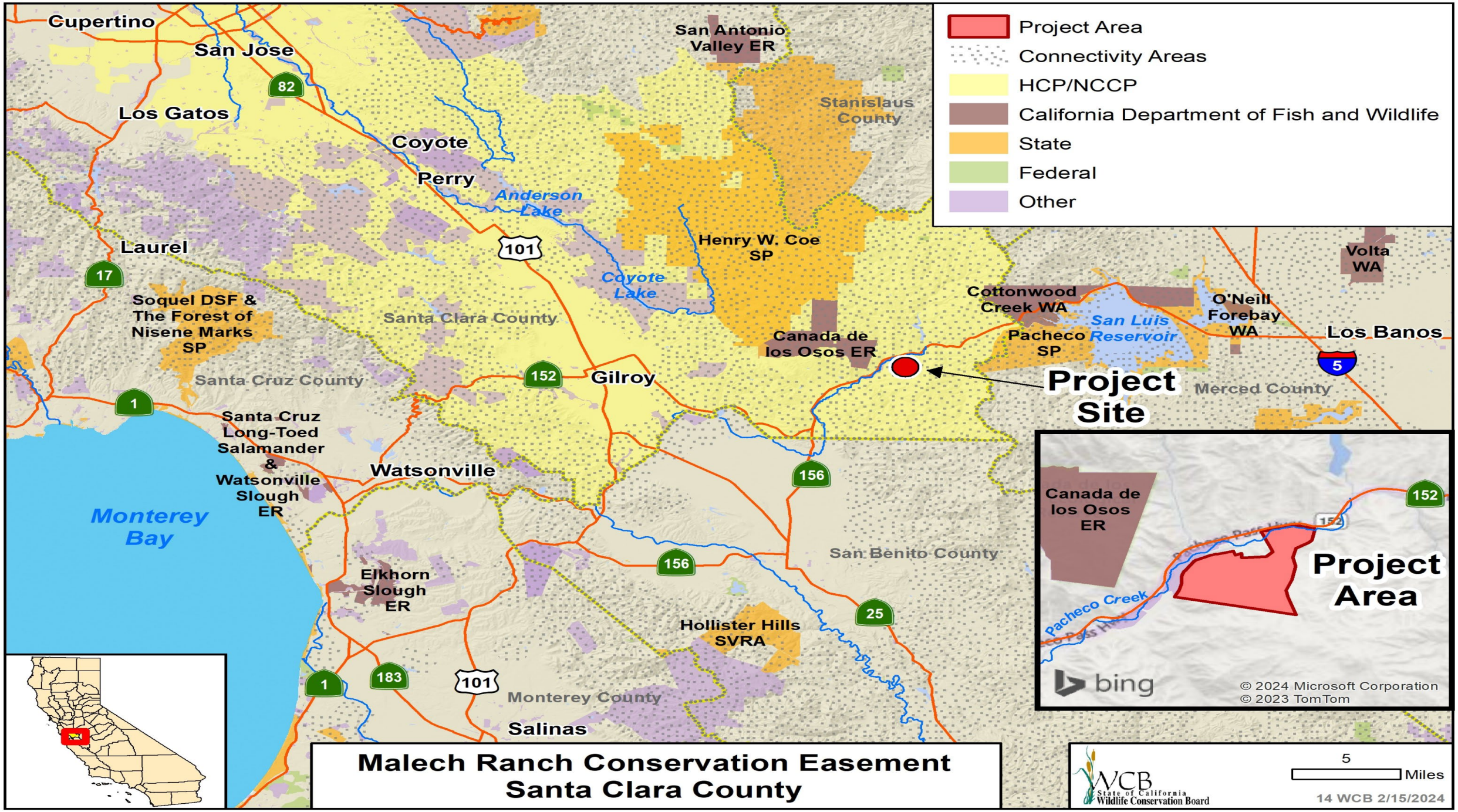
Goals:

- Assist the California Department of Fish and Wildlife in their preparation of the Western Joshua Tree Conservation Plan (WJTCP) per Western Joshua Tree Conservation Act
- Support Tribal participation with stipends in the development of the WJTCP

Western Joshua Tree Conservation Tribal Engagement

Los Banos Wildlife Area, Expansion 10 (Soares)

Withdrawn from consideration at this time



Malech Ranch Conservation Easement
Santa Clara County

Malech Ranch CE

Slide 1

Rattlesnake rock pond (Credit: SCVHA)

Malech Ranch CE

Slide 2

Looking north across the property
(Credit: SCVHA)

Malech Ranch CE

Slide 3

Looking north at Pacheco Pass Highway (Credit: SCVHA)

Malech Ranch CE

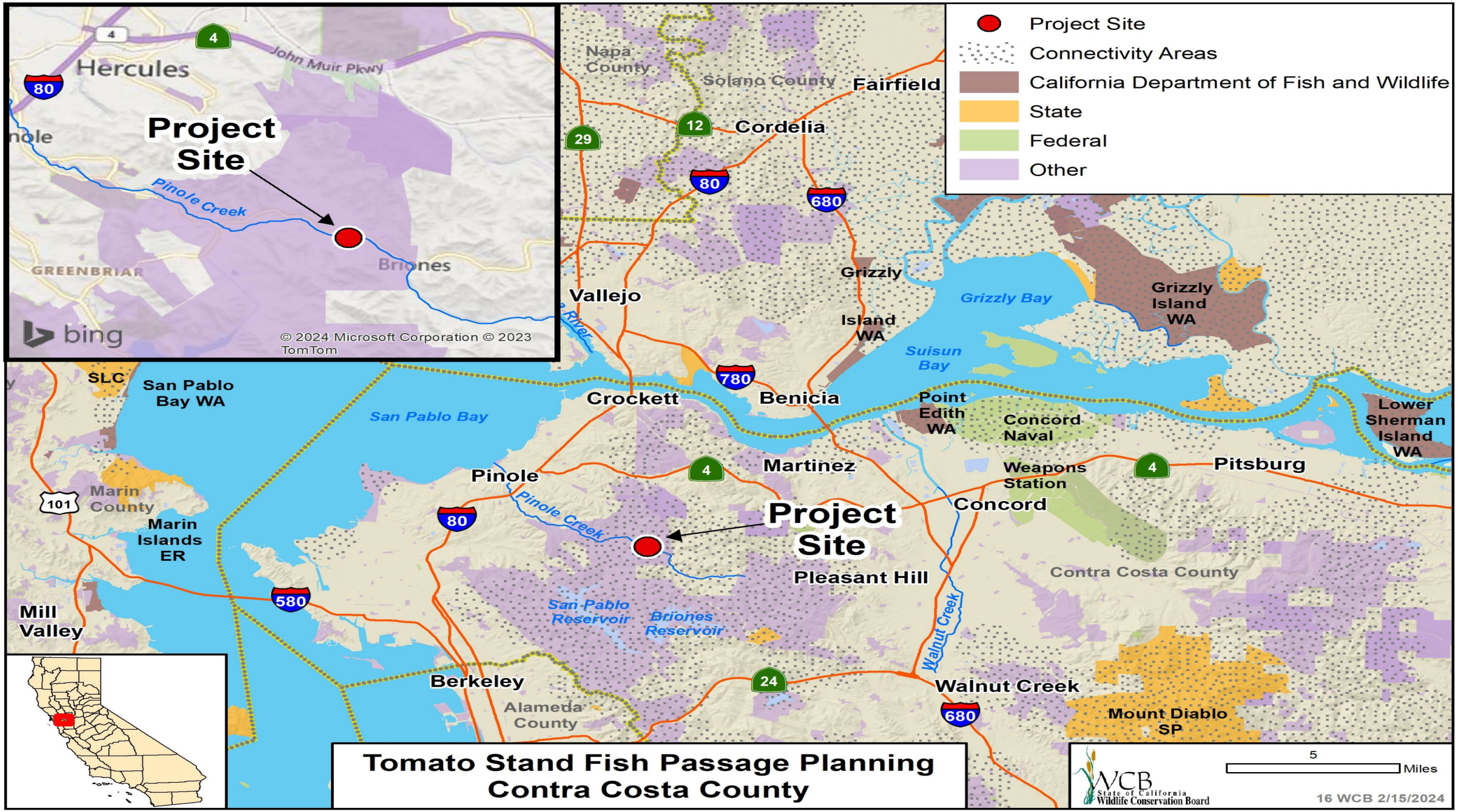
Slide 4

Looking West across the property

(Credit: SCVHA)

Mokelumne River Floodplain Reconnection and Restoration

Withdrawn from consideration at this time



Tomato Stand Fish Passage Planning
Contra Costa County

Tomato Stand Fish Passage Planning

Slide 1

Map of the Tomato Stand culvert within Pinole Creek Watershed.

Tomato Stand Fish Passage Planning

Slide 2

Left: Riparian corridor surrounding the Tomato Stand culvert.

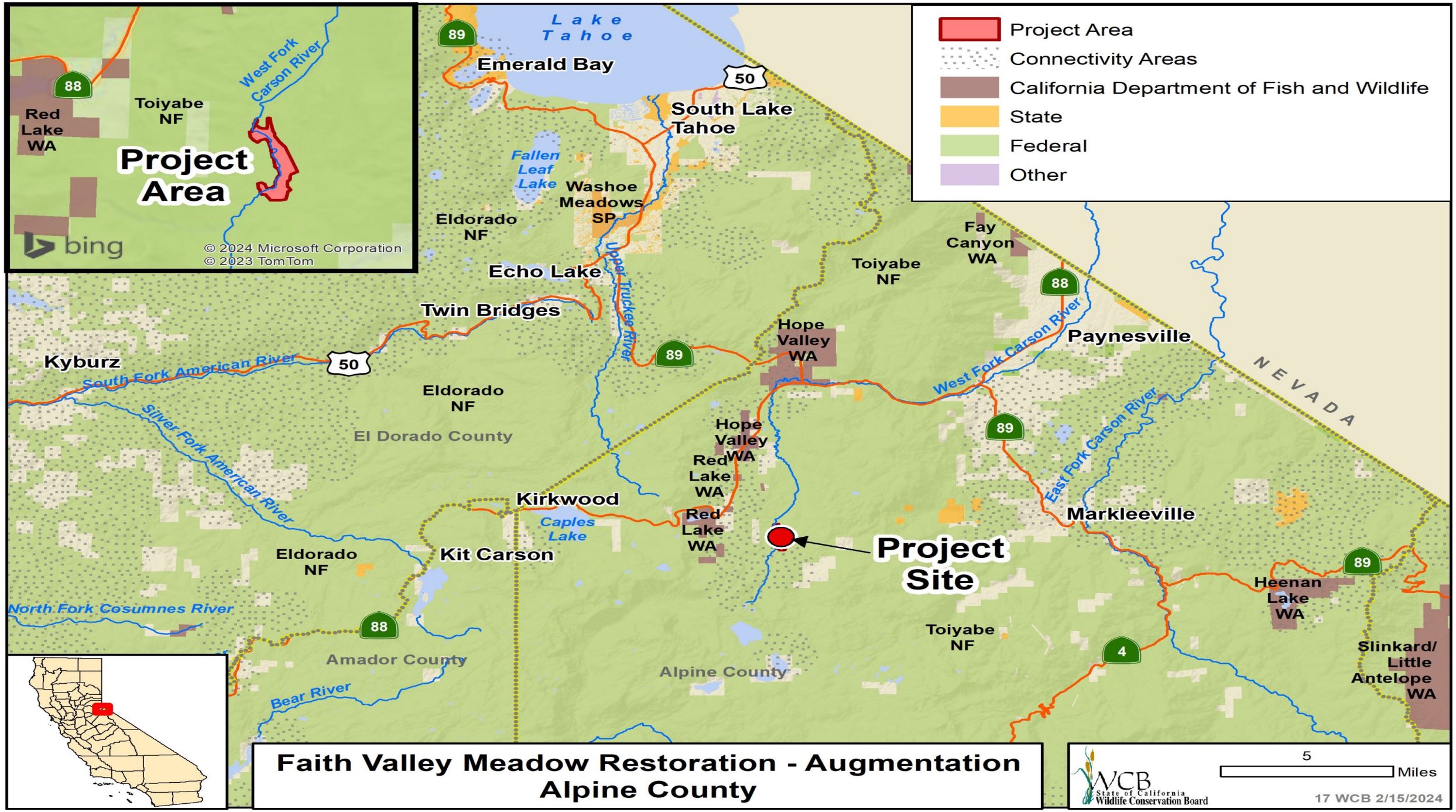
Right: Tomato Stand culvert looking downstream.

Tomato Stand Fish Passage Planning

Slide 3

Top: Tomato Stand culvert looking upstream during high flows.

Bottom: Tomato Stand culvert looking upstream during low flows.



Faith Valley Meadow Restoration - Augmentation
Alpine County

Faith Valley Meadow Restoration Augmentation

Slide 1

Channel incision & eroding bank along West Carson River

Faith Valley Meadow Restoration Augmentation

Slide 2

Eroding head cut stemming from channel incision

Faith Valley Meadow Restoration Augmentation

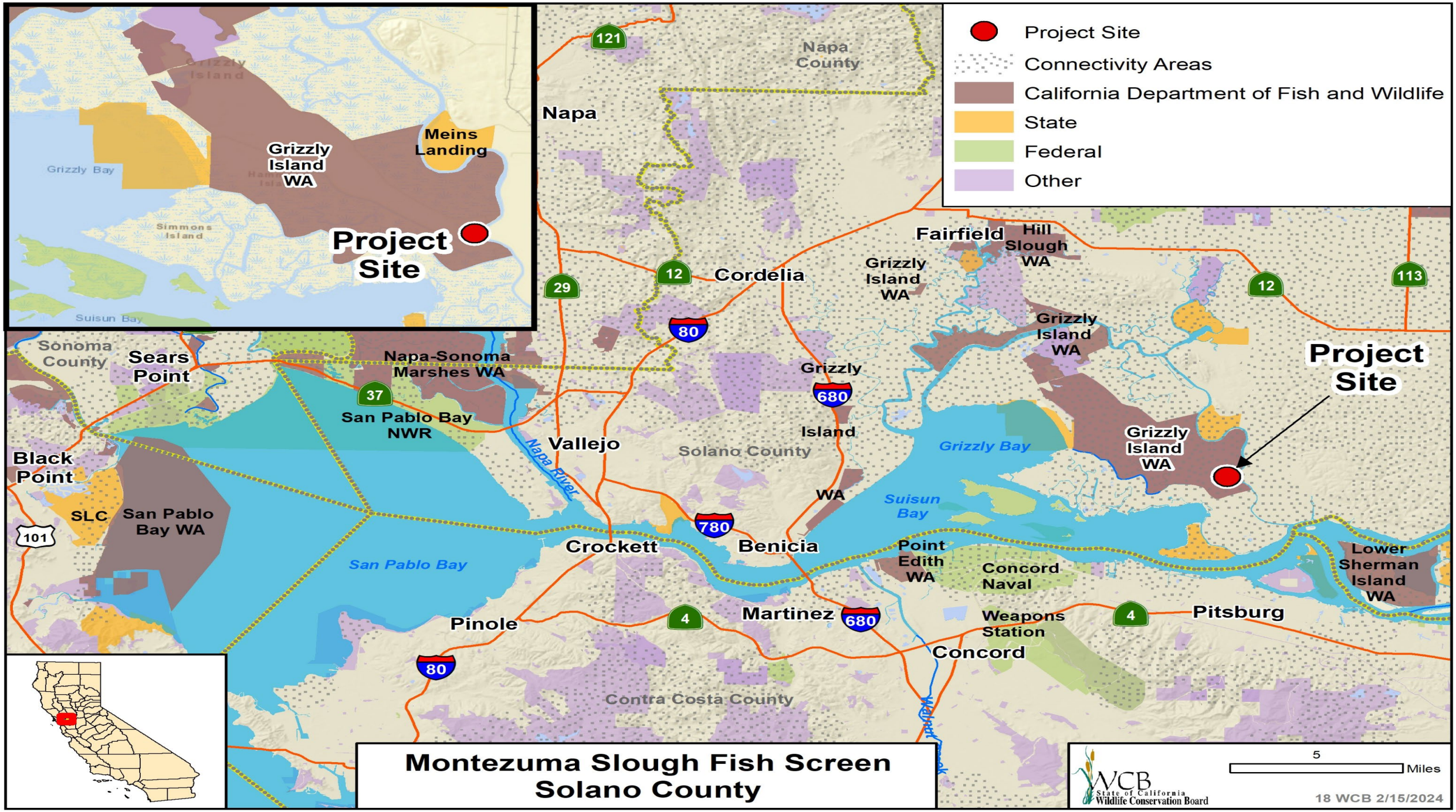
Slide 3

Entrenched section of OHV route that captures and conveys winter flows

Faith Valley Meadow Restoration Augmentation

Slide 4

Beaver dam at end of Faith Valley that maintained a raised water table upstream



Montezuma Slough Fish Screen
Solano County

Montezuma Slough Fish Screen

Slide 1

- Defunct infrastructure at the Montezuma Slough intake

Montezuma Slough Fish Screen

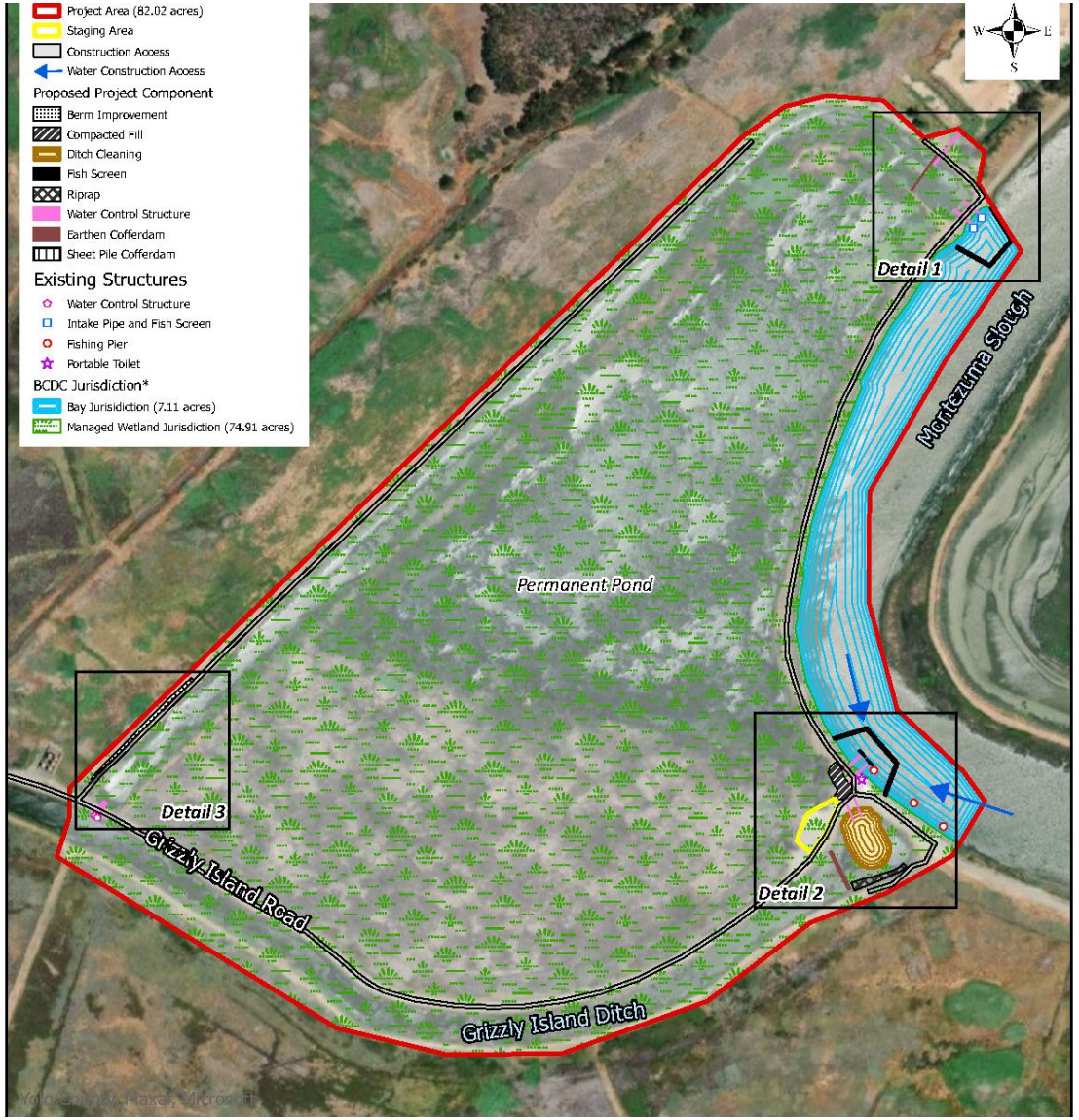
Slide 2

- Defunct infrastructure on Grizzly Ditch side

Montezuma Slough Fish Screen

Slide 3

Approximate location of fish screen relocation site.



Montezuma Slough Fish Screen

Slide 4

- Project design drawing, with current located shown as Detail 1, relocated fish screen shown as Detail 2.

Redwood Creek Enhancement Planning
Marin County

Redwood Creek Enhancement Planning

Slide 1

Right: Example of a common cross-section of Redwood Creek during wet season high-flows showing a failing, highly incised, and eroded bank.

Redwood Creek Enhancement Planning

Slide 2

Above: Example of a common cross-section of Redwood Creek during dry season low-flows showing gravel bar and inset terrace.

Redwood Creek Enhancement Planning

Slide 3

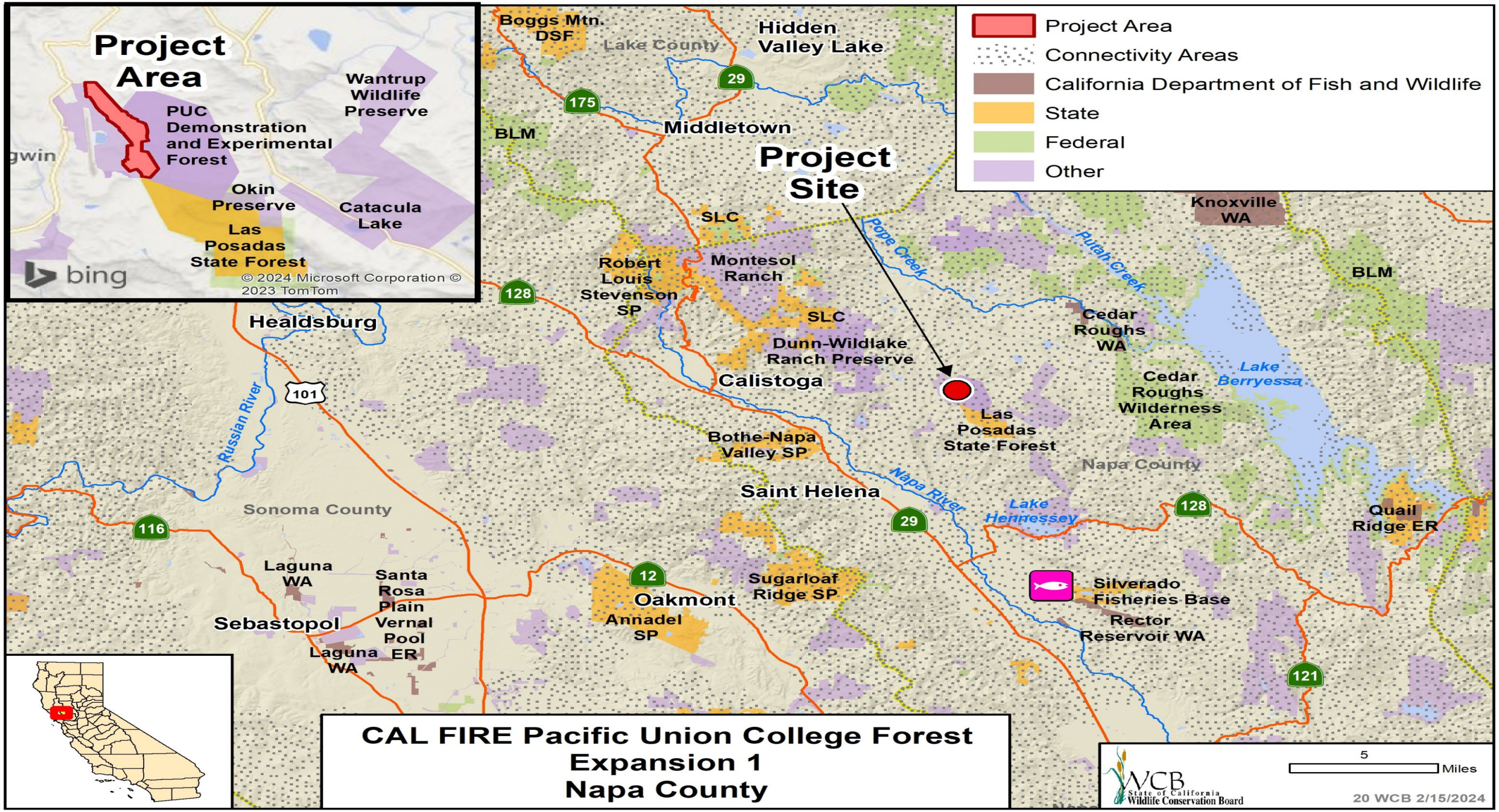
Left: Redwood Creek Project reach with limited coho salmon habitat complexity.

Right: Example of the “Bowling Alley”. These long reaches (with wide, shallow baseflows, no pools, sandy substrates and no instream cover) are the target for restoration in this project.

Redwood Creek Enhancement Planning

Slide 4

Right: Example from within the project reach of a live alder large woody debris showing features that will be replicated by this project such as pools, channel shading, gravel accumulation, etc.

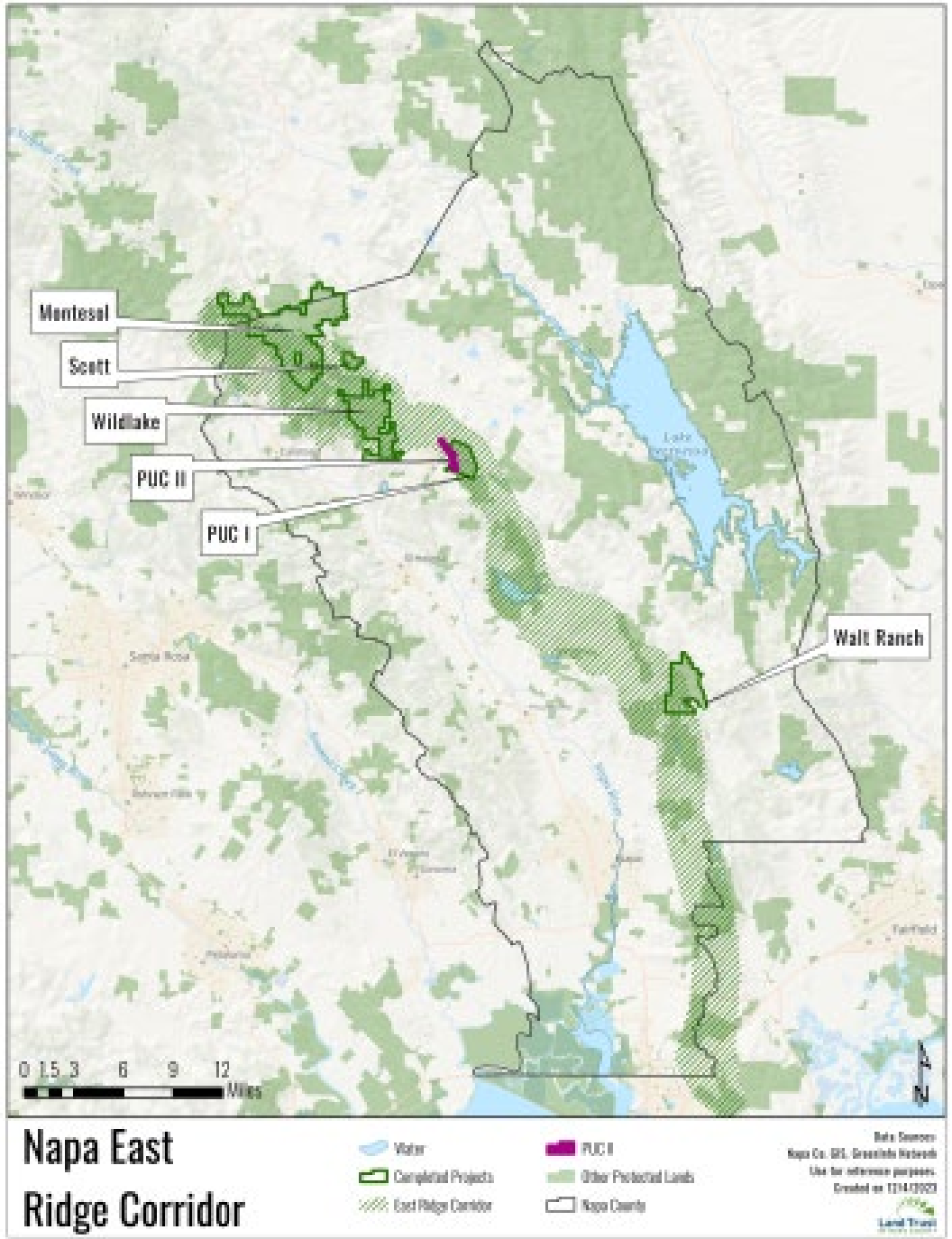


CAL FIRE Pacific Union College Forest Expansion 1 Napa County

CAL FIRE Pacific Union College Forest, Expansion 1

Slide 1

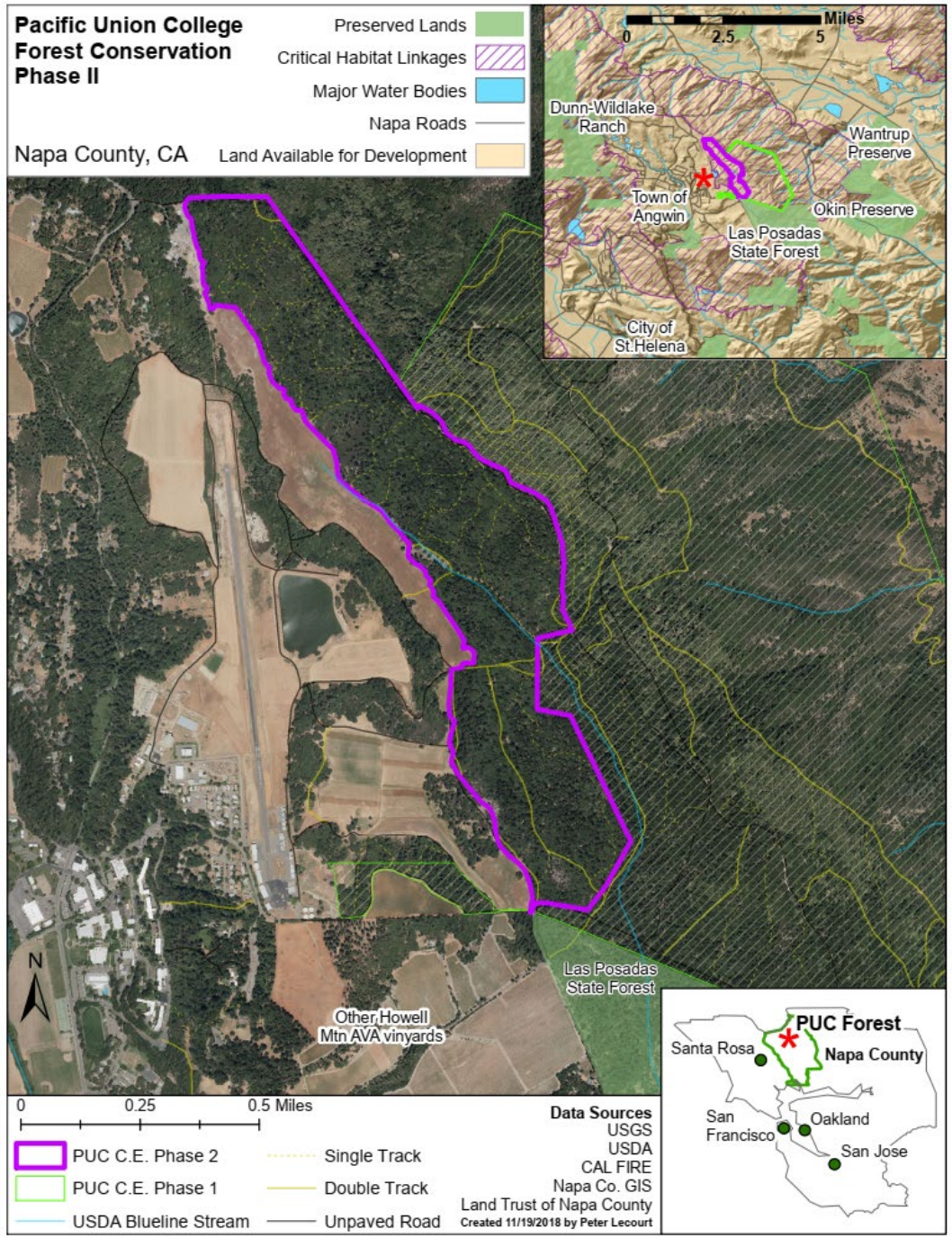
- Corridor map.



CAL FIRE Pacific Union College Forest, Expansion 1

Slide 2

- Pacific Union College, original acquisition and Expansion 1



CAL FIRE Pacific Union College Forest, Expansion 1

Slide 3

- Photo of the Ponderosa Pine - Douglas Fir Forest on the Property. Photo credit Jake Ruygt, botanist.

CAL FIRE Pacific Union College Forest, Expansion 1

Slide 4

- Photo of Mixed Conifer

Hardwood Forest on the Property.

Photo credit Jake Ruygt, botanist.

CAL FIRE Pacific Union College Forest, Expansion 1

Slide 5

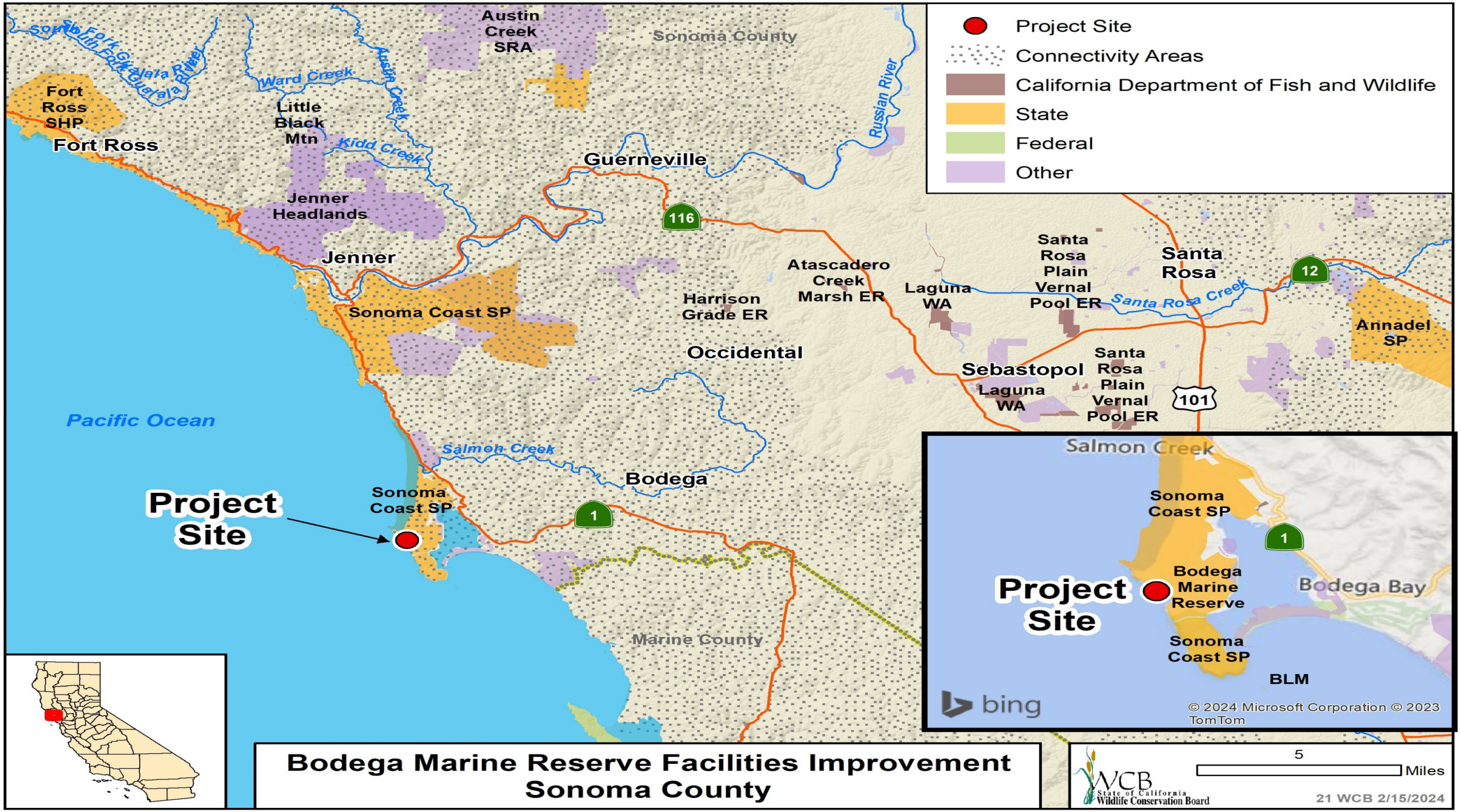
- Photo of Harmonia nutans found on the Property. Photo credit Jake Ruygt, botanist.

CAL FIRE Pacific Union College Forest, Expansion 1

Slide 6

- Trail on the eastern boundary near Moore Creek. Photo Credit: Land Trust of Napa County

- Trail near the southern boundary close to the entrance. Photo Credit: Land Trust of Napa County



Bodega Marine Reserve Facilities Improvement
Sonoma County

Bodega Marine Reserve Facilities Improvement Slide 1

Map of the four tasks proposed in this Project.

Bodega Marine Reserve Facilities Improvement

Slide 2

Left: Inoperable louvered ceiling panels in the greenhouse that were broken during high wind events. As a part of this Project, this will be repaired, in addition to repairing and replacing other components of the greenhouse.

Right: Bodega Marine Reserve's (BMR) terrestrial greenhouse which is used for experimental manipulations, propagating plants for field projects, and processing samples.

Bodega Marine Reserve Facilities Improvement

Slide 3

Left: Broken fence line along the BMR entrance road.

Right: Monterey cypress limbs that are at risk of dropping onto the Reserve's entrance gate. These will be pruned as a part of this project.

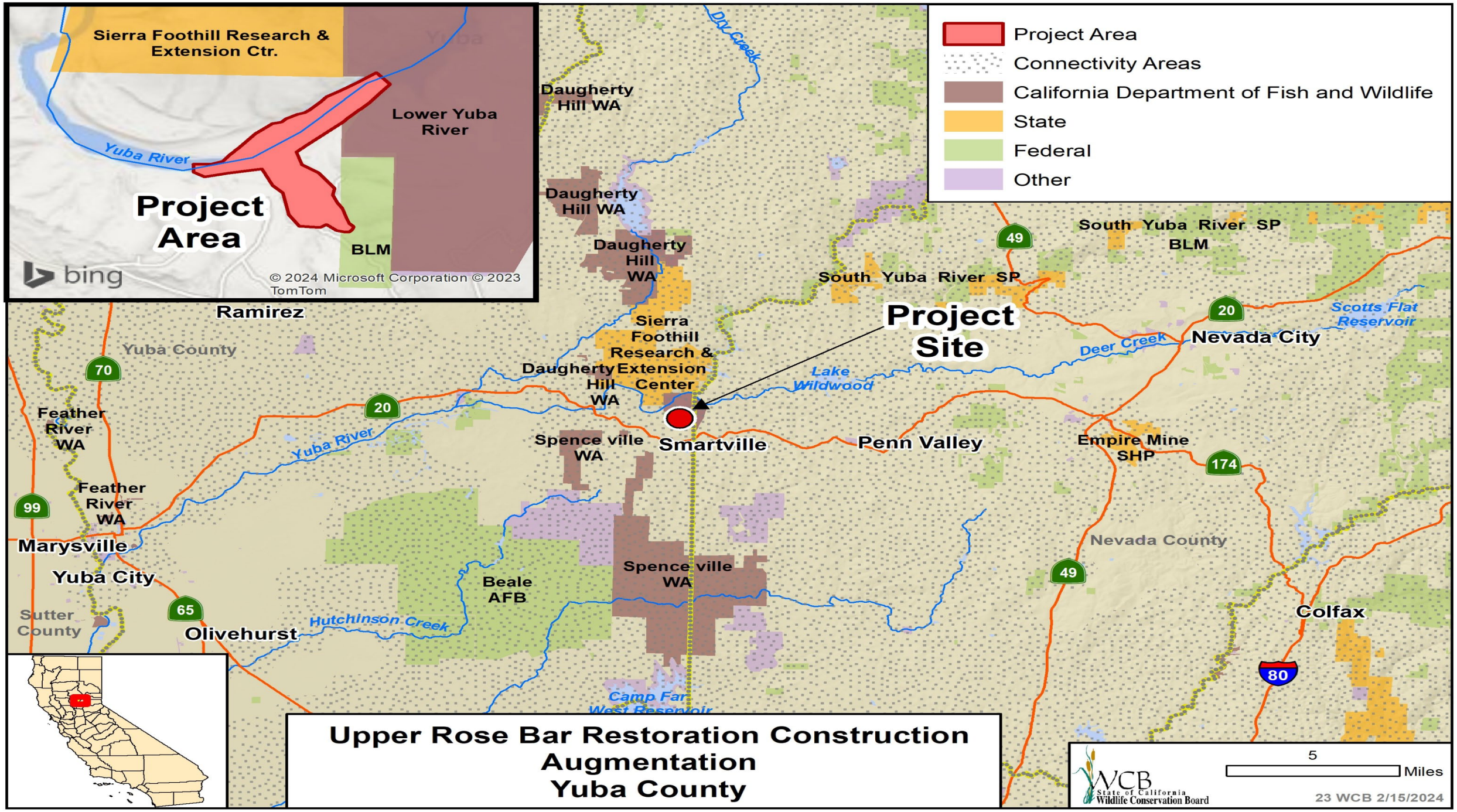
Bodega Marine Reserve Facilities Improvement

Slide 4

Left: View of bluffs from BMR.

Middle: An oceanographic instrument buoy will be deployed as a part of this project which will provide real-time data and allow scientists to track ocean conditions over the long term.

Right: Aerial view of Bodega Marine Laboratory and BMR.



Upper Rose Bar Restoration Construction Augmentation Yuba County

Upper Rose Bar Construction - Augmentation

Slide 1

This project was approved by the WCB Board at the May 2023 WCB Board Meeting

This project will add gravel to two existing riffles in the Yuba River to greatly increase spawning habitat for Chinook Salmon and Steelhead

Banks will also be excavated to create rearing habitat for juvenile salmonids

Upper Rose Bar Construction - Augmentation

Slide 2

Left: Steeply eroded gully before project began

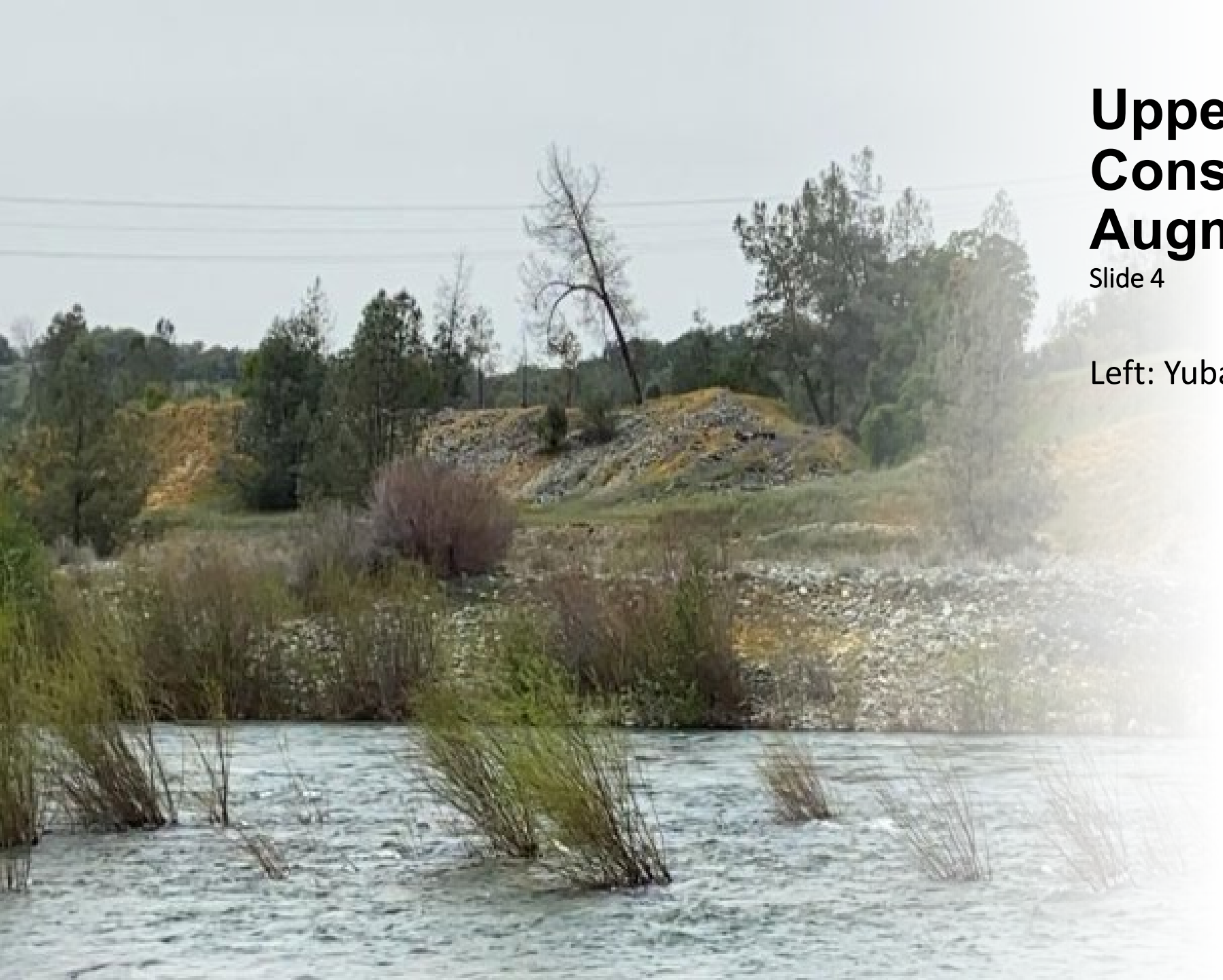
Right: Shaped valley planted with native vegetation

Upper Rose Bar Construction - Augmentation

Slide 3

Upper: Gravel and cobbles embedded in situ

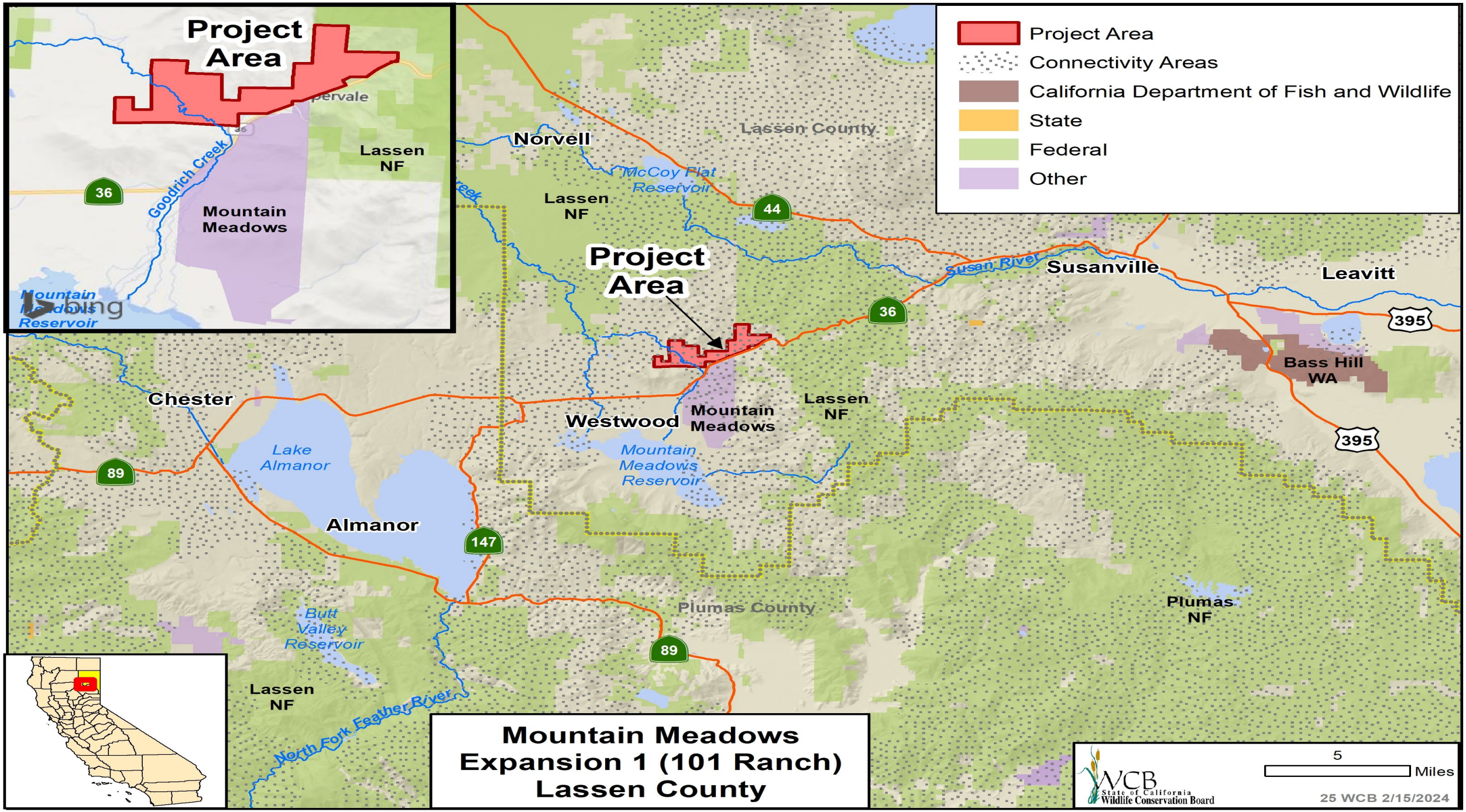
Lower: Gravel and cobbles cleaned, sorted, and staged



Upper Rose Bar Construction - Augmentation

Slide 4

Left: Yuba River at the Project Site


Project Area
Connectivity Areas
California Department of Fish and Wildlife
State
Federal
Other
Project Area
Lassen NF
Mountain Meadows
Goodrich Creek
Mountain Meadows Reservoir
36
Norvell
Lassen County
McCoy Flat Reservoir
Lassen NF
44
Project Area
Susan River
Susanville
Leavitt
36
395
Bass Hill WA
Chester
Westwood
Mountain Meadows
Lassen NF
Lake Almanor
Mountain Meadows Reservoir
395
89
Almanor
147
Plumas County
Plumas NF
Butt Valley Reservoir
89
Lassen NF
North Fork Feather River
Mountain Meadows Expansion 1 (101 Ranch) Lassen County
WCB State of California Wildlife Conservation Board
5 Miles
25 WCB 2/15/2024

Mountain Meadows Expansion 1 (101 Ranch)

Slide 1

Ariel photo of Goodrich Creek headwaters and 101 Ranch meadow. (Photo Courtesy of Trust for Public Land.)

Mountain Meadows Expansion 1 (101 Ranch)

Slide 2

Left: Fredonyer Creek at Northeast portion of property looking west at creek and upland habitats

Center: Goodrich Creek from approximately middle of the meadow.

Right: Wet meadow in foreground with fencing on pasture.

(Photos courtesy of Feather River Land Trust)

Mountain Meadows Expansion 1 (101 Ranch)

Slide 3

Left: Sandhill Cranes

Right: Yellow Warbler

(Photos courtesy of Point Blue Conservation Science)

Mountain Meadows Expansion 1 (101 Ranch)

Slide 4

Left: Point Blue Conservation Science field work team

Right: Scientists working hard

(Photos courtesy of Point Blue Conservation Science)

Van Arken Public Access Planning
Humboldt County

Van Arken Public Access Planning

Slide 1

Vanauken Creek riparian habitat within the 1,320-acre working forest conservation easement. Credit: Sanctuary Forest

Van Arken Public Access Planning

Slide 2

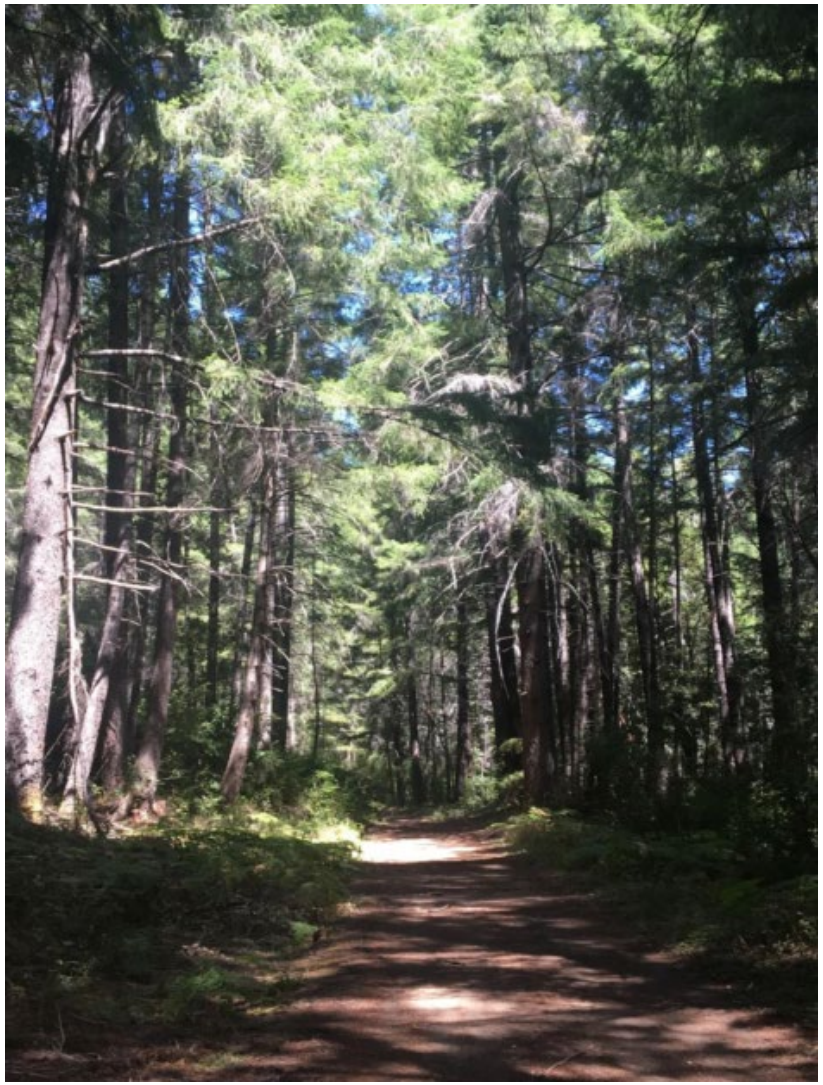
- Goals:
  - Passive recreation and enjoyment
  - Conservation
  - ADA Accessibility
  - Education and Community engagement

Community members hiking through madrones in Van Arken. Credit: Sanctuary Forest.

Van Arken Public Access Planning

Community members on a guided hike in Van Arken. Credit: Sanctuary Forest.

- Recreation Management Plan
  - Open periods
  - Usage forecast
  - Management strategy
  - Operational budget
- Assessment, Planning and Design
  - Trails
  - Parking
  - Signage
  - Environmental and Tribal Cultural



Existing timber roads will become part of a new trail system. Credit: Sanctuary Forest.

Van Arken Public Access Planning

Slide 4

7-acre meadow near the entrance to the property. Credit: Sanctuary Forest.

- Focus area for passive activities such as bird watching and picnicking
- Future restoration projects would engage the community in stewardship activities

Siskiyou I-5 Wildlife Overpass Planning
Siskiyou County

Siskiyou Mountains I-5 Connecticity Planning

Slide 1

Interstate 5 in Siskiyou County

- CA-OR border to Yreka
- Within DAC and SDAC
- Cascade-Siskiyou National Monument, Klamath National Forest, Modoc National Forest, upper Klamath River watershed

Project area has some of the highest rates of mortality in north state area

- Home for several sensitive species
- Bisects mule deer seasonal migration corridors

CDFW 2022 Wildlife Movement Barrier Priorities list

- Mule deer
- Mountain lion
- Gray wolf

Project Site

Siskiyou Mountains I-5 Connecticity Planning

Slide 2

Siskiyou Mountains I-5 Connecticity Planning

Slide 3

Project Elements

Feasibility study

- Leverages several preexisting studies
- Constructability analysis

Designs for up to two structures

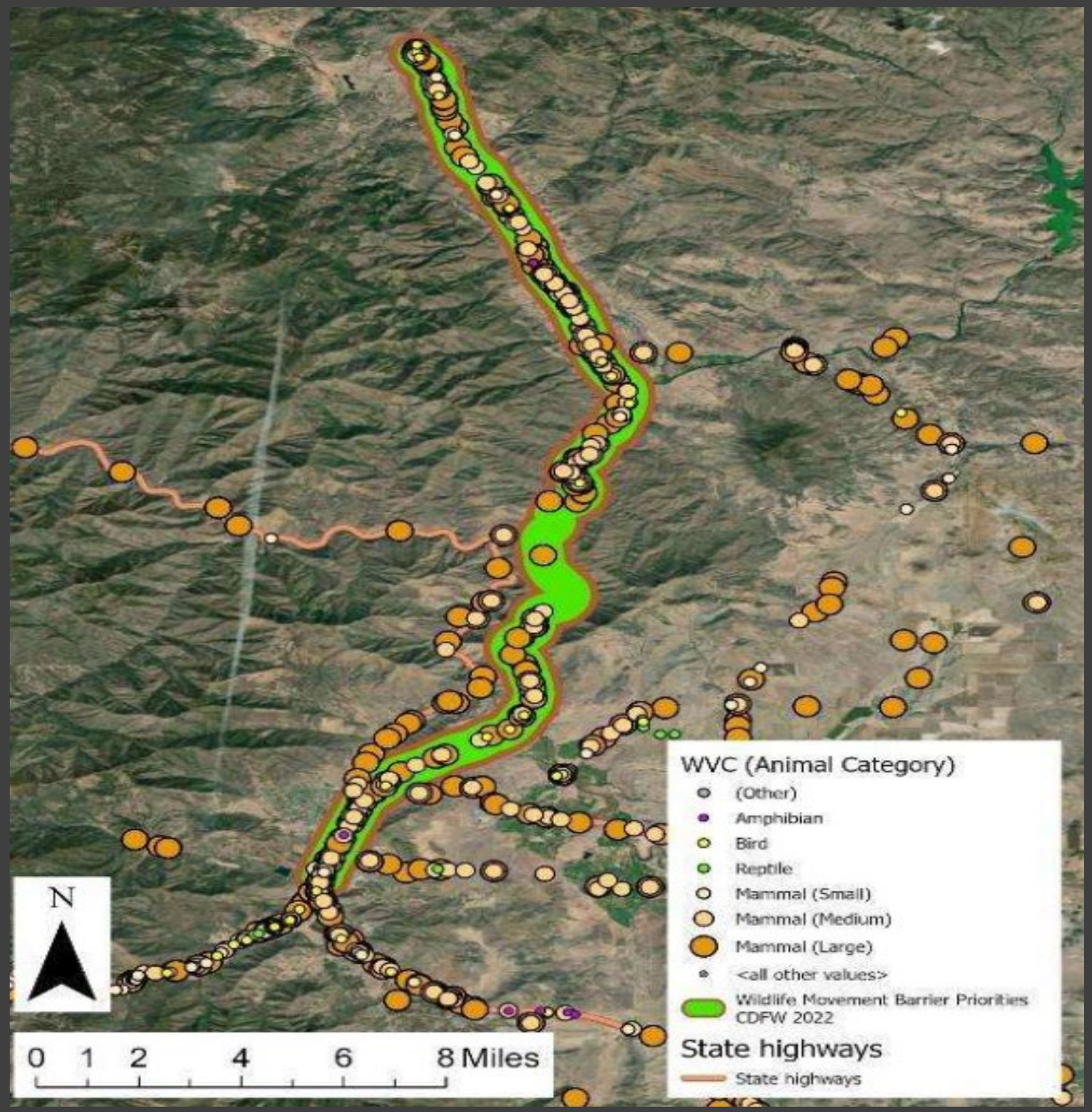
- Conceptual drawings (3 sites)
- 35% designs
- 65% designs
- Caltrans-required Design-Level Engineering Technical Reports

Caltrans Documentation

- Project Study Report/Project Development Study (PSR/PDS)
- Project Initiation Document (PID)
- Project Approval/Environment Document (PA/ED)

Environmental Review

- CEQA Initial Study/Mitigated Negative Declaration
- NEPA Categorical Exclusion



Vehicle – Wildlife Collisions

Project Support

Tribal Support
- Karuk Tribe
- Shasta Indian Nation
- Modoc Nation
- Northern California Indian Development Council

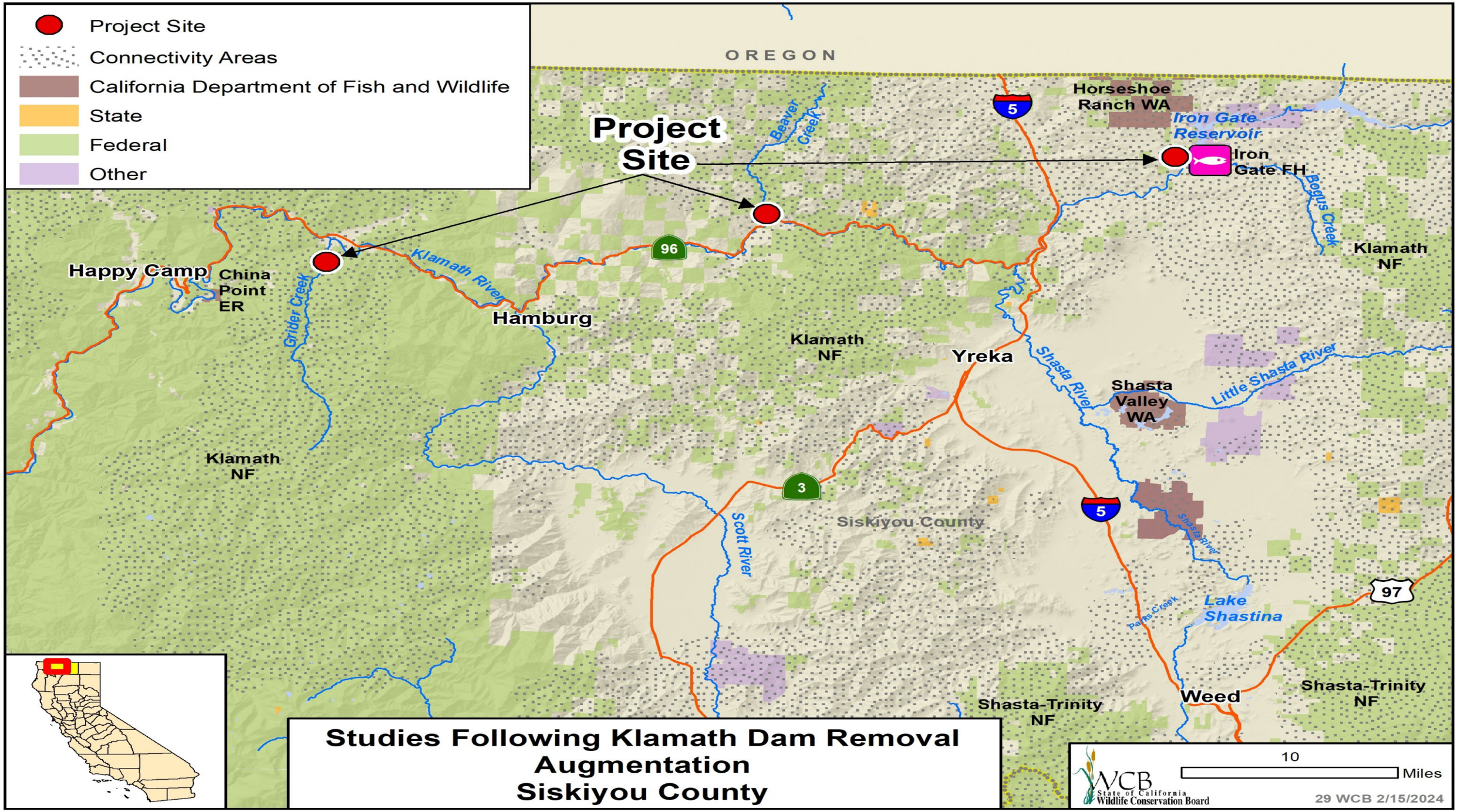
Siskiyou County Board of Supervisors

California and Oregon DOTs

39 NGOs

UC Davis Road Ecology Center

I-90 Snoqualmie Pass wildlife overcrossing in Washington State



Studies Following Klamath Dam Removal Augmentation Siskiyou County

Studies Following Klamath Dam Removal: Augmentation

Slide 1

Need

- Increased time commitment by Karuk tribe to sample fin clips and stomach contents from salmonids.

Objectives

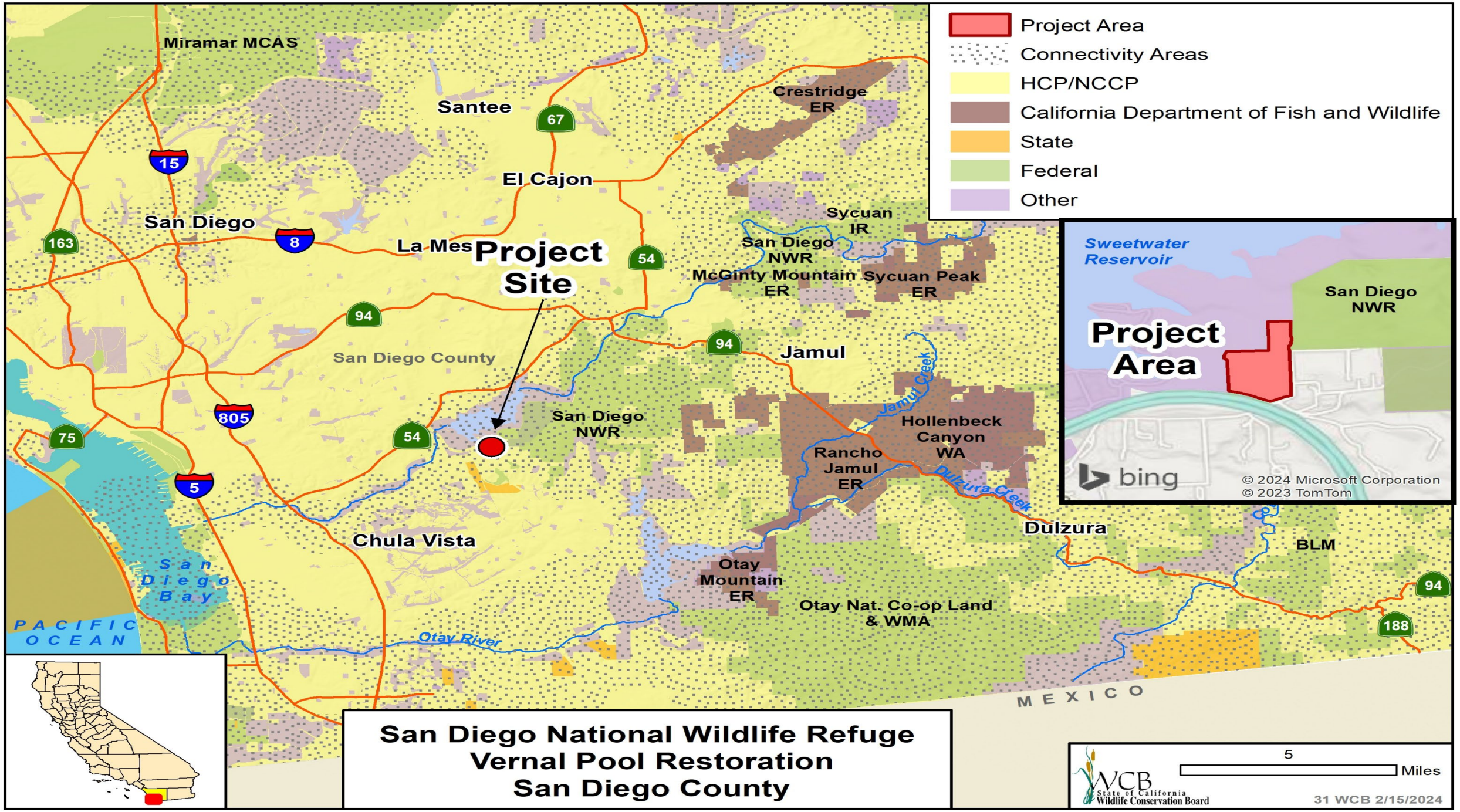
- Sample at least 20 juvenile salmonids at each site.
- Compensate Karuk tribe for 2024, 2025, and 2026 field season.

Outcomes

- Produce meaningful research on effects dam removal.
- Build strong working relationship with tribal community.
- Complete project as proposed.

Magoon and Gill Conservation Easement

Withdrawn from consideration at this time



San Diego National Wildlife Refuge
Vernal Pool Restoration
San Diego County

San Diego National Wildlife Refuge Vernal Pool Restoration

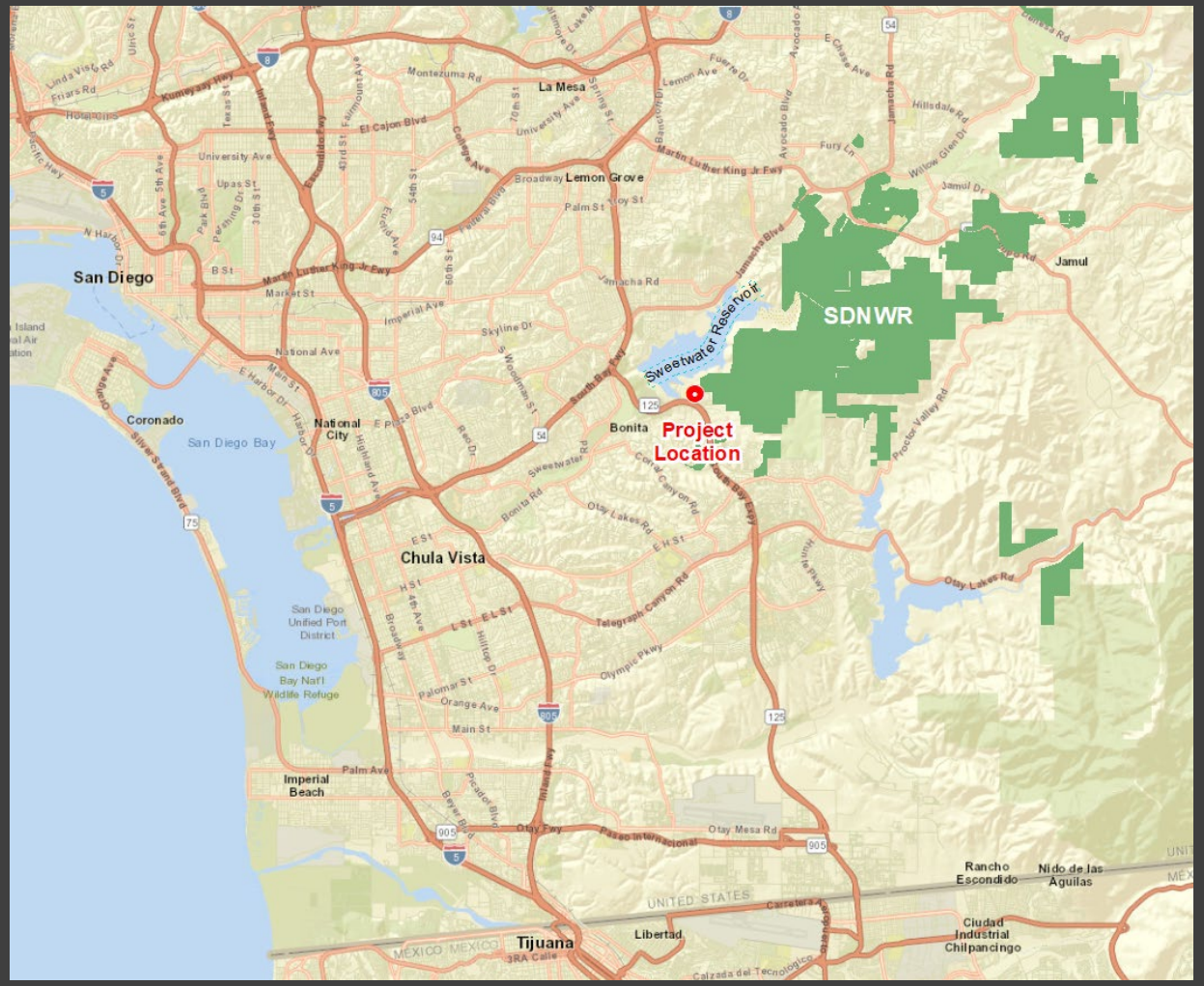
Slide 1

San Diego National Wildlife Refuge (SDNWR)

- 12,445-acres
- South of Sweetwater Reservoir in unincorporated southwestern San Diego County

Within San Diego Multiple Species Conservation Program Plan Preserve

95–97% of vernal pool habitat in San Diego County has been lost



Project Location

San Diego National Wildlife Refuge Vernal Pool Restoration

Slide 2

Otay Mesa mint

Spreading navarretia

6 Federally listed vernal pool associated species in SDNWR

Endangered:

- San Diego fairy shrimp
- San Diego button-celery
- Orcutt's grass
- Otay mesa mint

Threatened:

- Spreading navarretia
- Otay tarplant

San Diego button celery

San Diego fairy shrimp

San Diego National Wildlife Refuge Vernal Pool Restoration

Slide 3

Vernal pools at SDNWR dominated by non-native plant species

San Diego National Wildlife Refuge Vernal Pool Restoration

Slide 4

Project Elements

Enhance/restore approximately 20 acres within the 30-acre area

- Vernal pool basins
- Coastal sage scrub in vernal pool watersheds
- Coastal sage scrub and native grasses in upland areas
- Native shrub hedgerow

Tasks:

- Site prep and weed management
- Seeding of pool basins
- Container planting in uplands adjacent to pools
- Installation and maintenance of fencing and irrigation
- Installation of a native hedgerow

Project Site Map

San Diego National Wildlife Refuge Vernal Pool Restoration

Slide 5

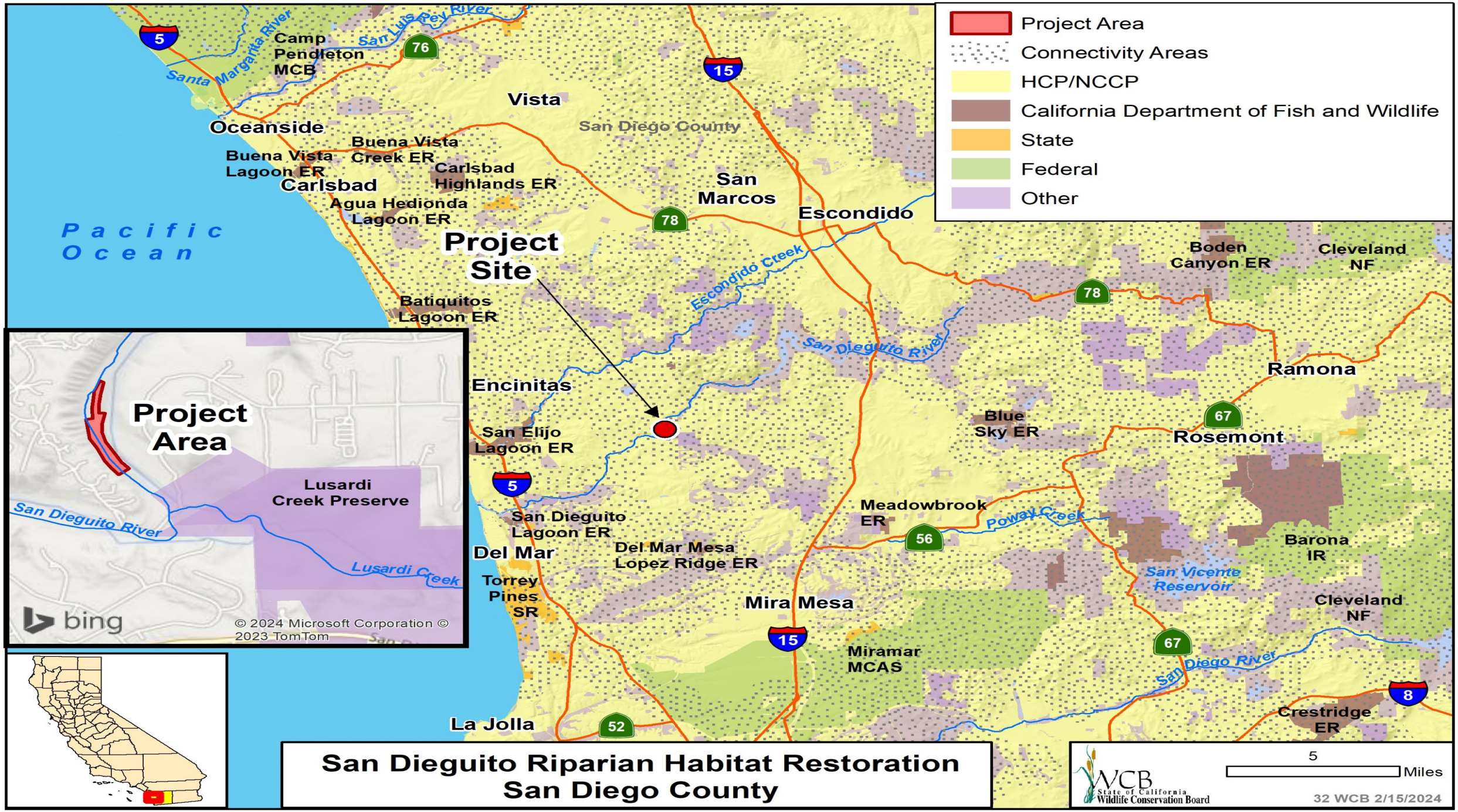
Weed Management Plan

1. Four weeks following first rainfall event of the wet season (likely December): glyphosate application to control first crop of germinating weeds
2. Four weeks following the second rainfall event of the wet season (likely January/February): triclopyr application to control germinating broadleaf weeds
3. Mid- to late-winter (approximately March): triclopyr application to control germinated broadleaf weeds
4. Early spring (approximately April): line trimming around vernal pool edges, line trimming of weeds in the uplands
5. Mid-spring to late spring (approximately May - June): line trimming of weeds in the uplands, hand pulling of vernal pool basins
6. Late summer: triclopyr application to control late season thistles

San Diego National Wildlife Refuge Vernal Pool Restoration

Slide 6

Restored vernal pools on Otay Mesa in San Diego County



San Dieguito Riparian Habitat Restoration
San Diego County

San Dieguito Riparian Habitat Restoration

Slide 1

San Dieguito Riparian Habitat Restoration

Slide 2

San Dieguito Riparian Habitat Restoration

Slide 3

Need

- Cyclical invasions and burns
- Endangered Species Present
- Altered Water Regime

Goals

- Reduce invasives
- Reduce fire risk
- Improve habitat connectivity

Credit: USFWS

Credit: USFWS

Credit: USFWS

San Dieguito Riparian Habitat Restoration

Slide 4

Solution

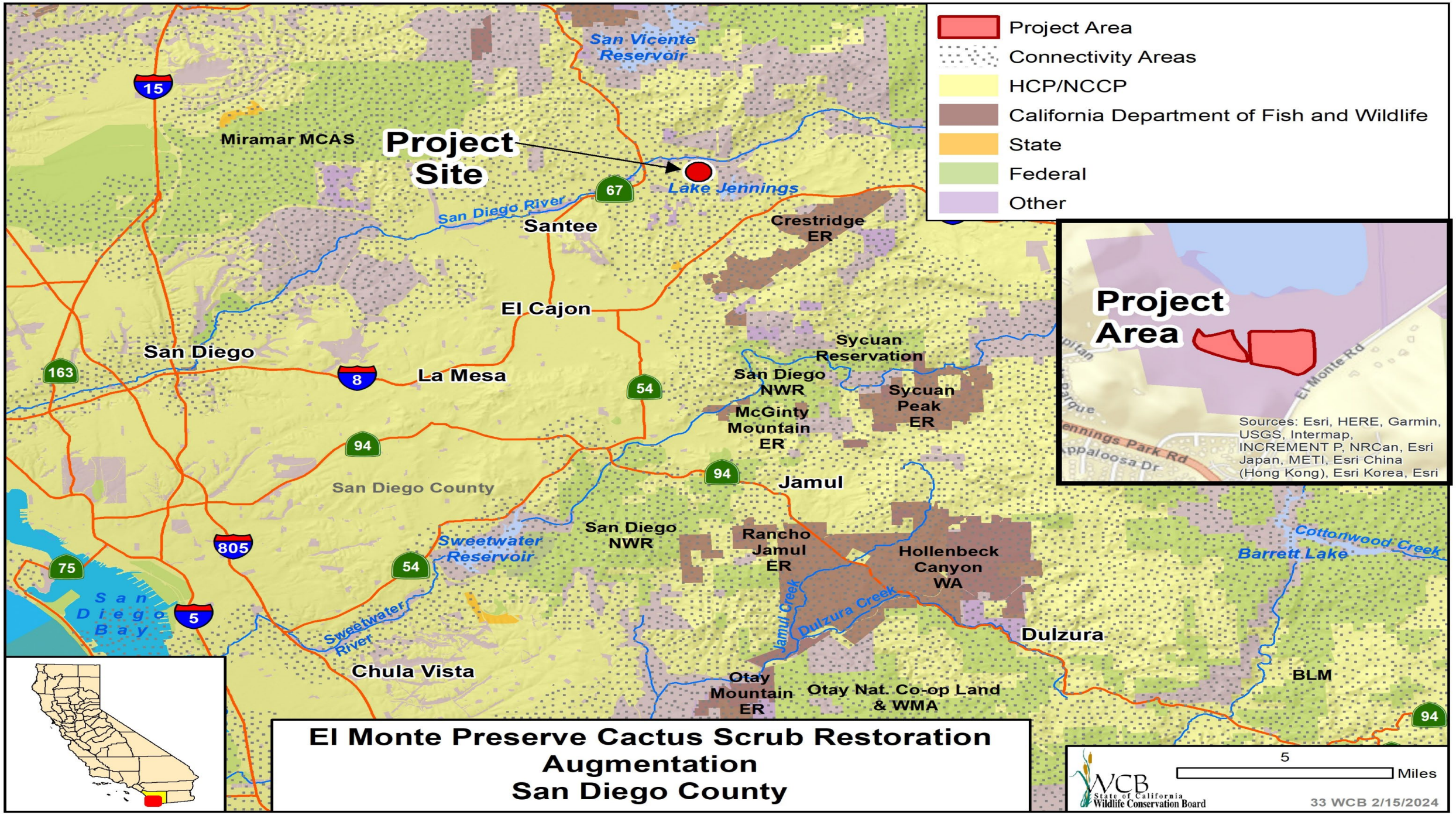
- Treat invasive species
  - Mechanically
  - Chemically
    - No glyphosate
- Install purchased plants, seed and live cuttings
- Monitor

San Dieguito Riparian Habitat Restoration

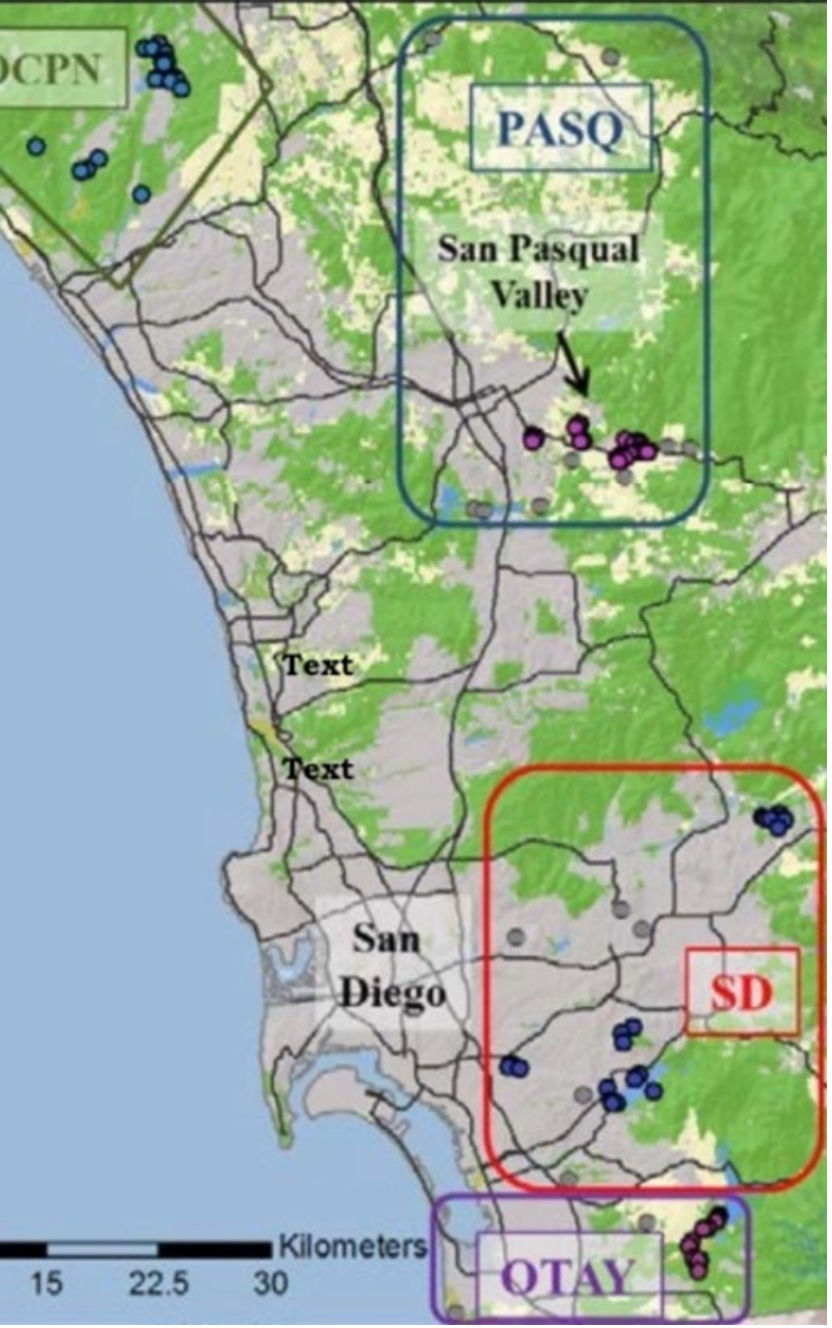
Slide 5

Outcomes

- Improved habitat
- Reduction to 5% invasive absolute cover.
- Increase to 50% native absolute cover.
- Limit fire risk
- Increase connectivity



El Monte Preserve Cactus Scrub Restoration Augmentation
San Diego County



El Monte Preserve Cactus Scrub Restoration Augmentation

Slide 1

Purpose: Develop 15 acres of habitat critical for the coastal cactus wren, a species prioritized for conservation

LANDSCAPE CONSERVATION PLANNING PROGRAM

Images courtesy of Earth Discovery Institute, CDFW

El Monte Preserve Cactus Scrub Restoration Augmentation

Slide 2

Project site and potential for habitat connectivity: Proximity to several existing habitat areas with nesting cactus wrens

El Monte Preserve Cactus Scrub Restoration Augmentation

Slide 3

Left: Project area conditions before restoration

Middle: Post-treatment: Maintenance crew trimming cactus islands

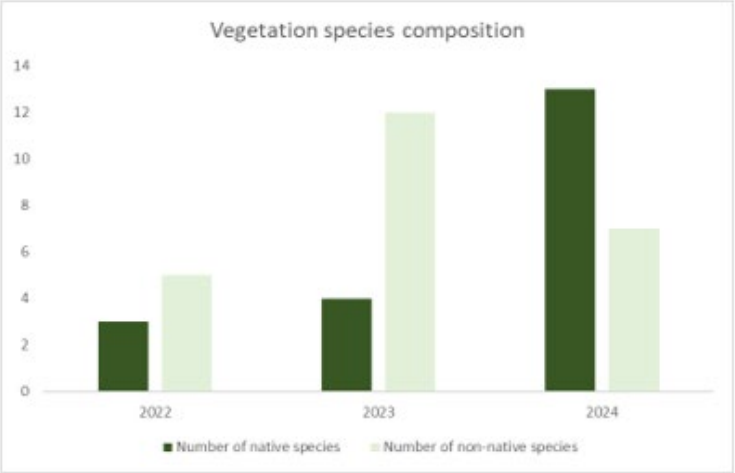
Right: Close-up, cactus islands

El Monte Preserve Cactus Scrub Restoration Augmentation

Slide 4

Invasive weed outbreaks from unexpected high rains:

- Left: Brassica tournefortii
- Center: Brachypopdium
- Right: Vegetation species composition monitoring results, 2022-2024



Los Angeles River Reach 8A Restoration
Los Angeles County

WCB State of California Wildlife Conservation Board

34 WCB 2/15/2024

Los Angeles River Reach 8A Restoration

Slide 1

First step in creating Southern California steelhead fish passage to the upper tributaries of the LA River Watershed spawning grounds

Modifications to the Los Angeles flood control channel bed and banks

- ¼ mile stretch (Reach 8A)
- Reduce water velocity
- Addition of fish resting pools and other habitat structures
- Install native riparian vegetation

Designs from Los Angeles River Fish Passage and Habitat Structures Design project

- Approved by the Board on November 21, 2019

Project Location

Los Angeles River Reach 8A Restoration

Slide 2

Los Angeles River in Downtown Los Angeles

Project Elements

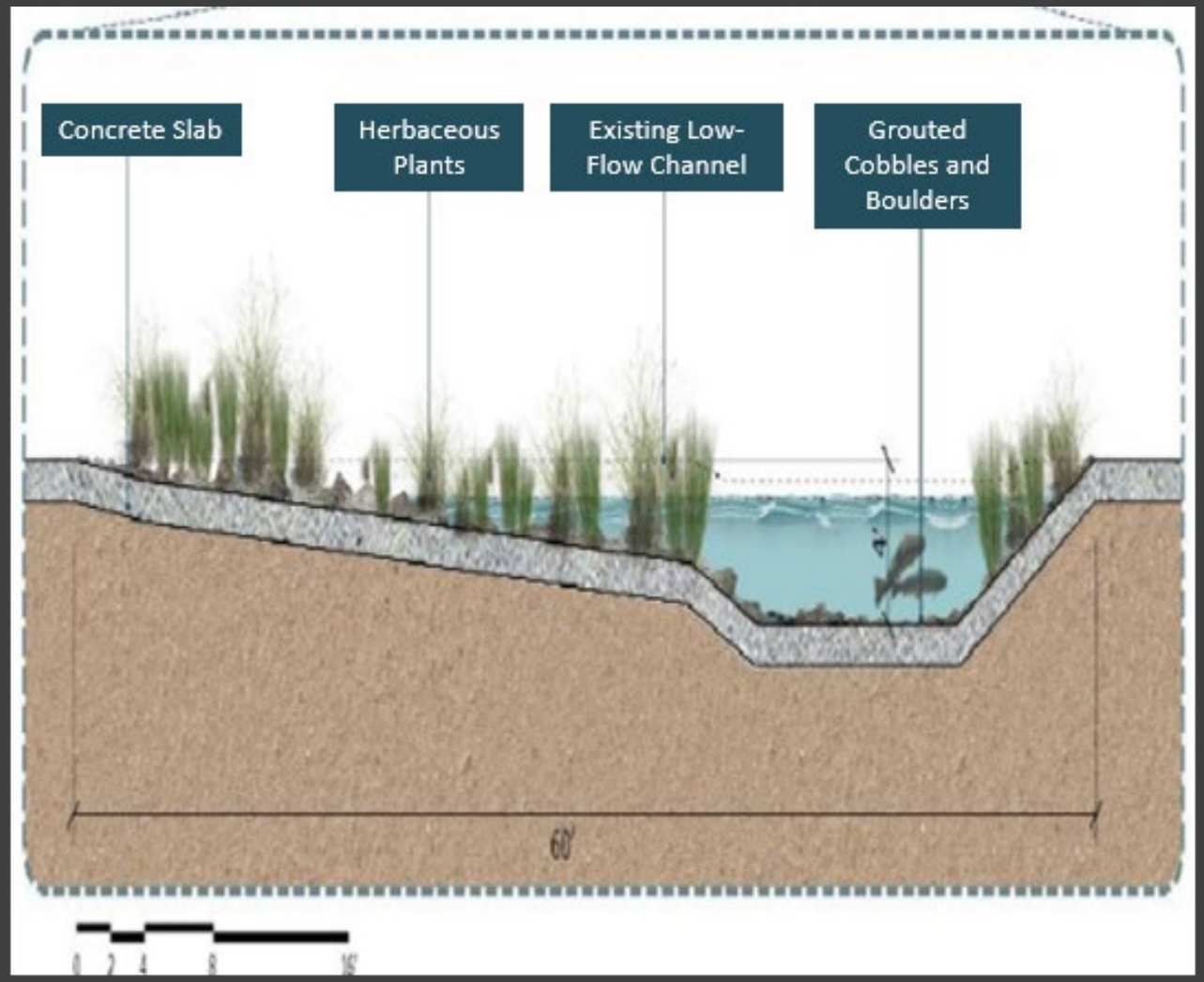
Final 100% engineering, designs and permits

Channel modifications

- Inset channel adjacent to the existing low flow channel
- Resting pockets for velocity and depth refuge
- Anchored boulders
- Cobbled bottom
- Vegetation features

Monitoring, Evaluation and Adaptive Management of the project

Public engagement, outreach, and education



Cross Section Conceptual Drawing

Photo: Stillwater Sciences

Los Angeles River Reach 8A Restoration

Slide 4

Restoration Conceptual Drawing

Photo: Stillwater Sciences

Los Angeles River Reach 8A Restoration

Slide 5

Southern California Steelhead Distinct Population Segment

- Endangered under the federal Endangered Species Act

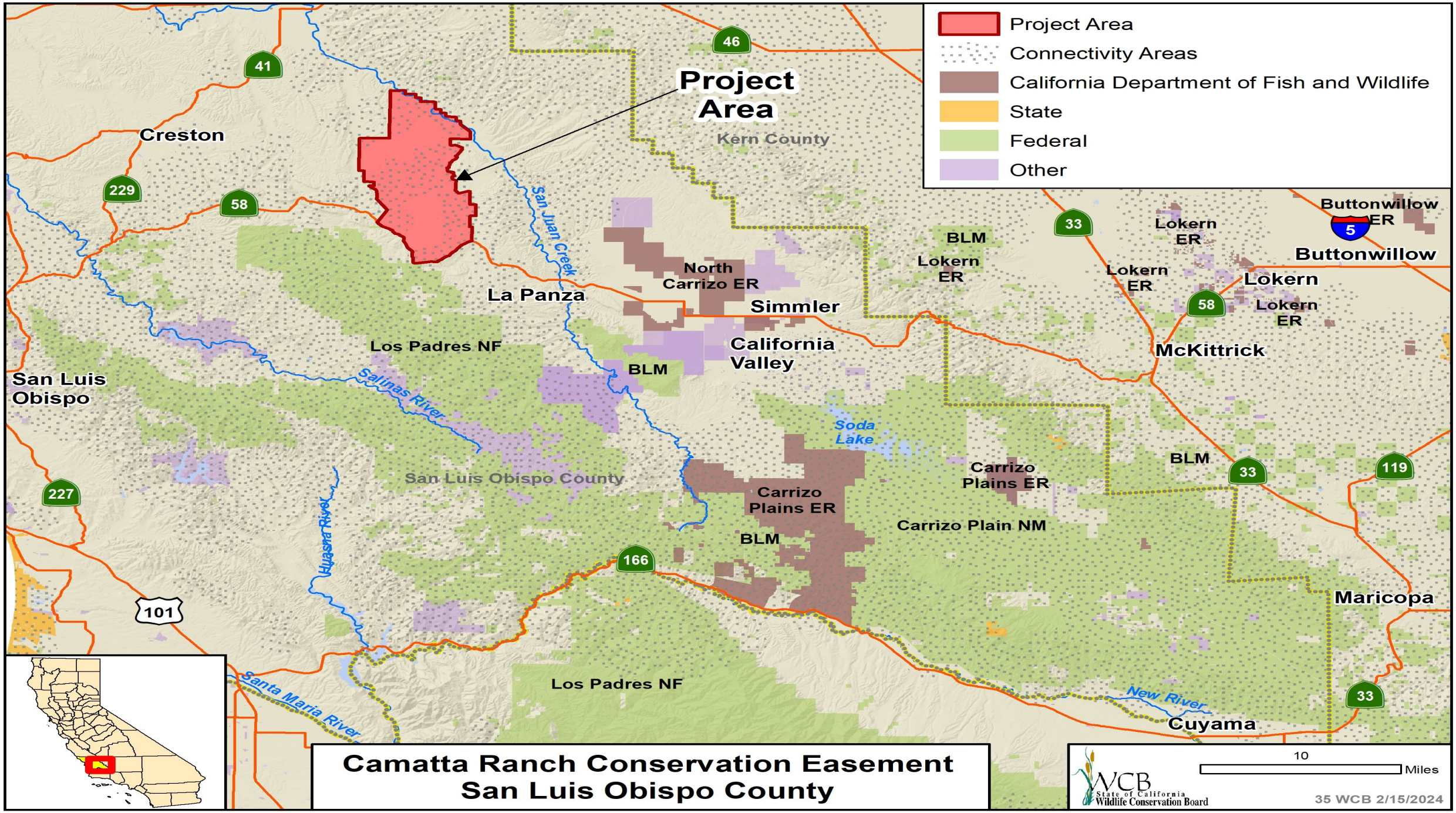
First fish passage project within the larger LA River Watershed

- Connection to suitable spawning and rearing habitat in mountain tributary streams within the LA River Watershed
- Lay the groundwork for future modifications to the current concrete lined and channelized LA River

Will meet the strict flood control requirements of the U.S. Army Corps of Engineers

Provide a “green space” in a highly urbanized environment

25-in. steelhead caught in LA River, January 1940



Camatta Ranch Conservation Easement
San Luis Obispo County

Camatta Ranch Conservation Easement

Slide 1

Aerial view of Camatta Ranch along Highway 58

Camatta Ranch Conservation Easement

Slide 2

Top: Oak savannah and grassland habitat

Bottom: Oak woodlands and grassland habitat

Camatta Ranch Conservation Easement

Slide 3

Top: View towards the east from central location

Middle: view north along Tin Pan Alley

Bottom: View west from central location

All photos courtesy of Cody Kester, Appraiser.

Camatta Ranch Conservation Easement

Slide 4

The federally threatened Camatta Canyon amole

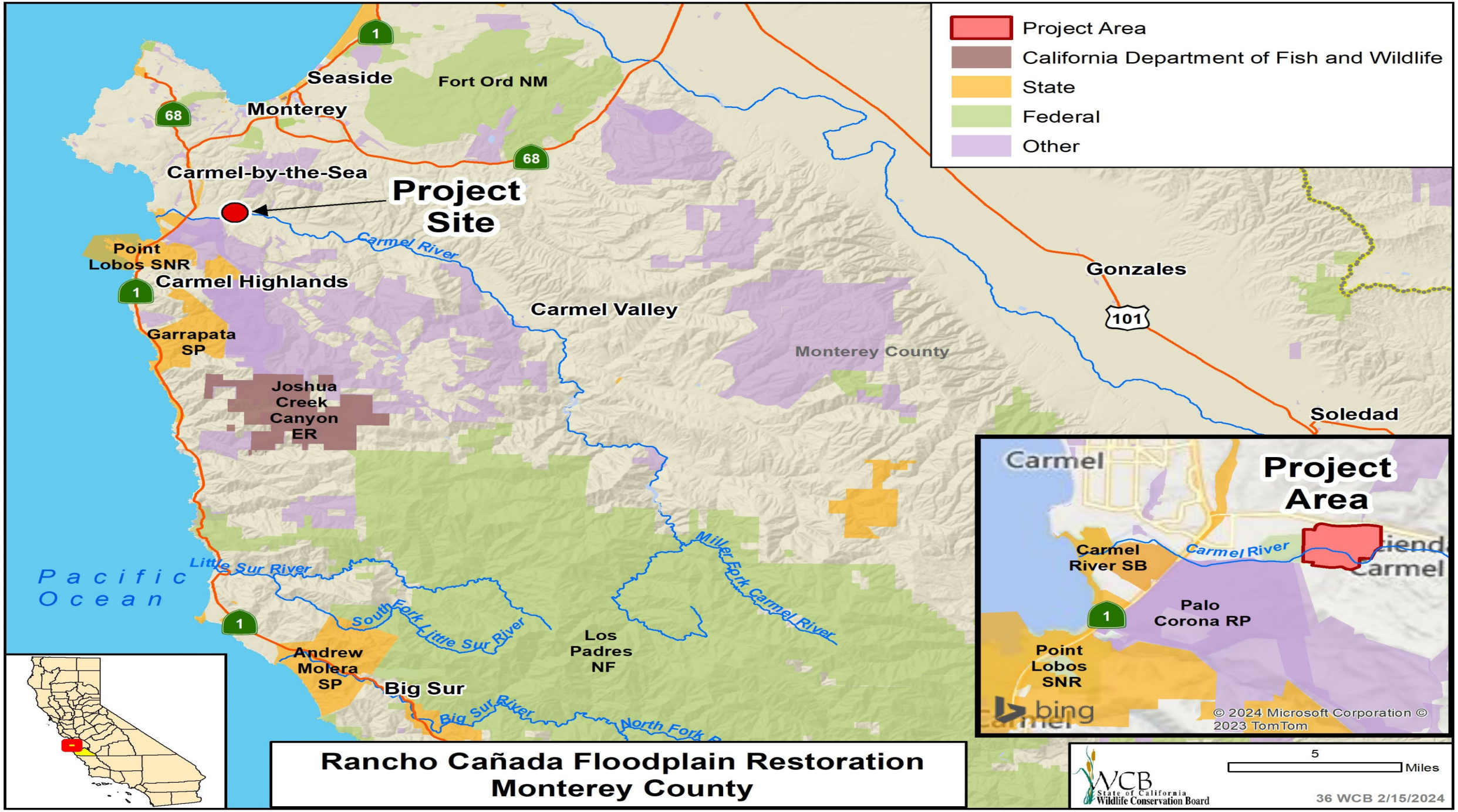
Camatta Ranch Conservation Easement

Slide 5

Top: Kit fox and its pup on a wildlife camera placed near a den

Bottom: Kit fox posing for a picture in April 2022

Photos courtesy of landowner representative



Rancho Cañada Floodplain Restoration
Monterey County

Rancho Cañada Floodplain Restoration

Slide 1

This implementation project will transform 40 acres of property that was previously a golf course into a complex mosaic of instream, riparian, floodplain, and upland habitat.

Rancho Cañada Floodplain Restoration

Slide 2

The Carmel River as it flows through the project area

Rancho Cañada Floodplain Restoration

Slide 3

Left: Armored bank of the Carmel River

Right: Deeply incised channel and exposed bank

Rancho Cañada Floodplain Restoration

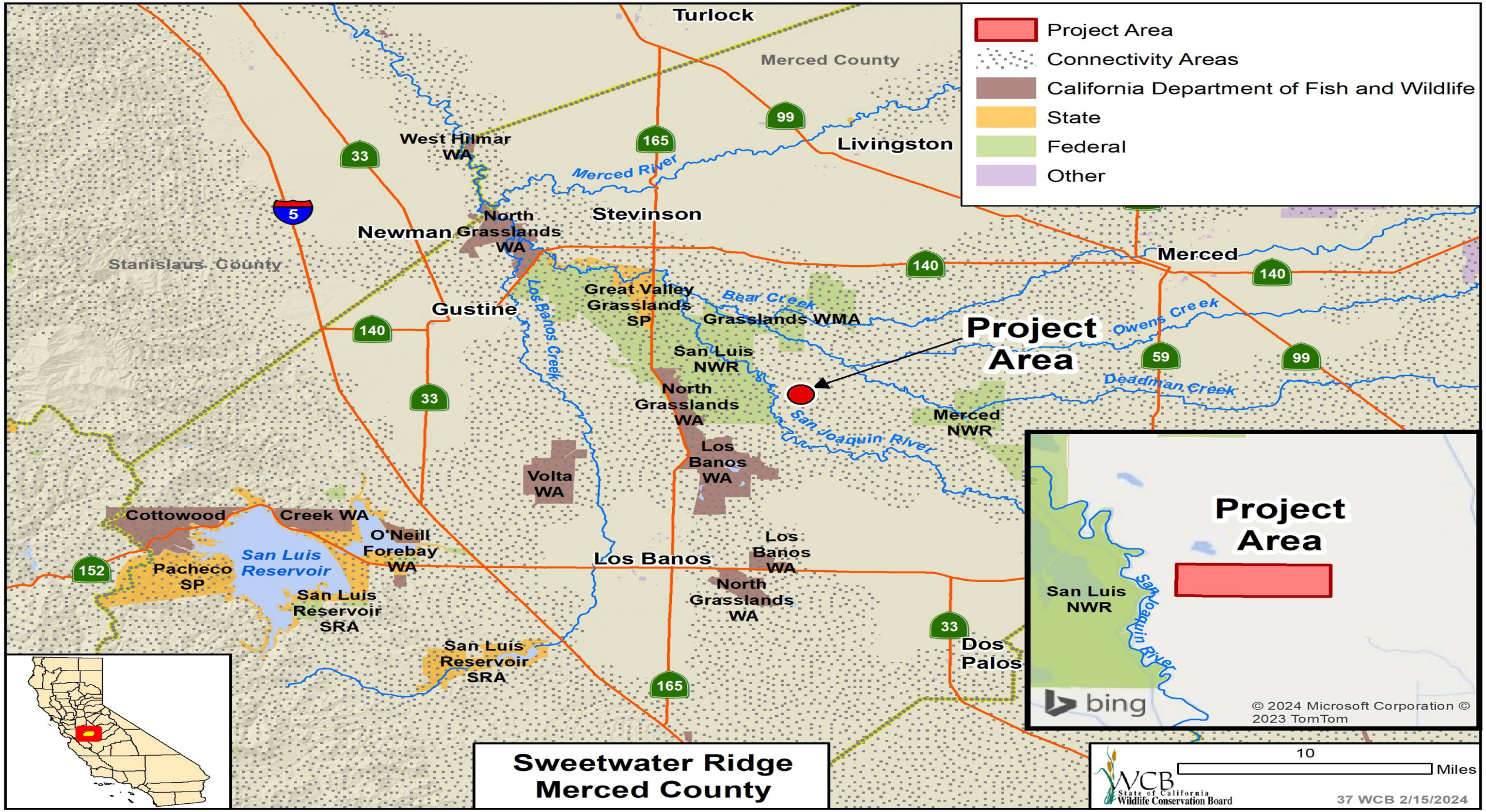
Slide 4

Former golf course with invasive grasses

Rancho Cañada Floodplain Restoration

Slide 5

Carmel River within the project area



Sweetwater Ridge
Merced County

Sweetwater Ridge

Slide 1

- Historic Sand Slough (now irrigation canal) bisects the property
- In the distance, San Luis National Wildlife Refuge is visible (Photo by: Kel Mitchel)

Sweetwater Ridge

Slide 2

Photo showing existing farm conditions on site and levee protecting intensified agriculture (Photo by: Elizabeth King)

Sweetwater Ridge

Slide 3

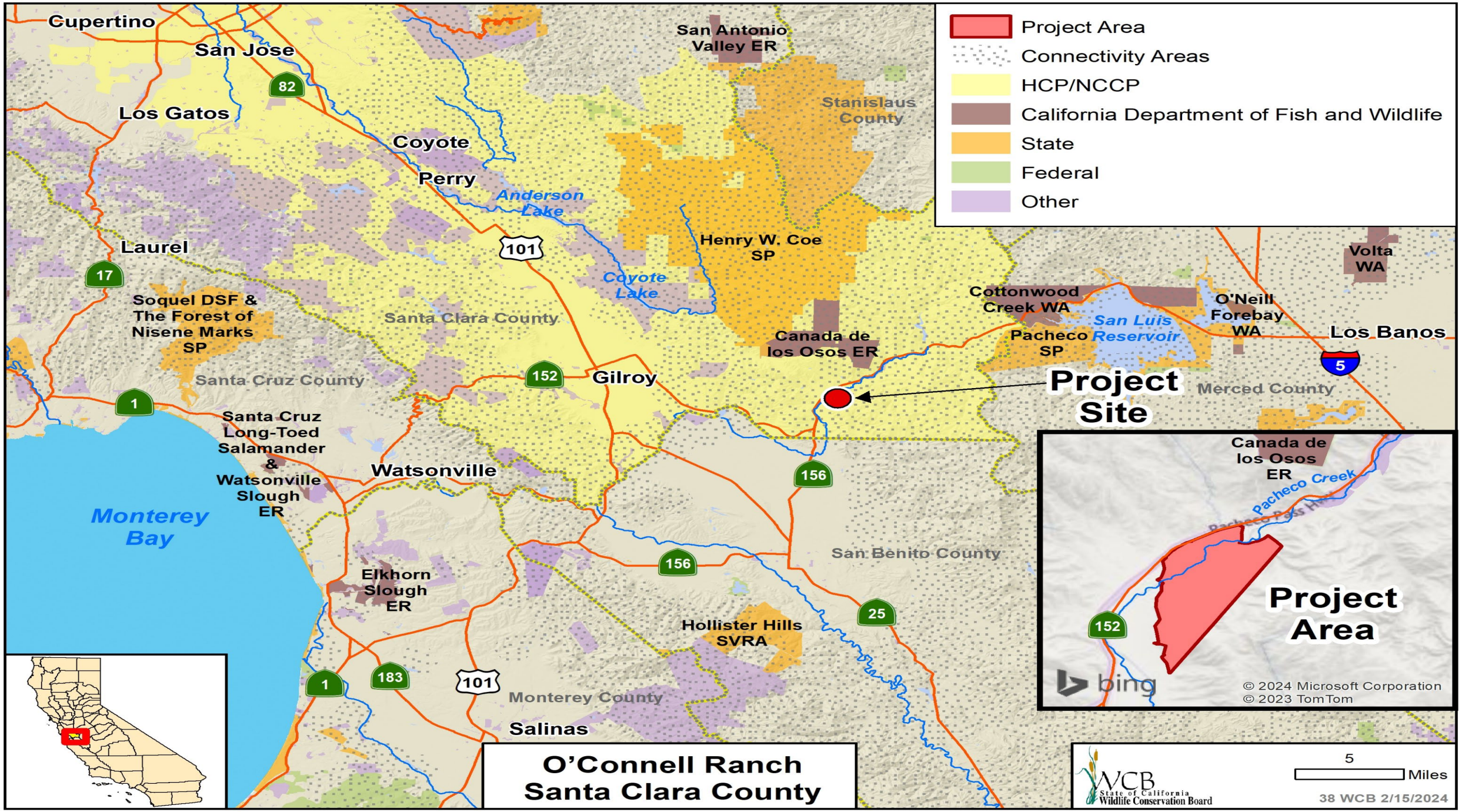
- Property is laser leveled to grow melon, garlic, corn, onion and tomatoes.
- Purchase will allow restoration of native habitat and modified floodplain topography

Sweetwater Ridge

Slide 4

Example photo of River Partners restored grasslands and wetlands. Project will remove agricultural uses and create wildlife habitat.

Lunch Break



O'Connell Ranch
Santa Clara County

O’Connell Ranch

Slide 1

Pacheco Creek Corridor Lands

Credit: SCVHA

O’Connell Ranch

Slide 2

Oak Woodlands

(Credit: SCVHA)

O’Connell Ranch

Slide 3

Acquisition would provide Pacheco Creek restoration opportunities.

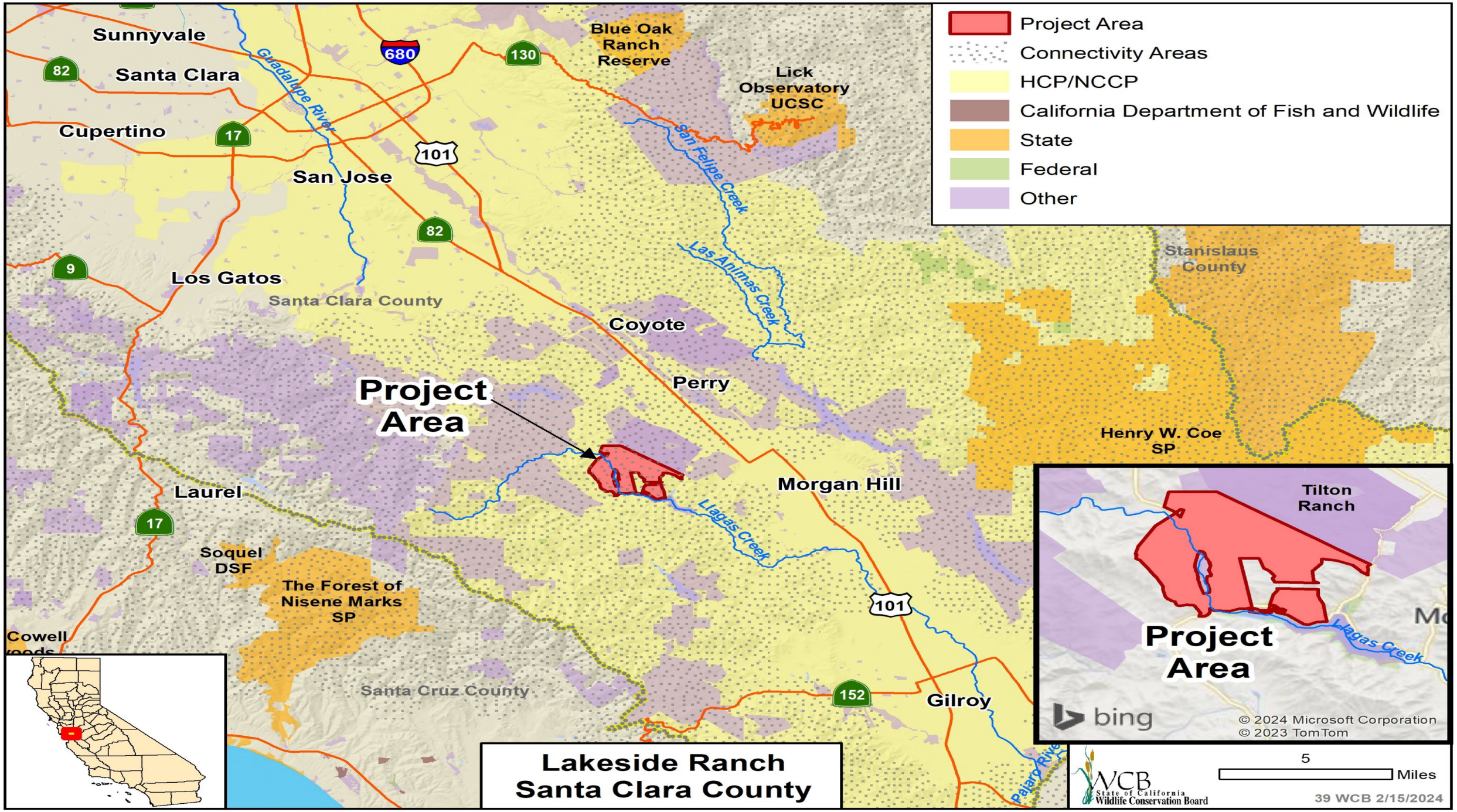
(Credit: SCVHA)

O’Connell Ranch

Slide 4

Sycamore Alluvial

(Credit: SCVHA)



Lakeside Ranch
Santa Clara County

Lakeside Ranch

Slide 1

Aerial view of Lakeside Ranch and Chesbro Reservoir (Credit: Teddy Miller)

Lakeside Ranch

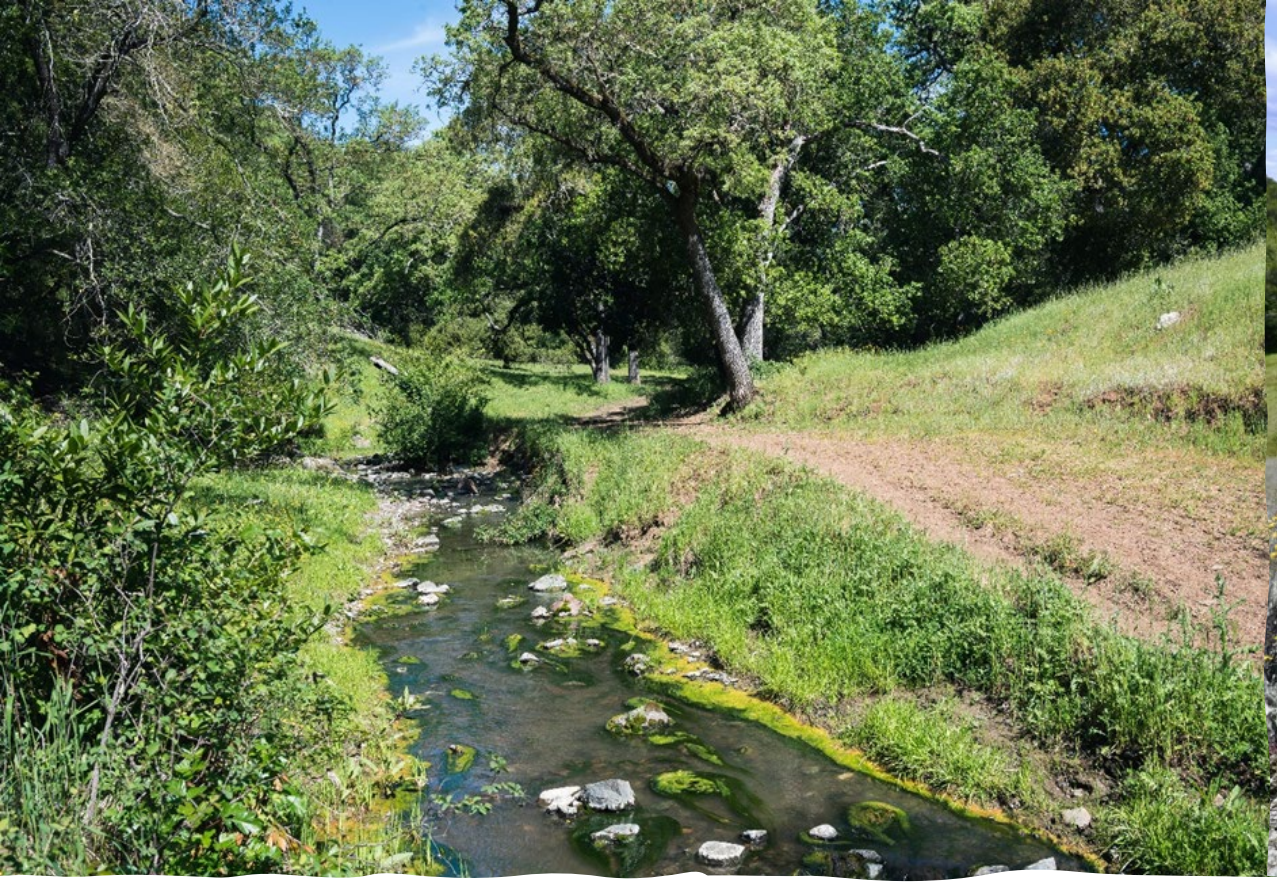
Slide 2

Grassland and Chesbro Reservoir (Credit: POST)

Lakeside Ranch

Slide 3

Mixed Oak Woodland (Credit: POST)

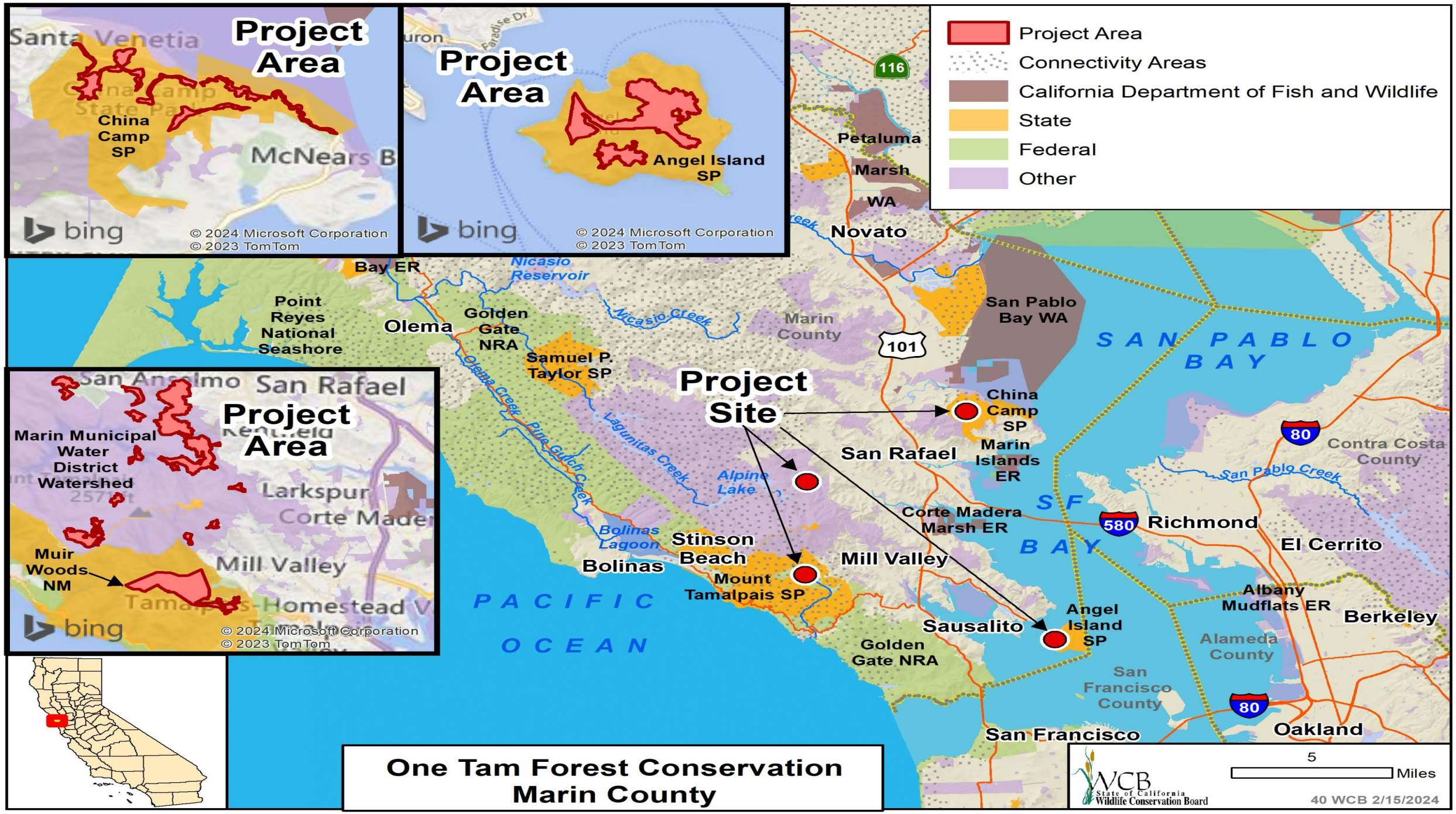


Lakeside Ranch

Slide 4

Left: Lakeside Ranch has approximately 8 miles of streams (Credit: POST)

Right: Serpentine rock outcrop (Credit: Teddy Miller)



One Tam Forest Conservation
Marin County

One Tam Forest Conservation

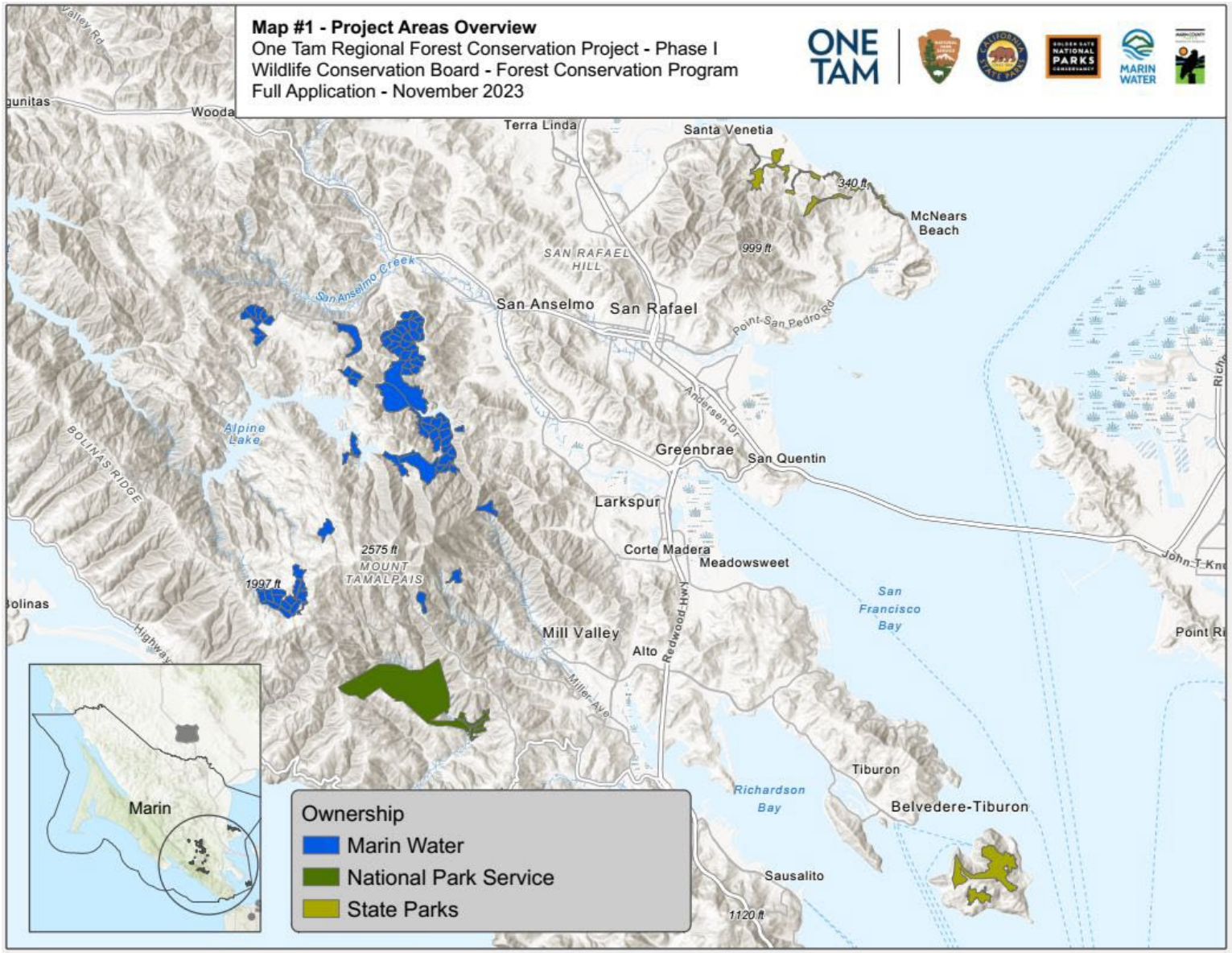
Slide 1

Partners

California State Parks
National Parks
Marin Water

Project Actions

1,151 acres of forest treatment to increase stand resilience and diversity.



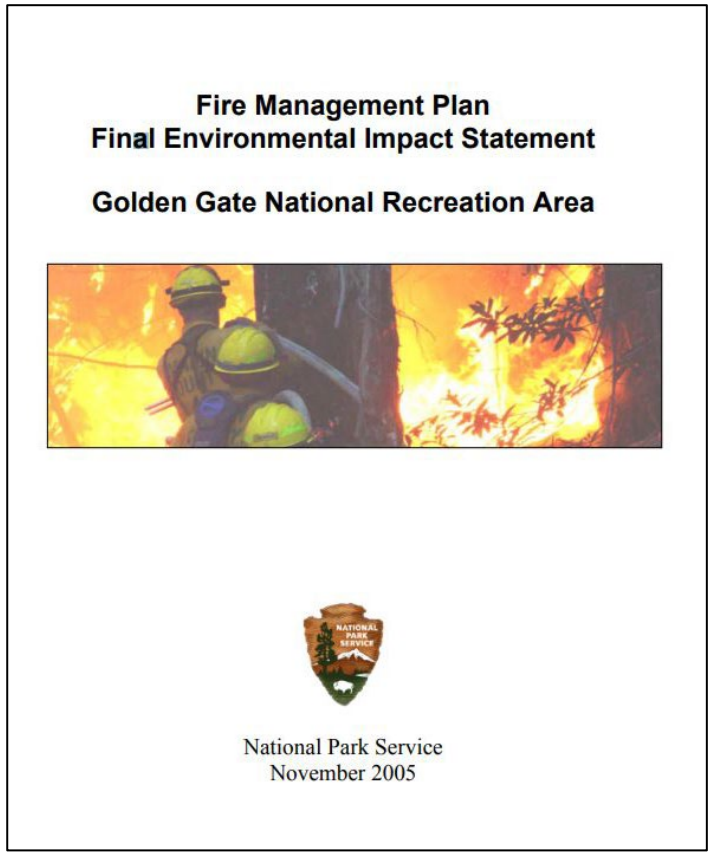
***Above**: project locations & ownership map; One Tam.*

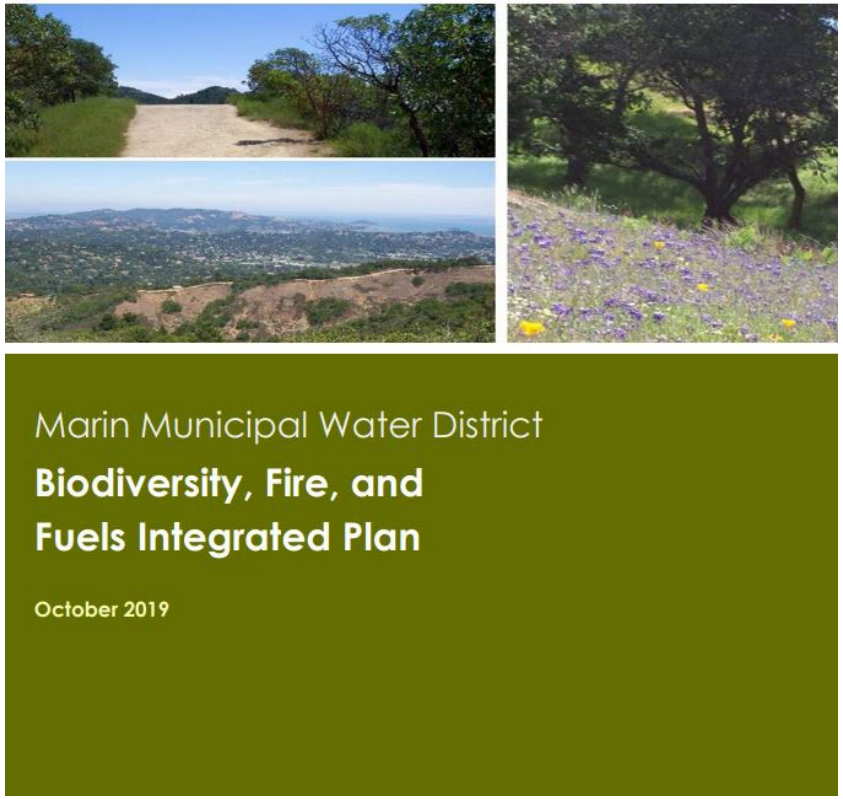
One Tam Forest Conservation

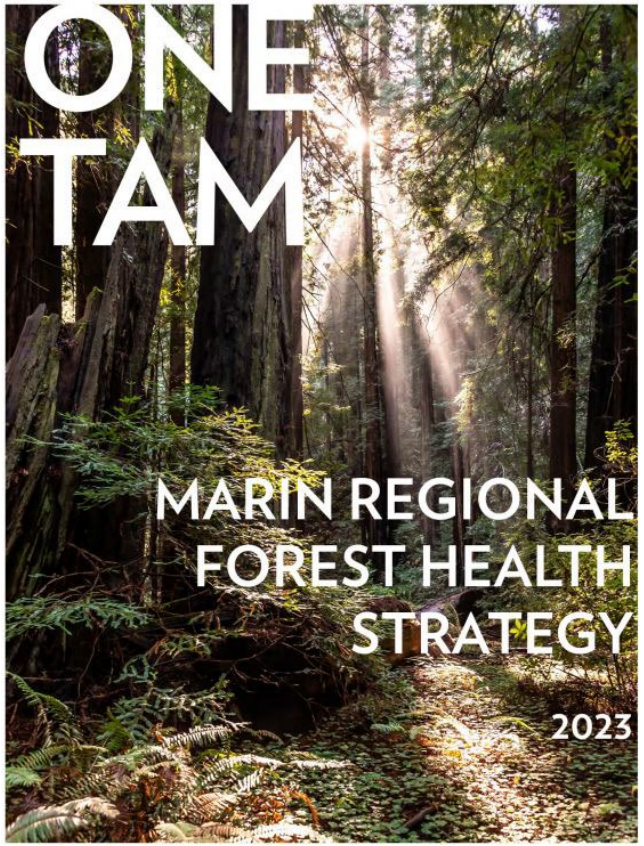
Slide 2

Planning Context

Marin Regional Forest Health Strategy determined priority treatment areas achieve landscape level community wildfire resilience.







***Above**: Subset of existing plans guiding Project actions.*

One Tam Forest Conservation

Slide 3

Existing Conditions

Right: *Vertical and horizonal continuity of vegetation.*

One Tam Forest Conservation

Slide 4

Existing Conditions (Continued)

Above left: *Sudden Oak Death (SOD) mortality.*

Above right: *Douglas Fir encroachment due to lack of low intensity fire.*

One Tam Forest Conservation

Slide 5

Project Activities

- Diverse combination of treatment techniques to achieve Project goals.

Example forest treatment activities, clockwise from top left:
Prescribed fire in coast redwoods, pile burning, manual invasive plant removal, mastication treatment, and thinning/chipping.

One Tam Forest Conservation

Slide 6

How does this work fit into the broader context of conservation in the west and climate change?

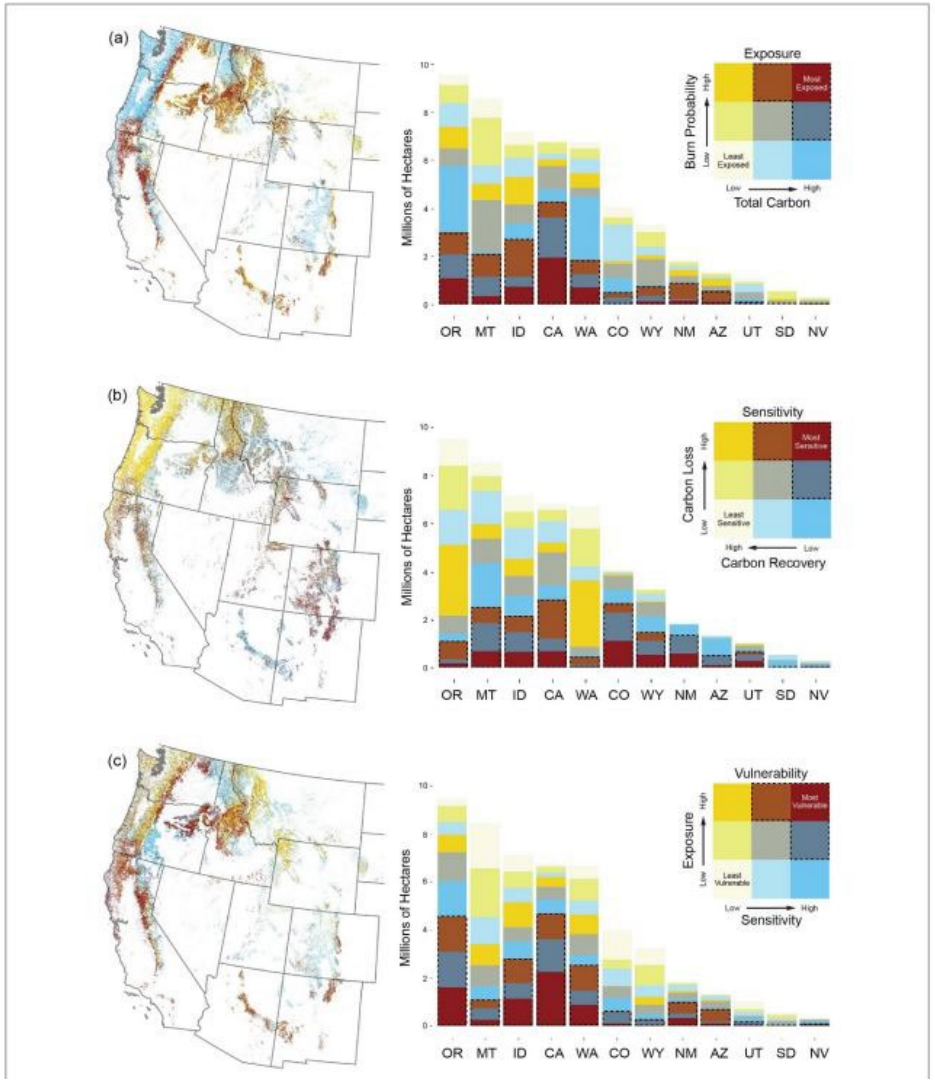
Environ. Res. Lett. **18** (2023) 094040 https://doi.org/10.1088/1748-9326/acf05a

ENVIRONMENTAL RESEARCH
LETTERS

LETTER

Identifying opportunity hot spots for reducing the risk of wildfire-caused carbon loss in western US conifer forests

Jamie L Peeler[1,*], Lisa McCauley[2], Kerry L Metlen[3], Travis Woolley[4], Kimberley T Davis[5], Marcos D Robles[2], Ryan D Haugo[6], Karin L Riley[5], Philip E Higuera[1], Joseph E Fargione[7], Robert N Addington[8], Steven Bassett[9], Kori Blankenship[10], Michael J Case[11], Teresa B Chapman[10], Edward Smith[12], Randy Swaty[13] and Nathan Welch[14]



Right: *Modeling carbon exposure, sensitivity, and vulnerability in 12 western states; J L Peeler et al.*

One Tam Forest Conservation

Slide 7

Fireshed modeling to determine multi-benefit outcomes for forest treatments.

Environ. Res. Lett. **18** (2023) 094040 https://doi.org/10.1088/1748-9326/acf05a

ENVIRONMENTAL RESEARCH
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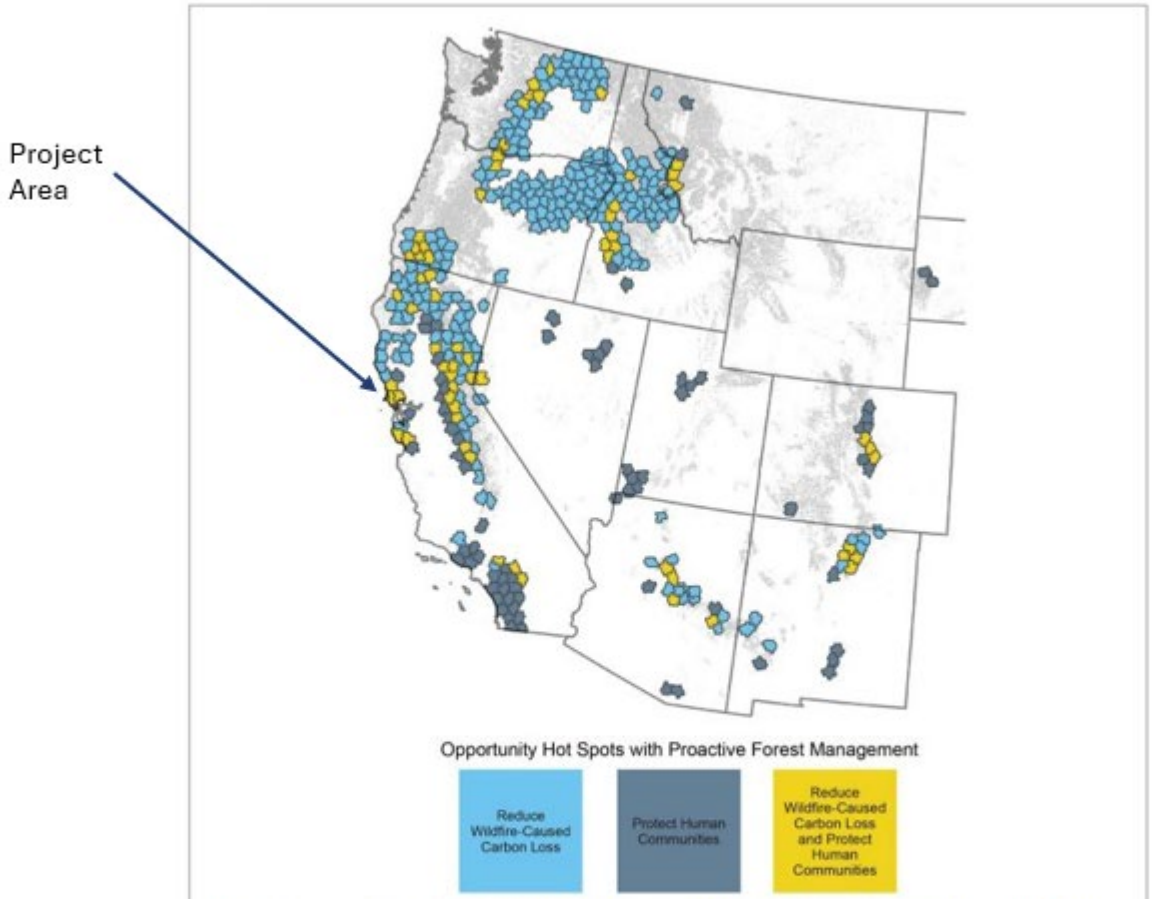


Figure 5. We observed opportunities for using proactive forest management to simultaneously mitigate the greatest risk from wildfire to carbon and human communities in the western US. Although the framework can be applied for any treatment, we highlighted forest thinning and prescribed or cultural burning to identify opportunity hot spots where humans could proactively reduce the risk of wildfire-caused carbon loss. After overlaying our 308 opportunity hot spots on previously published maps of 140 high risk all lands firesheds for human communities [2], we observed that 64 firesheds overlapped. Here we represented those firesheds in gold to emphasize that improving reciprocal relationships between humans and forests can support multiple ecological, social, and cultural values concurrently.

Right: *Opportunity Hot Spots identified at the fireshed level; J L Peeler et al.*

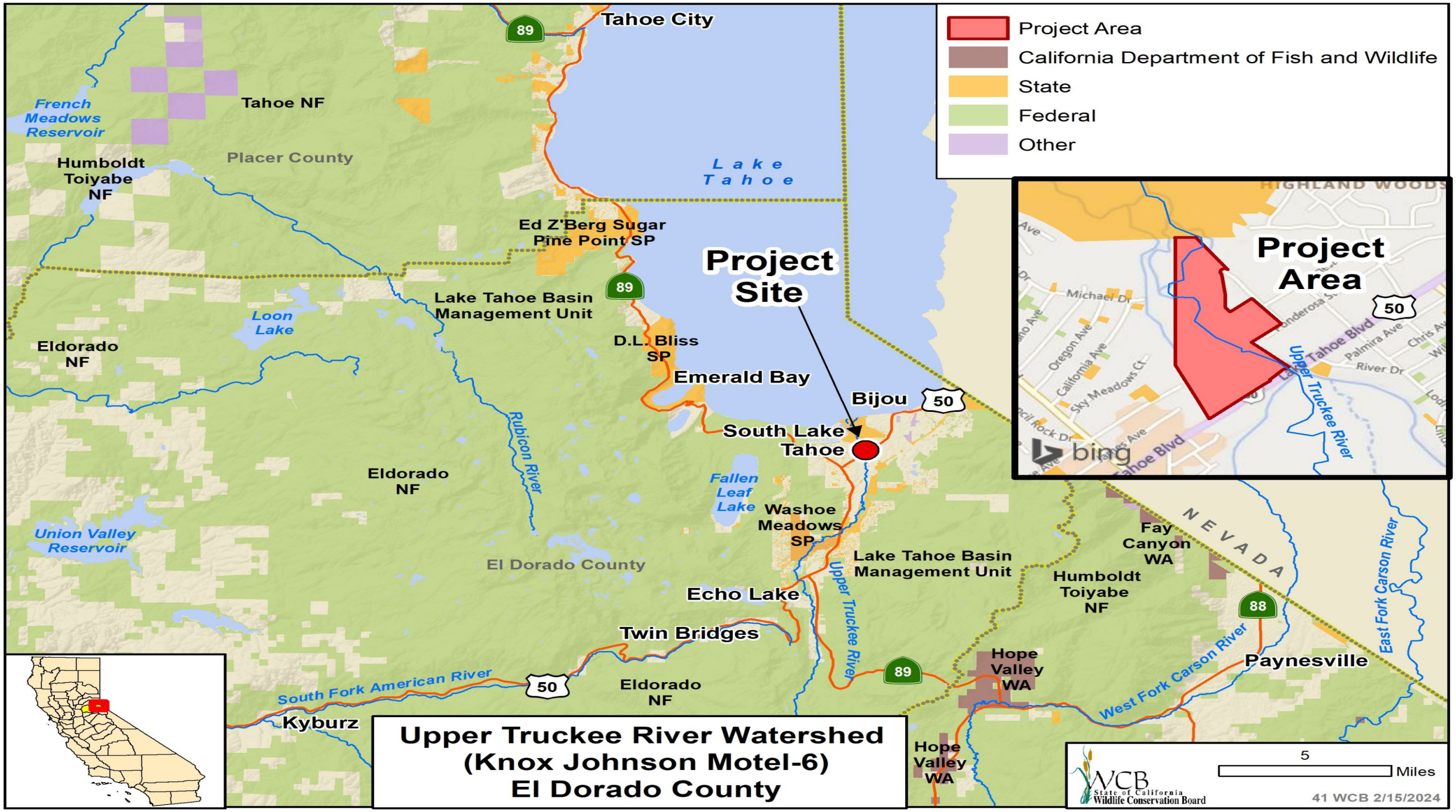
One Tam Forest Conservation

Slide 8

Project Outcomes

- Increased heterogeneity in forest & woodlands with associated habitat quality and biodiversity benefits.
- Treatment of lands impacted by Sudden Oak Death and invasive plants.
- Beneficial fire as a management tool after decades-long hiatus.
- Increased resilience to wildfire and protection of carbon stores.

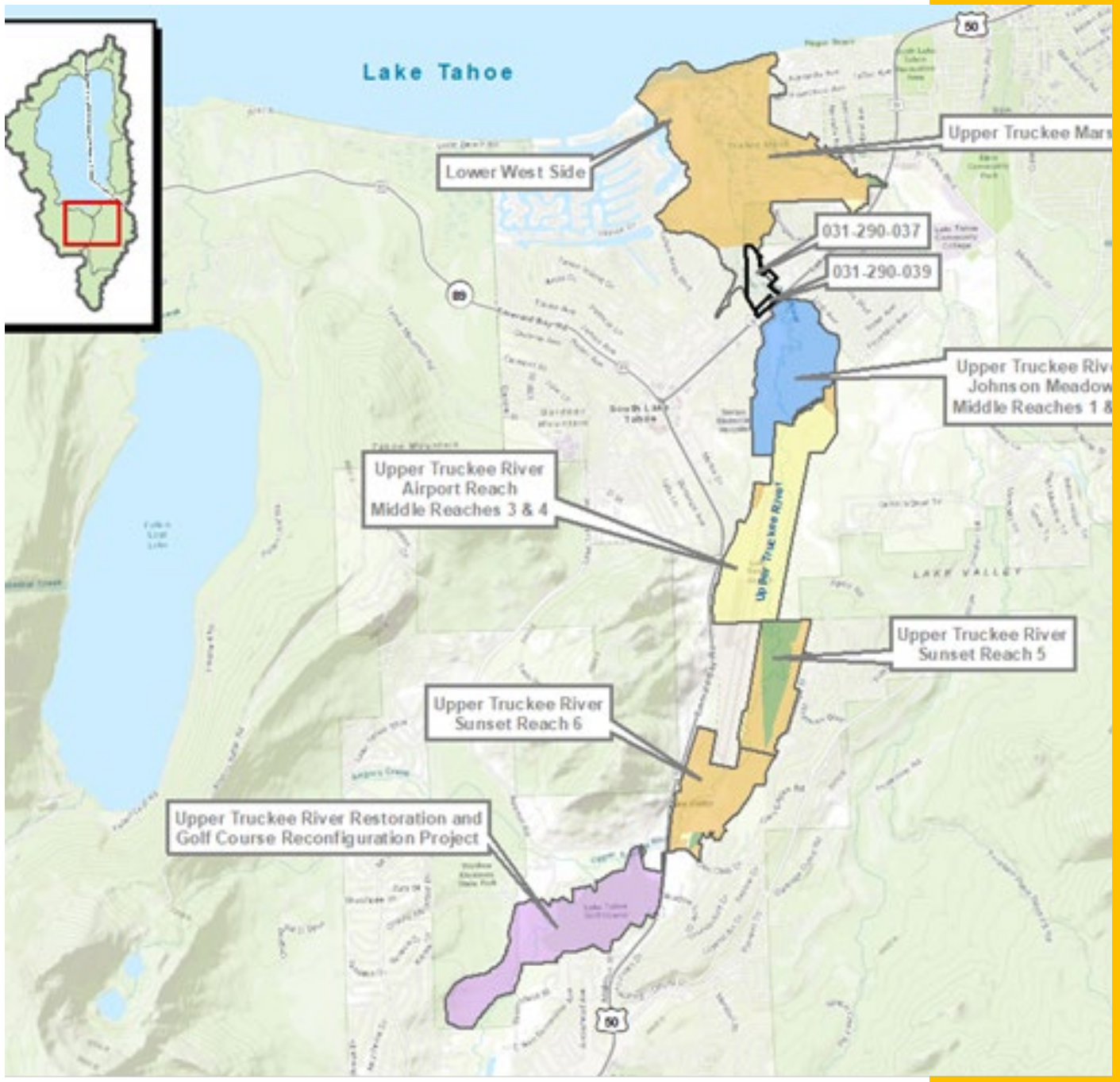
Right: *Muir Woods National Monument stand conditions display lack of disturbance from low intensity wildfire.*



Upper Truckee River Watershed (Knox Johnson Motel-6) El Dorado County

Upper Truckee River Watershed

Slide 1



Credit: California Tahoe Conservancy

Upper Truckee River Watershed

Slide 2

(Credit: California Tahoe Conservancy)

Upper Truckee River Watershed

Slide 3

The Upper Truckee River runs through the property.

(Credit: California Tahoe Conservancy)

Upper Truckee River Watershed

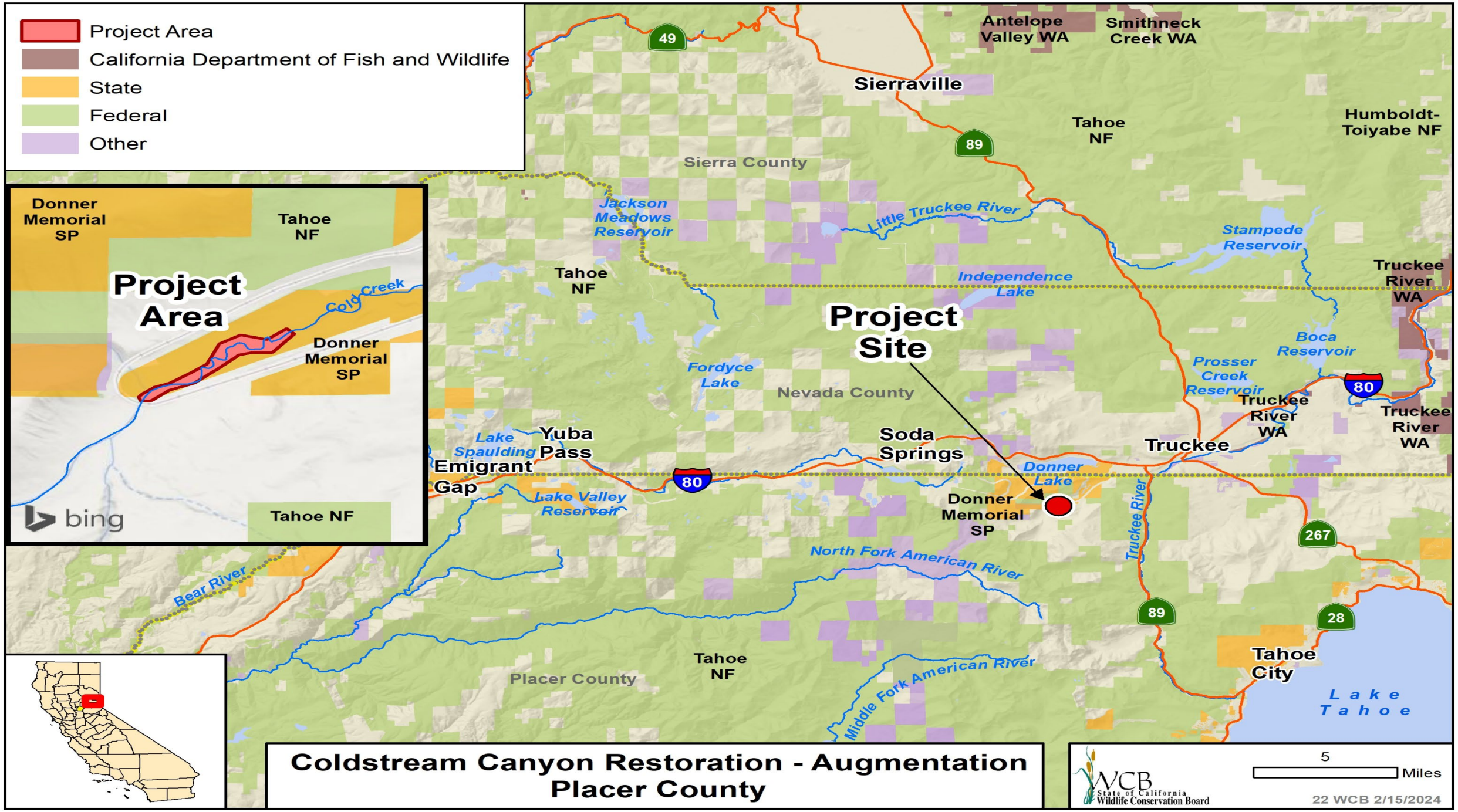
Slide 4

User created path looking NW toward Lake Tahoe with Mt. Tallac in background. Mountain Meadow and Wetland Parcel. (Credit: California Tahoe Conservancy)

Upper Truckee River Watershed

Slide 5

- Wet meadow area with willows along the Upper Truckee River. (Credit: California Tahoe Conservancy)



Coldstream Canyon Restoration - Augmentation
Placer County

Coldstream Canyon Restoration Augmentation

Slide 1

Project Overview

Restoration of 22 acres of floodplain and 6,000 linear feet of riparian habitat, funded at the May 2022 WCB meeting.

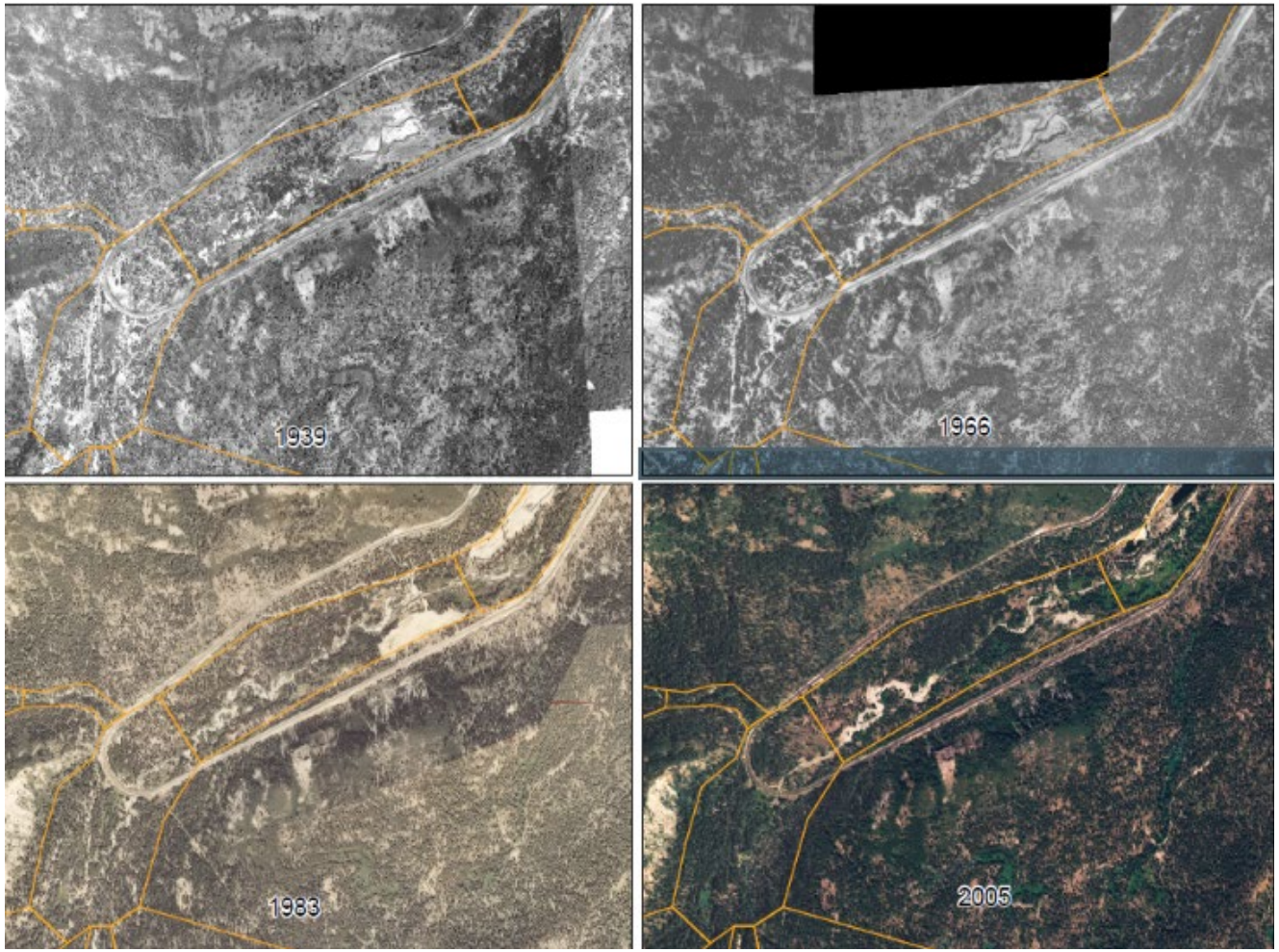
Left: *Coldstream Canyon erosion, E. Swain*

Coldstream Canyon Restoration Augmentation

Slide 2

Project Overview (Continued)

Right:
Railroad crossing



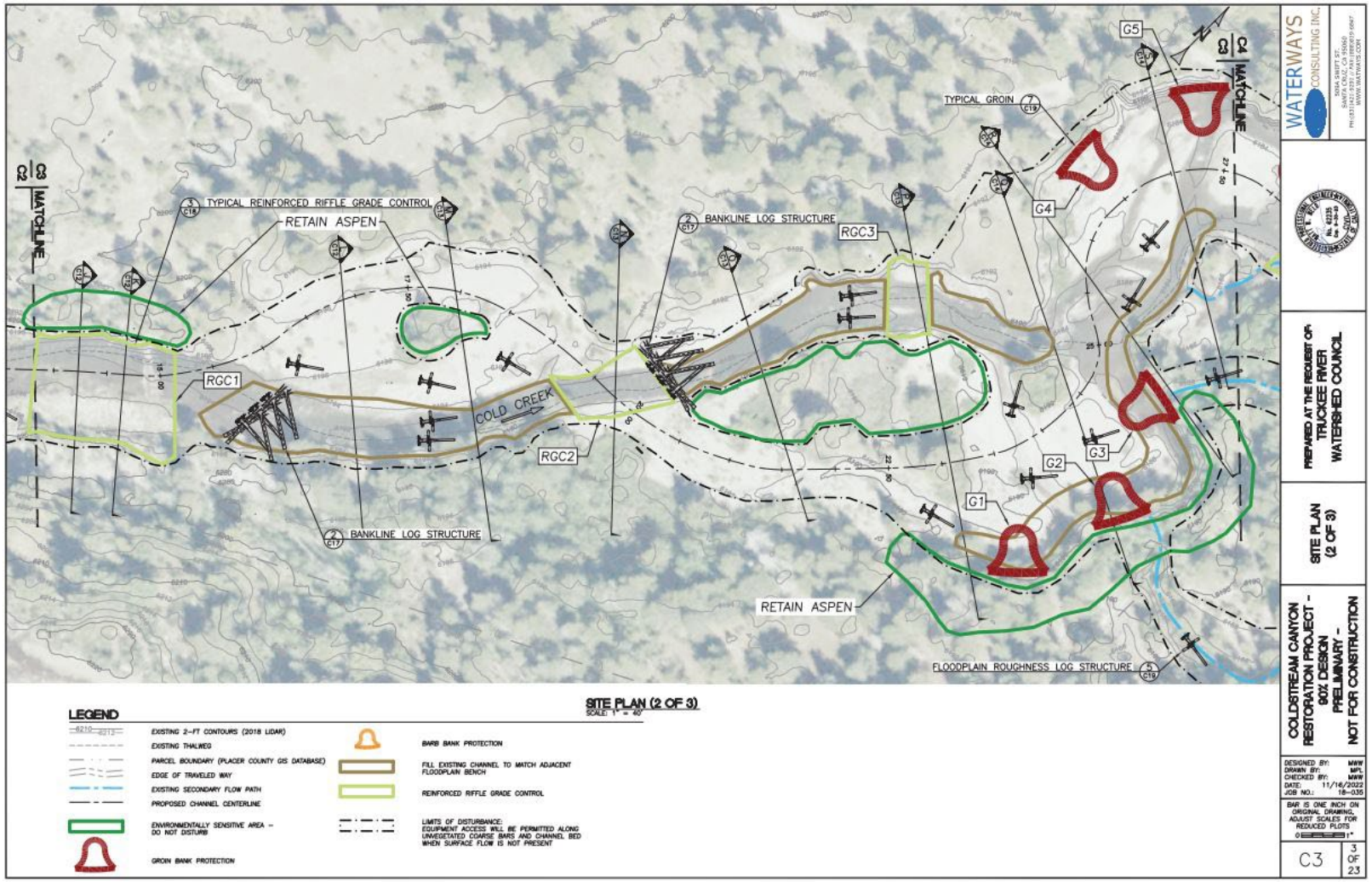
Above: *Array of historic aerial imagery showing loss of channel sinuosity 1939-2005. Truckee River Watershed Council; 2007 Coldstream Coldstream Canyon Watershed Assessment.*

Coldstream Canyon Restoration Augmentation

Slide 3

Project Design

- Diverse instream project activities including multiple structure types and channel recontouring.
- Draws upon success & from nearby Blackwood Canyon restoration site.

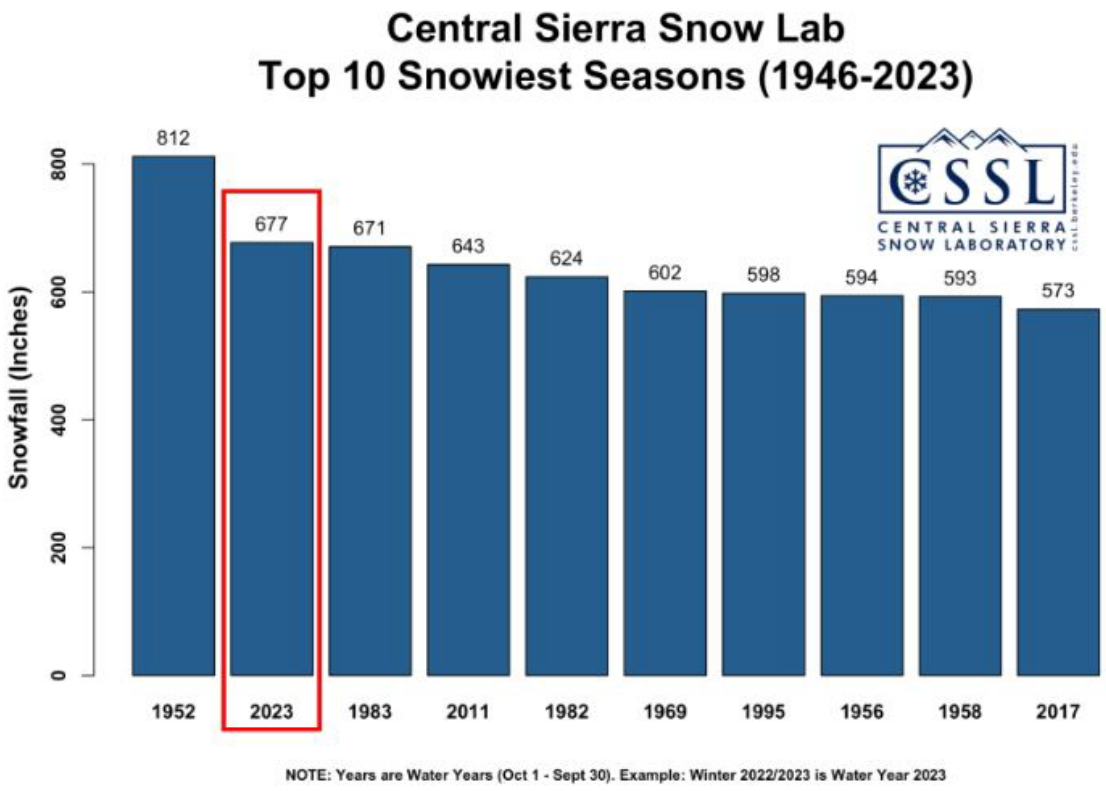


***Above**: Coldstream Restoration design plan excerpt; Truckee River Watershed Council.*

Coldstream Canyon Restoration Augmentation

Slide 4

Challenges



Above: *Snowfall totals; UC Berkeley Central Sierra Snow Lab.*

CALIFORNIA

2023 is 2nd-snowiest winter recorded in Sierra Nevada mountains

by: Amy Larson
Posted: Mar 21, 2023 / 03:06 PM PDT
Updated: Mar 21, 2023 / 03:11 PM PDT

Left*: News headline and photo; KRON4/Amy Larson*

Working inside a nearly 18-foot-deep snow pit at the UC Berkeley Central Sierra Snow Lab, from left, Shaun Joseph, Claudia Norman, Helena Middleton take measurements of snow temperatures on March 9, 2023, in Soda Springs, Calif. (Karl Mondon /Bay Area News Group via AP)

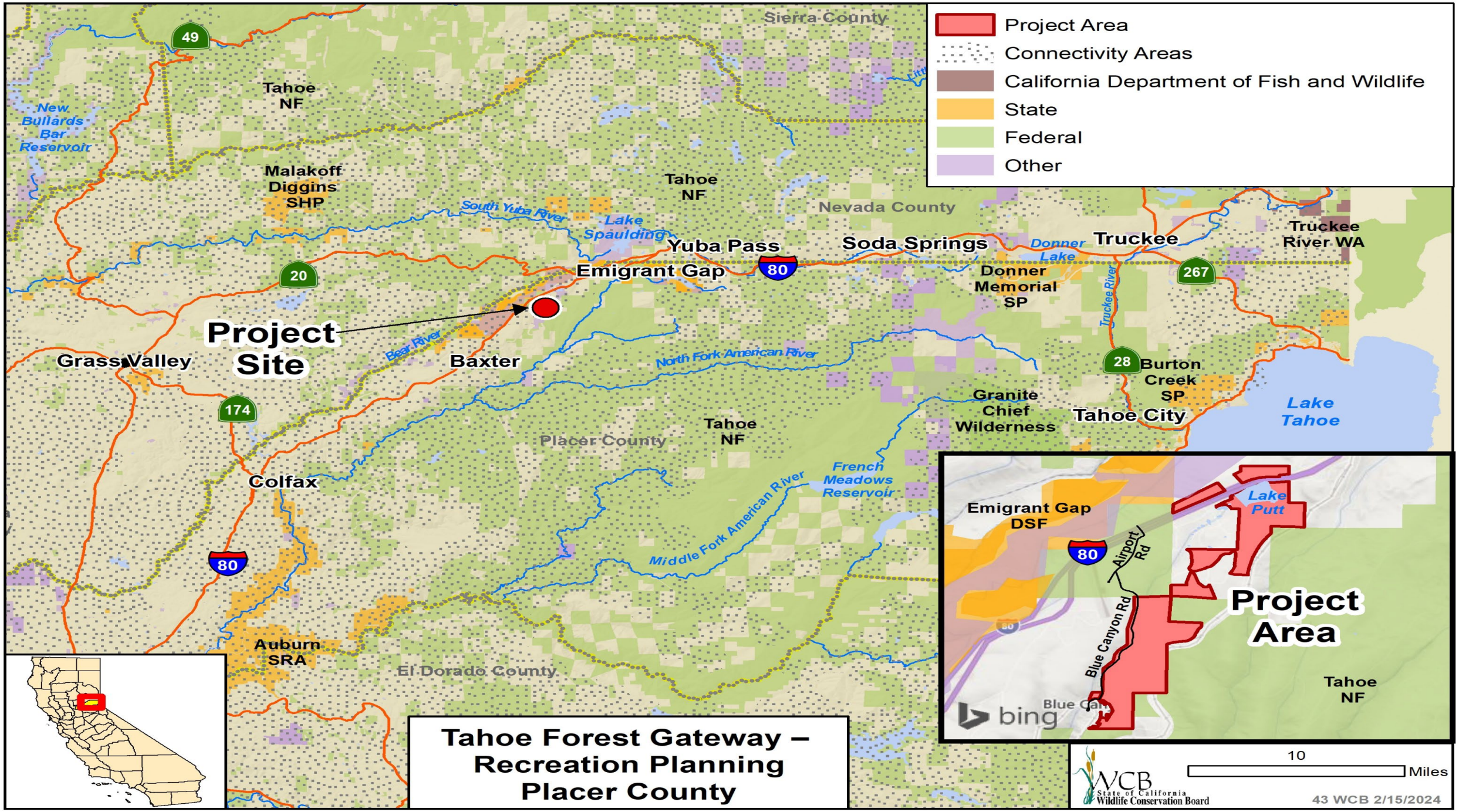
Coldstream Canyon Restoration Augmentation

Slide 5

Project Outcomes

- Reduced flow depth and velocity
- Increased inundation
- Improved water quality, lower water temps
- Increase wetted areas and longer duration surface flows increase habitat function & biodiversity.

Left: *Coldstream Canyon, E. Swain*



Tahoe Forest Gateway – Recreation Planning Placer County

Tahoe Forest Gateway – Recreation Planning

Slide 1

40 ACRE Conservation League

Mission: Overcome intergenerational cultural inhibitions about the outdoors by creating welcoming, safe, and inclusive spaces that are adjacent to national parks, national forests, and other recreational lands.

Lake Putt

Tahoe Forest Gateway – Recreation Planning

Slide 2

Project: Create a public access opportunity that welcomes all to Tahoe National Forest.

- 24-hour Nature Center offering equipment rentals and recreational programming
- Camping/glamping facilities
- Trails with varying degrees of difficulty
- Safe egress routes for wildfire and shelter during extreme weather

Existing timber roads and stream crossings will form the basis of ingress/egress roads and recreational trails.

Proposed location for public access base of operations

- Pre-disturbed area (3.5 – 4 acres) close to Lake Putt and property entrance from I-80
- Nature Center and parking

Tahoe Forest Gateway – Recreation Planning

Slide 3

Project Outcomes

Site Assessments

Cultural Resources

Water Resources

Geotechnical Survey

Forest Management Plan

Updated after Forest Health project implementation

Design & Engineering

Visioning to inform recreational opportunities and programs

Parking, Nature Center, Signage, Trails

Up to construction-ready documents

Public Engagement & Outreach

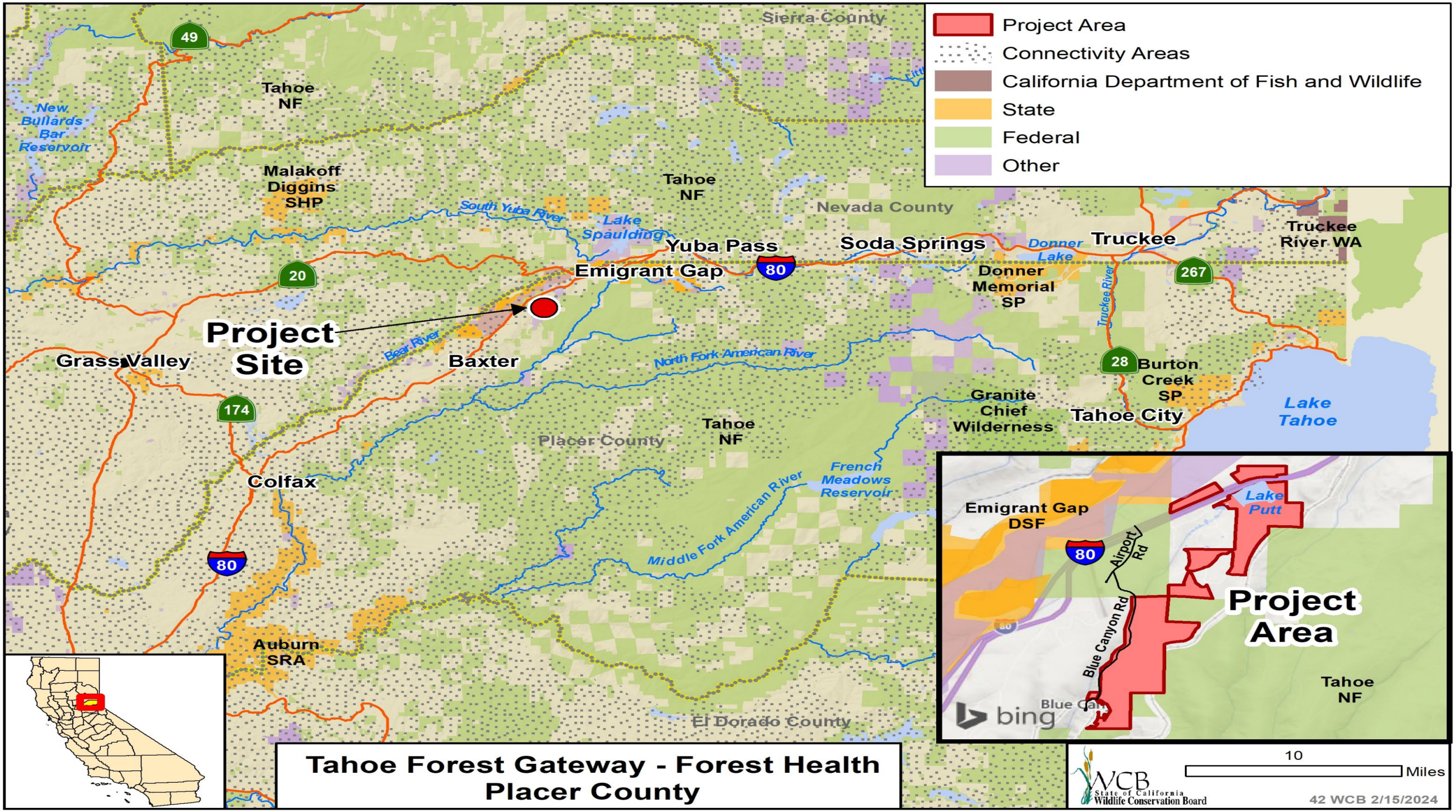
Local and regional stakeholders

BIPOC constituencies

Environmental Review

CEQA

Permitting



Tahoe Forest Gateway - Forest Health Placer County

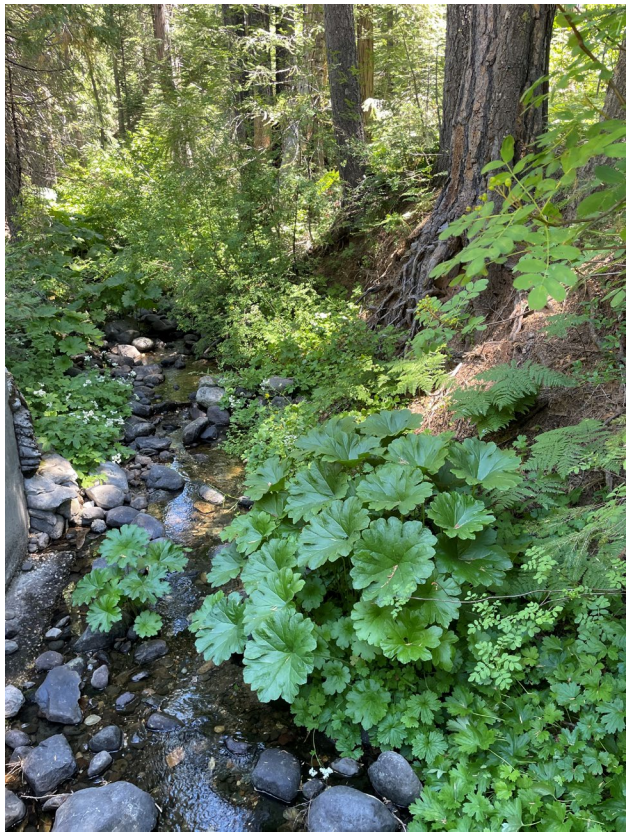
Tahoe Forest Gateway – Forest Health

Slide 1

Existing Conditions

- Substantial accumulation of fuels.
- Degradation of oak woodlands due to conifer encroachment.
- Neglected road network increasing sediment input to hydrologic resources.
- Special status wildlife in the area: foothill yellow-legged frog, California spotted owl, Townsend's big eared bat, western bumble bee, and more.

Dense shrub layer



Fulda Creek

Tahoe Gateway Forest – Forest Health

Slide 2

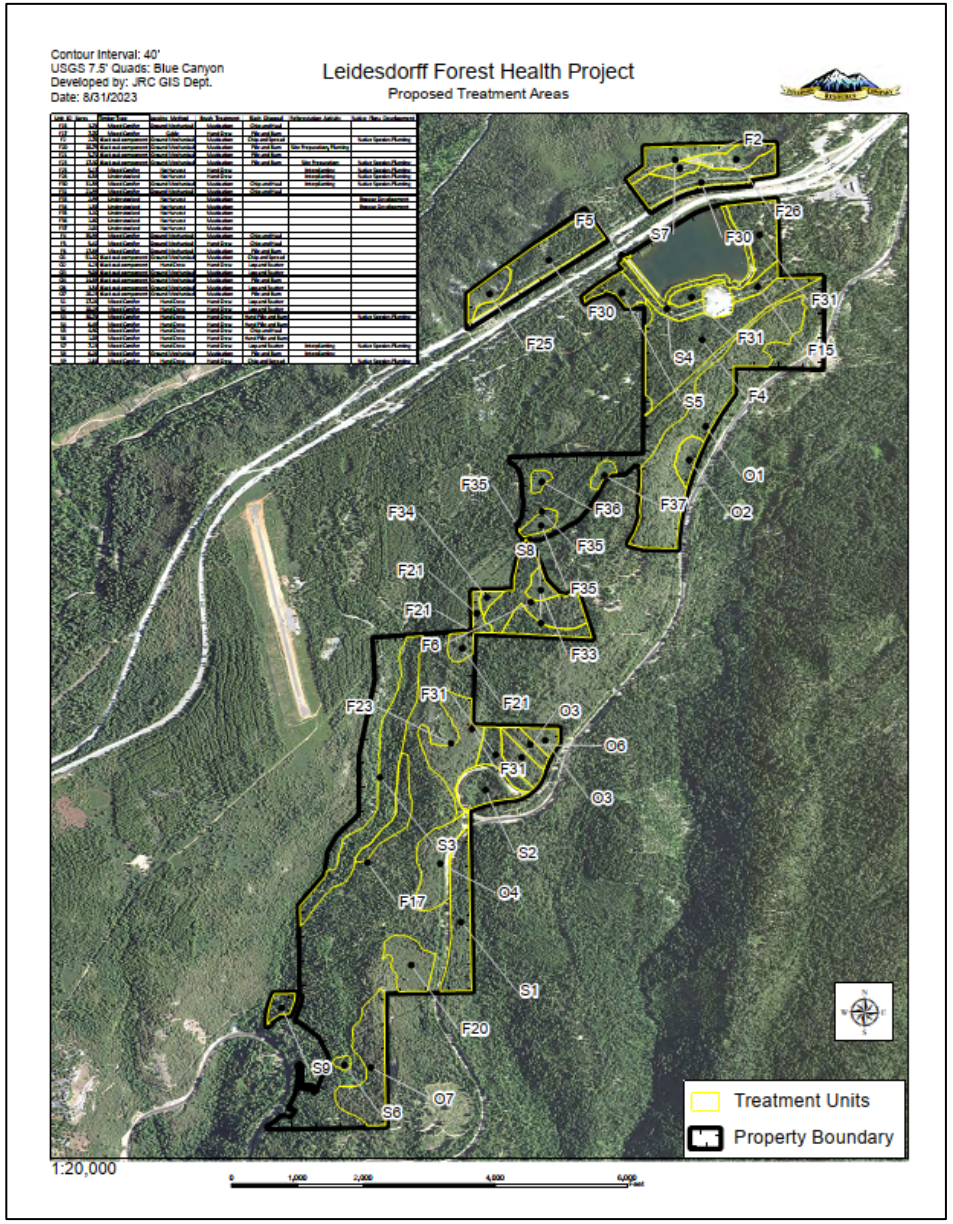
Project Actions

Implement vegetation management & road treatment to increase habitat quality and resilience:

- Mechanical thinning
- Hand thinning in sensitive/steep areas
- Oak woodland enhancement
- Roadside fuels reduction
- Conifer reforestation
- Road repair to enable access to restoration sites

Pollinator habitat enhancement pilot project

- Test plots to determine best approach for enhancing pollinator forage in Sierran Mixed Conifer systems.



Project site treatment map

Tahoe Gateway Forest – Forest Health

Slide 3

Project Outcomes

- Increased forest resilience to climate driven stressors, i.e. wildfire and forest pests.
- Increased ecosystem function and biodiversity through managing for heterogeneity.
- Site will provide access to nature for populations that have historically been underrepresented and/or excluded.

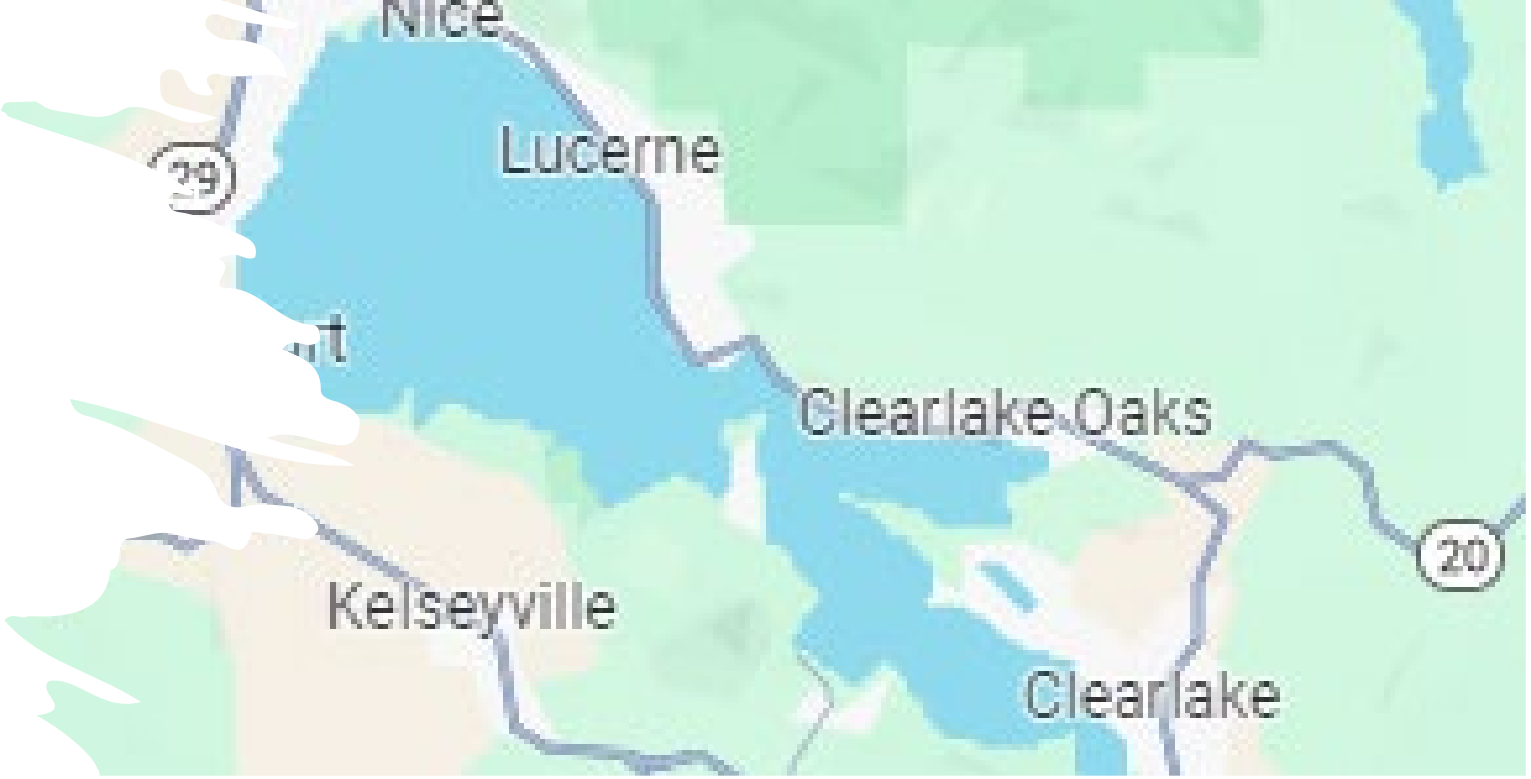
Conifer stand on Tahoe Forest Gateway property.

Clear Lake Hitch Habitat Planning
Lake County

Clear Lake Hitch Habitat Planning

Slide 1:

***Purpose*:** Develop the supportive information needed to restore functional flows and habitat to benefit the imperiled Clear Lake Hitch.



Clear Lake Hitch Habitat Planning

Slide 2:

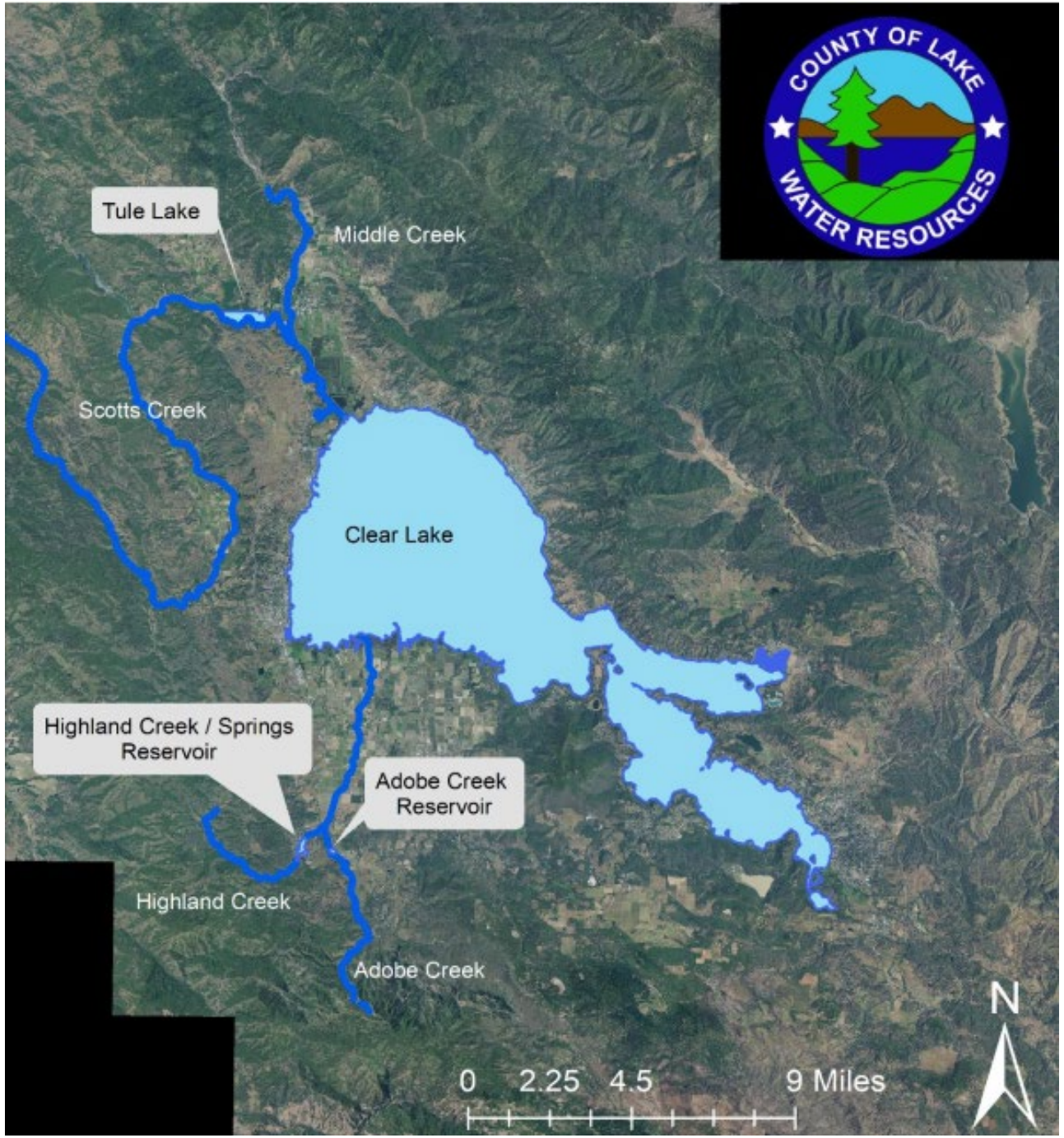
Clear Lake Hitch Habitat Planning

Slide 3:

Goals and Objectives:

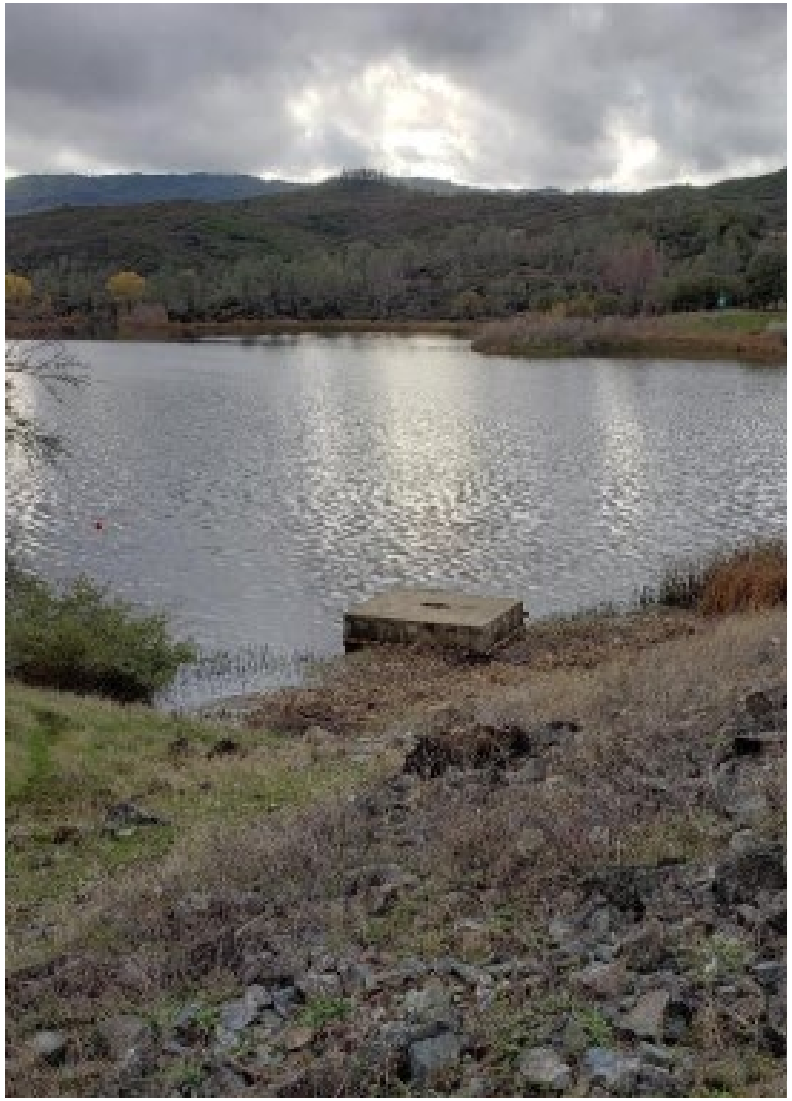
Scotts Creek: Clarify surface flow conditions and interactions with Tule Lake, identify priority fish passage barriers, develop 60-90% design for removal of at least two of these barriers.

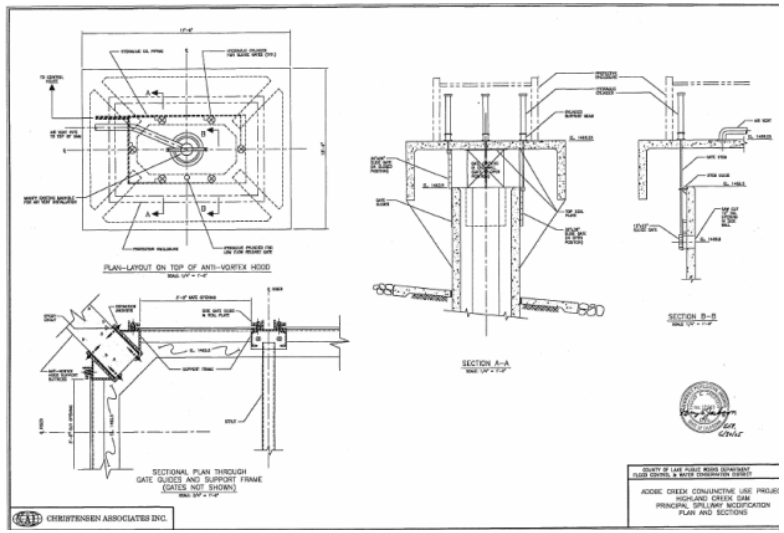
Adobe Creek: Assess and update Highland Dam operations to improve water storage for flow augmentation during spawning/migration. Develop design plans to replace existing culverts along a significant barrier in Adobe Creek.

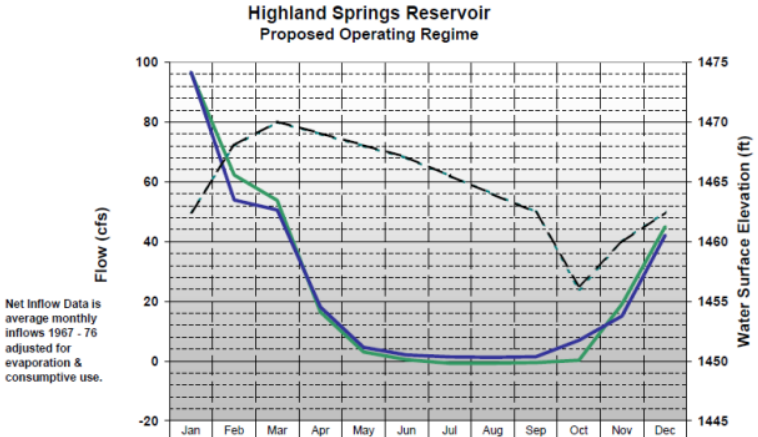


Clear Lake Hitch Habitat Planning: Scotts Creek

Slide 4:







	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Net Inflow (cfs)	96.6	62.3	53.8	16.4	3.1	0.5	-0.7	-0.7	-0.5	0.3	19.1	45.0
Actual Release (cfs)	96.7	53.9	50.6	18.1	4.6	2.0	1.4	1.3	1.4	7.0	15.1	42.1
Target Water level (ft.)	1462.5	1468.0	1470.0	1469.0	1468.0	1467.0	1465.5	1464.0	1462.5	1456.0	1460.0	1462.5
EOM Elevation (ft)	1462.4	1468.1	1470.0	1469.1	1468.1	1467.1	1465.5	1464.0	1462.4	1456.3	1459.9	1462.4

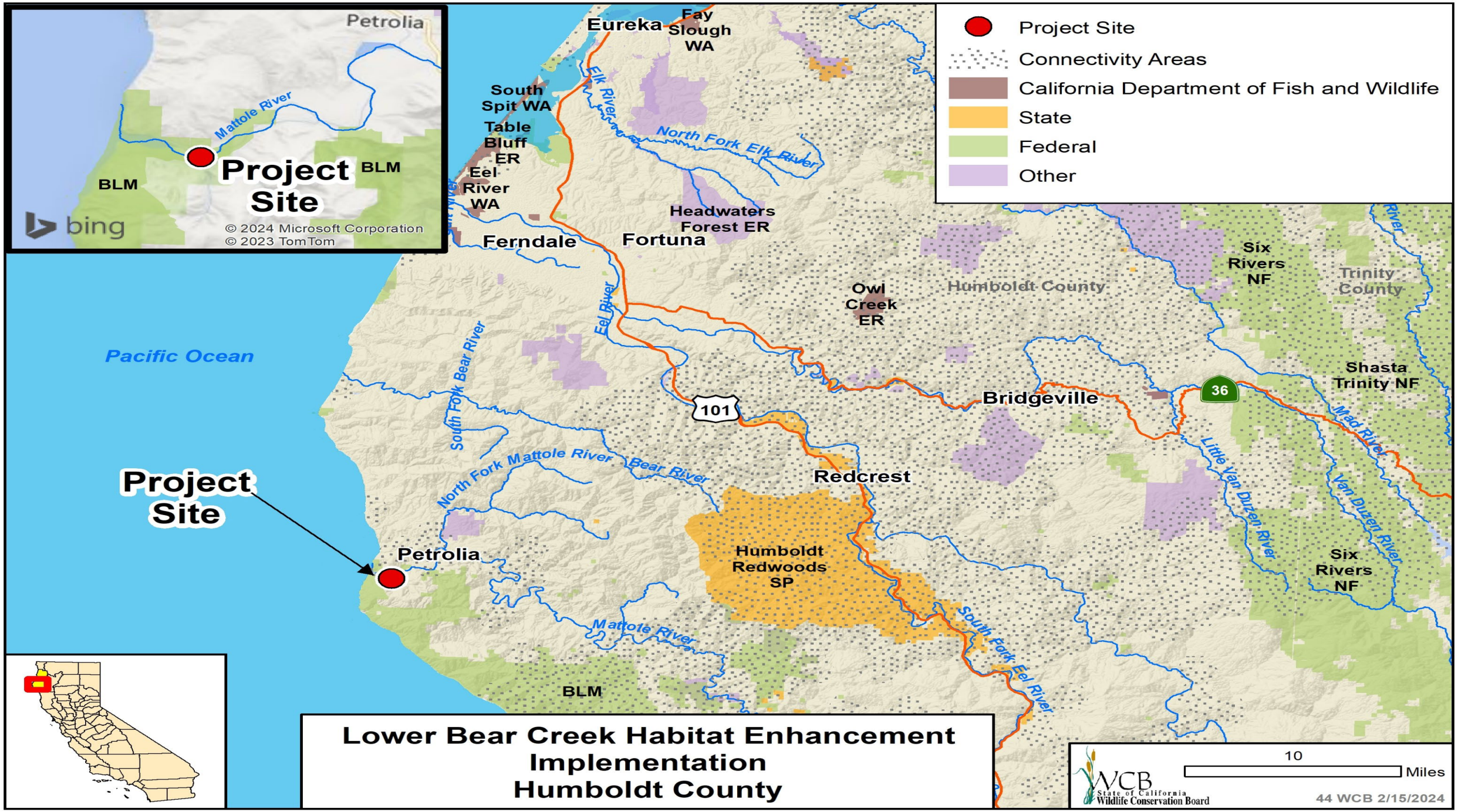
Clear Lake Hitch Habitat Planning: Adobe Creek

Slide 5:

Clear Lake Hitch Habitat Planning: Adobe Creek

Slide 6:

Nine culvert drainage system, proposed for replacement with bottomless culvert or bridge.



Lower Bear Creek Habitat Enhancement Implementation Humboldt County

Lower Bear Creek Habitat Enhancement

Slide 1

This project will reconnect Lower Bear Creek with the Mattole River Estuary by redirecting its flow into previously restored habitat.

Lower Bear Creek Habitat Enhancement

Slide 2

Left and Right: Two examples of flooded forest due to Bear Creek flows being blocked by Lighthouse Road

Lower Bear Creek Habitat Enhancement

Slide 3

Right: Undersized culvert perched above the water level of Mattole River and so disconnected from the Mattole River Estuary

Lower Bear Creek Habitat Enhancement

Slide 4

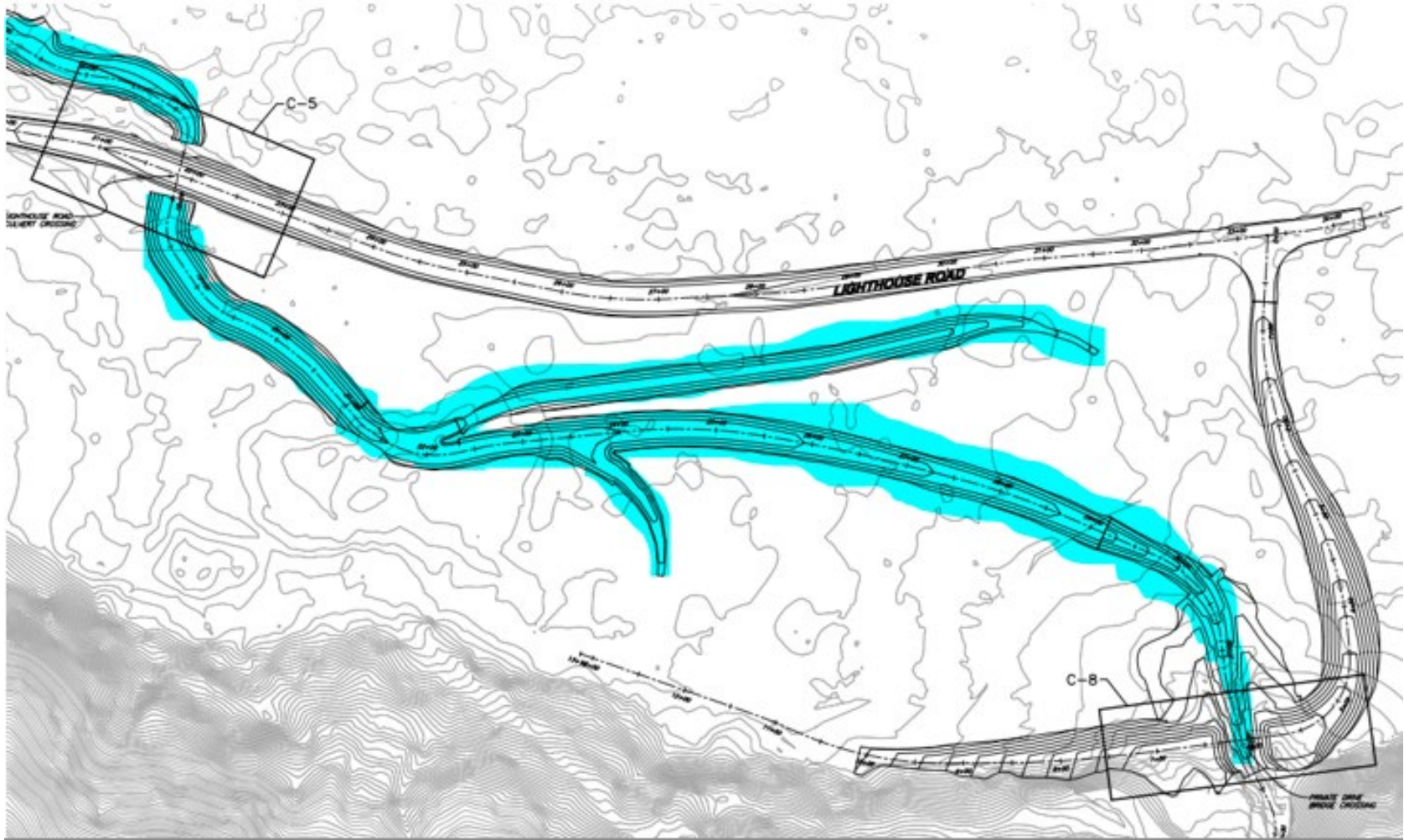
Left: Water overflowing from Bear Creek over Lighthouse Road

Right: Emergency road repairs to Lighthouse Road in response to damage from flooding from Bear Creek

Lower Bear Creek Habitat Enhancement

Slide 5

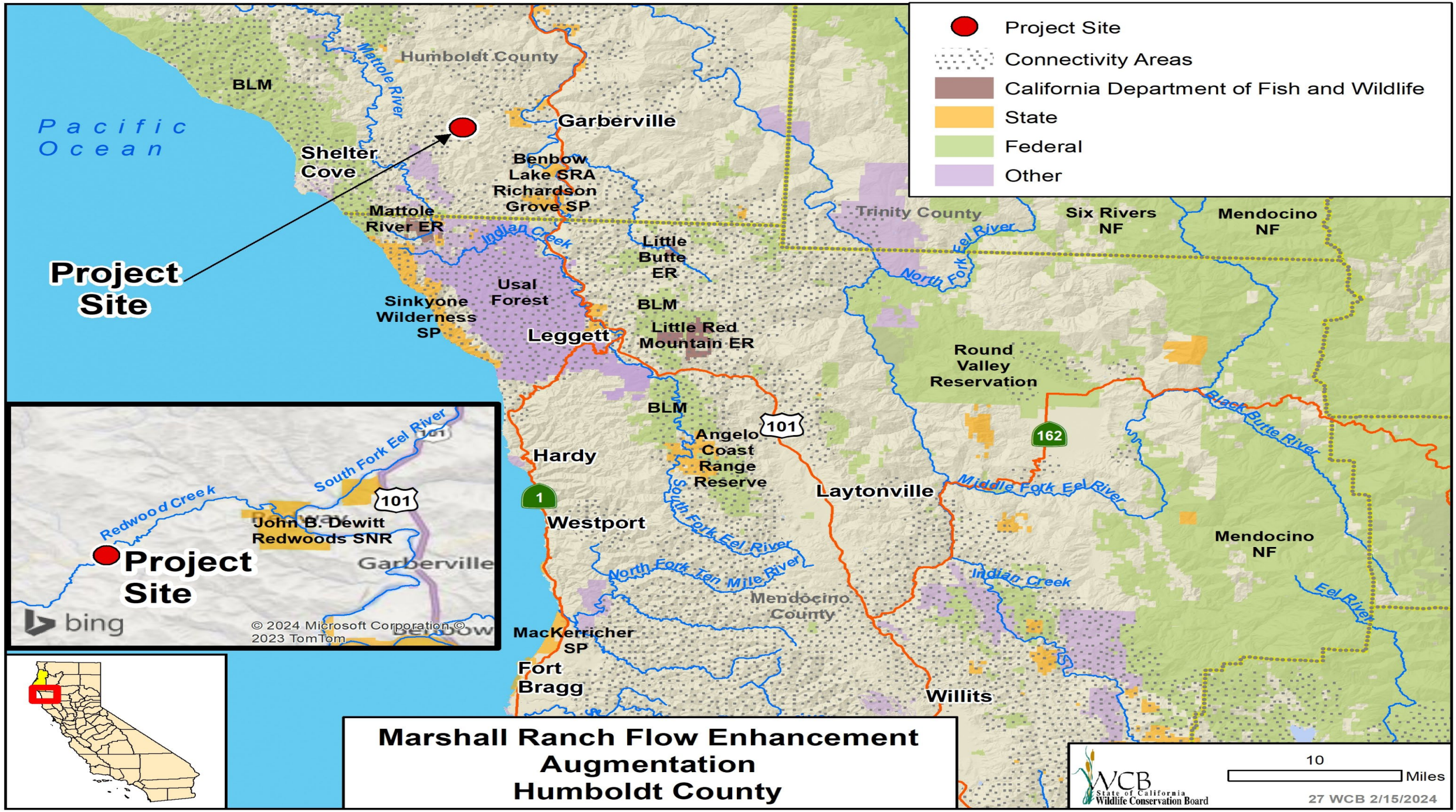
Right: Map showing proposed new alignment of Lower Bear Creek and back channels (in aqua)



Lower Bear Creek Habitat Enhancement

Slide 6

Above: Cottonwood and Alder forest surrounding Lower Bear Creek



Marshall Ranch Flow Enhancement Augmentation Humboldt County

Marshall Ranch Flow Enhancement - Augmentation

Slide 1

Top: Redwood Creek in July 2021, at proposed flow delivery point. Credit: Stillwater Sciences

Bottom: Redwood Creek in November 2023, with new instream habitat structure.

Marshall Ranch Flow Enhancement

Slide 2

Intermediate terrace looking west, with incised eastern tributary visible in the foreground.

Top: 2021, Pre-construction

Bottom: 2023, pond 1 excavation and lining completed. Future site of 90,000-gallon tank (to be installed in 2024).

Credit: Stillwater Sciences

Marshall Ranch Flow Enhancement

Slide 3

Storage tanks totaling 100,000 gallons (installed in 2023)

Gully stabilization measures (implemented in 2023) in both the east and west tributaries, to reduce fine sediment inputs to Redwood Creek.

Marshall Ranch Flow Enhancement

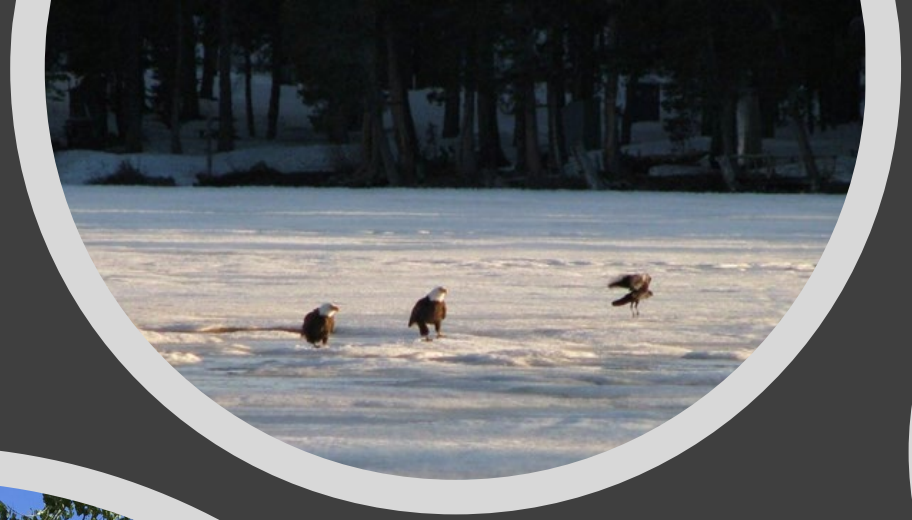
Slide 4

Top Left: Pond 1 in February 2024 (Credit: Dana Stolzman)

Top Right: Pond 2 in November 2023

Bottom Right: Pond 2 in February 2024 (Credit: Stillwater Sciences)

California Onward Capacity Building and Grant Program



California Onward Capacity Building and Grant Program

Slide 2

Prior WCB projects with Land Trusts

California Onward Capacity Building and Grant Program

Slide 3

Strategy	Objective	Metrics of Success
Grant Program	1. Fund projects that advance 30x30 and the NWLCSS.	100% of funded projects demonstrate clear connection to 30x30 and/or NWLCSS.
	2. Fund projects that provide a benefit to disadvantaged communities.	At least 40% of funded projects are located within, or directly benefit, disadvantaged or severely disadvantaged communities.
	3. Fund partnerships between land trusts and California Native American tribes or Native-led organizations.	At least 25% of funded projects support meaningful partnership with California Native American tribes or Native-led organizations.

California Onward Capacity Building and Grant Program

Slide 4

Strategy	Objective	Metrics of Success
Technical Assistance	1. Strengthen land trusts' and partners' ability to implement 30x30 and NWLCSS.	300 participants in technical assistance on topics related to land transaction, due diligence, compliance, stewardship, and grant writing and fundraising.
	2. Support land trusts and partners to leverage $7 million against the California Onward Grant Program.	$7 million in non-WCB funding agreements used as match for grant projects - as demonstrated through final survey of grantees.

California Onward Capacity Building and Grant Program

Slide 5

The California Onward Capacity Building and Grant Program: Accelerating Conservation to Reach 30x30

CALIFORNIA COUNCIL
OF LAND TRUSTS

Conservation for ALL Californians

- Capacity building and project support
- DEIJ
- 3.5M additional acres positioned for conservation by 2030

CONSERVATION HORIZONS

KEEPING CONSERVATION AND LAND TRUSTS VITAL FOR THE NEXT AGE

30x30 CALIFORNIA

CALIFORNIA COUNCIL OF LAND TRUSTS

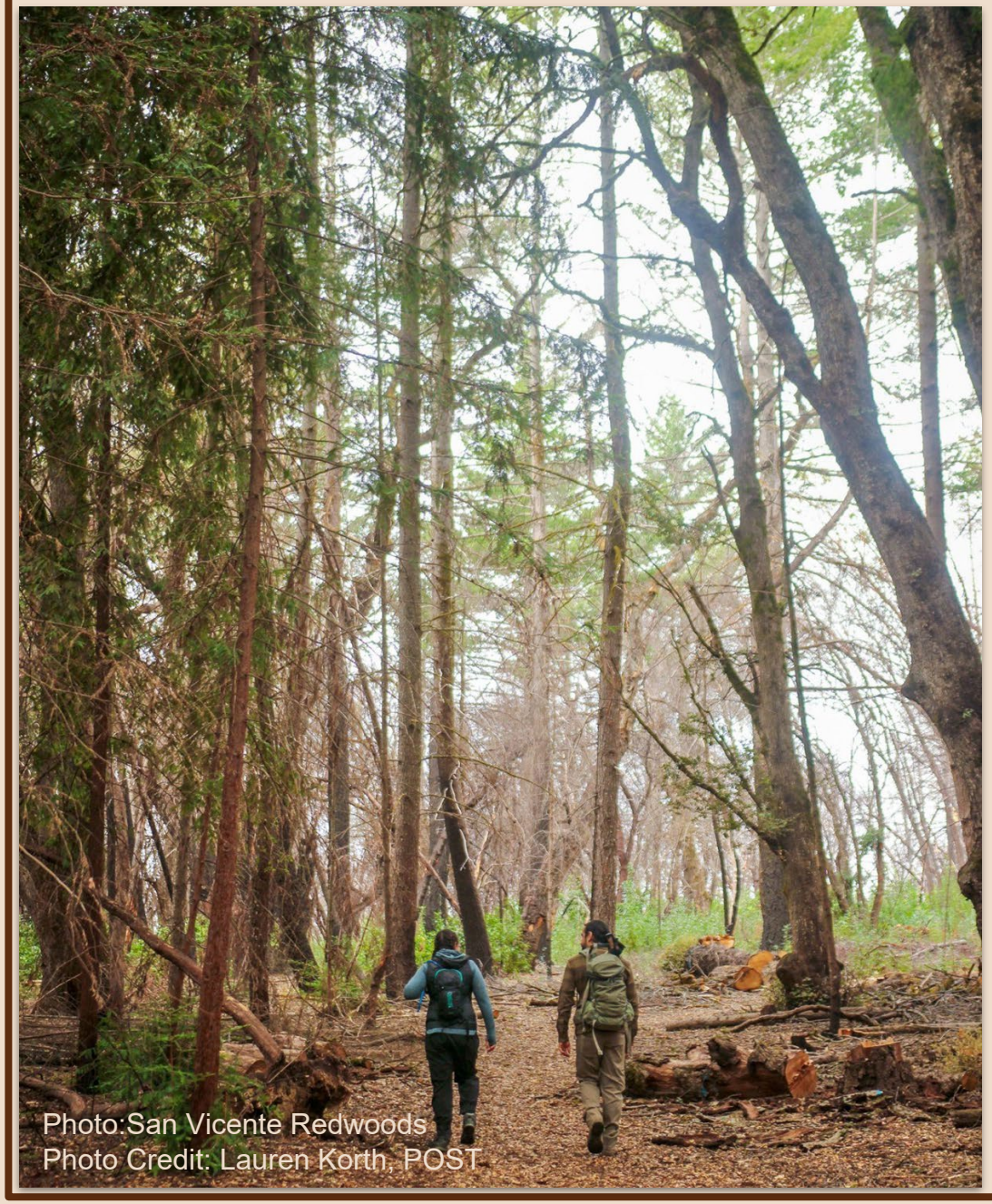


Photo:San Vicente Redwoods
Photo Credit: Lauren Korth, POST

Partners

CALIFORNIA COUNCIL OF LAND TRUSTS

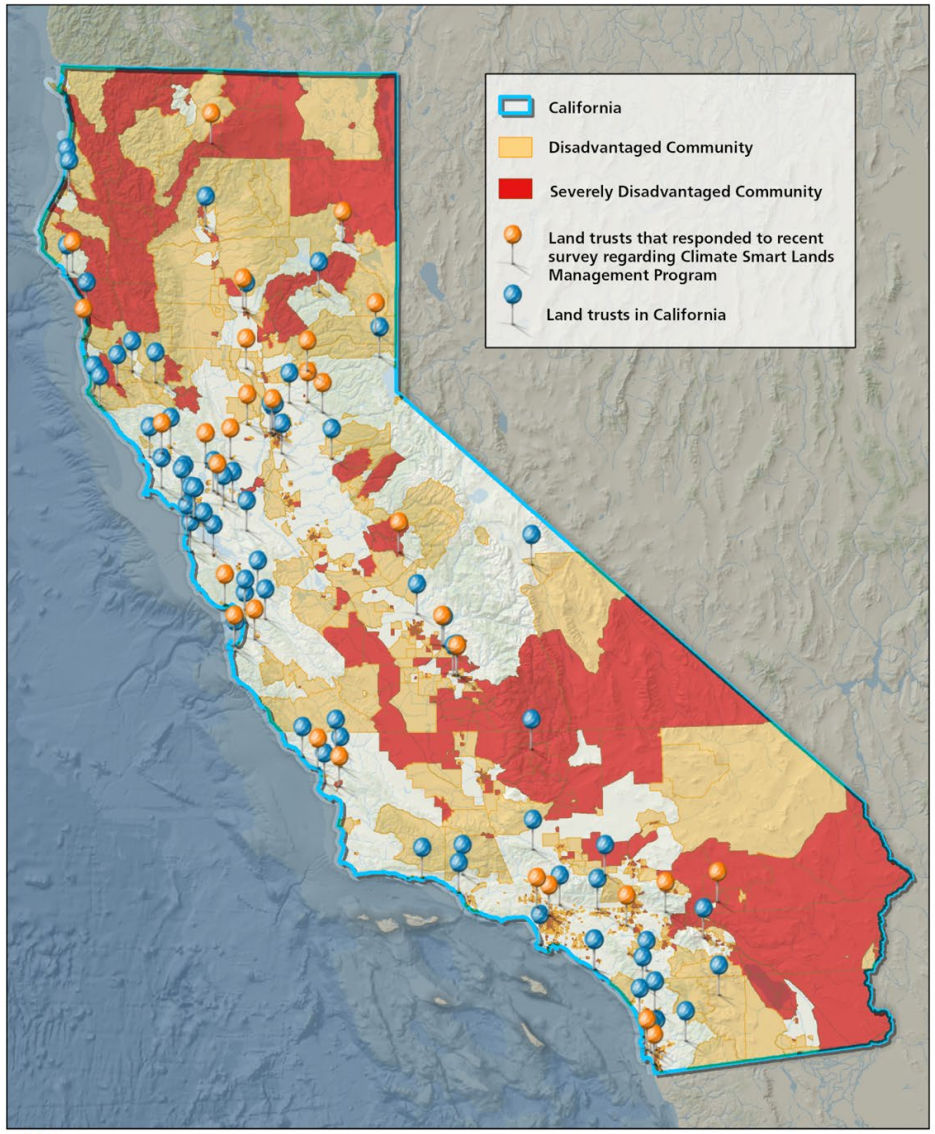
Land Trust Alliance
Together, conserving the places you love

Diversifying Conservation: Equity Lens

- Advisors
- Leveraging Regional Networks
- 1:1 support for proposal development, and on-going support for project delivery

Photo: Birds and Bino's
Photo Credit: Eastern Sierra Land Trust

CALIFORNIA COUNCIL OF LAND TRUSTS



Serving Disadvantaged Communities

1. At least 40% of funded projects allocated within, or directly benefiting, disadvantaged or severely disadvantaged communities

1. At least 25% of funded projects support meaningful partnership with California Native American tribes or Native-led organizations.

CALIFORNIA COUNCIL OF LAND TRUSTS

Project Examples

*"**Siskiyou Land Trust** does not have the capacity to increase our current project load to act on these important 30x30 opportunities unless we increase capacity related to program staffing and consultant support needs."*

Photo: Klamath Cascade forest
Photo Credit: Bubba Suess

*"The capacity funding and technical assistance will provide critical support for the **Los Angeles Neighborhood Land Trust** as we continue to plan, design and build new parks and green spaces in low-income communities of color. These projects bring critical recreation space, cooling and habitat to historically under-resourced communities throughout Los Angeles County."*

CALIFORNIA COUNCIL OF LAND TRUSTS

Project Examples cont.

"The Southern Sierra Miwuk Nation Rematriation project would return ancestral lands via this partnership project with Sierra Foothill Conservancy. Funding is needed for project development in order to realize this acquisition project."

CALIFORNIA COUNCIL OF LAND TRUSTS

A 30x30 Project Pipeline

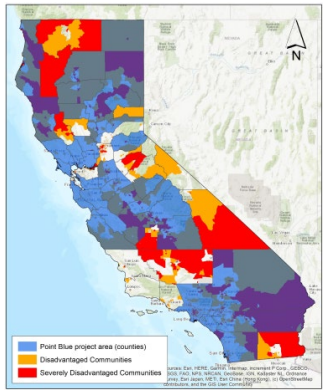
Technical Assistance

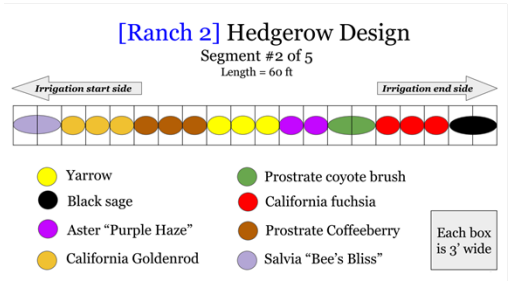
+ Small Grants
+ Ongoing support

1M Acre Pipeline

CALIFORNIA COUNCIL OF LAND TRUSTS

Photo: Tunitas Creek Beach
Photo Credit: Teddy Miller, POST





Block Grant Update

Building Wildlife-friendly Resilience and Equity in California's Working Landscapes

- Recipient: Point Blue Conservation Science
- Amount: $26,000,000

Project Milestone:	Status:
Restore 5 mi riparian habitat	~ 2.2 miles of riparian habitat in progress to be restored (additional 16 riparian projects currently pending)
Restore 40,000 ac of upland habitat	~114,148 acres of working lands projected to benefit from restoration practices based on estimated operation size
Implement projects in a minimum of 35 counties across California	Projects are under implementation or pending in 21 different counties
Implement at least 50% of restoration projects in disadvantaged communities	25 (54%) of projects are located in DAC or a SDAC communities
Partner with 200 land managers	Currently partnering with 53 land managers
Engage a minimum of 8,000 volunteers in restoration implementation	~2,970 volunteers will be engaged from current projects, with an additional 4 projects pending

Climate Smart Meadow Restoration

- Recipient: Point Blue Conservation Science
- Amount: $24,731,000

Sierra Meadows Partnership goals: Restore 6,000 acres, plan for 4,000 acres, and identify the next 2,500 priority acres for meadow restoration

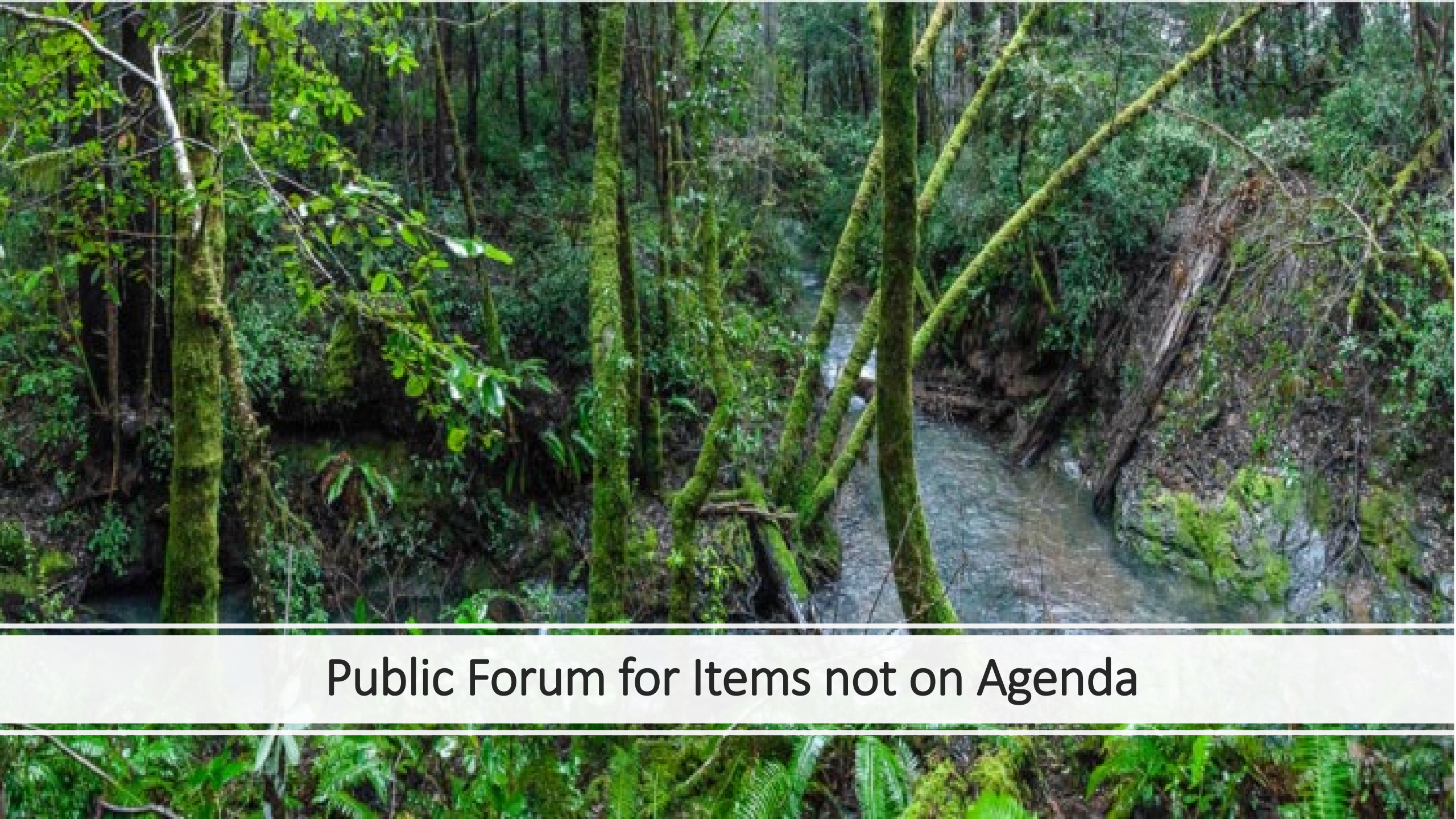
Project Milestone:	Status:
Acres of restoration implementation funded:	3,743 ($8.39 million obligated)
Acres of restoration planning funded:	2,082 ($3.02 million obligated)
Acres of prioritization & meadow science/technical assistance funded:	$1.89 million obligated

Climate Resilience Through Habitat Restoration

- Recipient: California Association of Resource Conservation Districts

Project Milestone:	Status:
Monarch Pollinator Habitat:	
30 monarch/pollinator habitat restoration projects on working lands	27 RCDs working on pollinator projects; 22 near or at implementation stage
25 monarch/pollinator habitat restoration projects on public lands	26 RCDs engaged; 22 preparing to implement projects
Improve at least 5 monarch/pollinator overwintering sites on public lands or private property	5 RCDs working on this habitat category, partnering with Xerces Society, preparing for implementation projects
Habitat Restoration:	
19 wildlife habitat restoration projects on public and private lands	18 RCDs engaged and completing technical assistance, outreach, and permitting; preparing to implement
Working Lands:	
Implement carbon farm plans on at least 40 sites	17 RCDs working on CFPs (technical assistance/outreach); 11 are preparing to implement projects
Develop additional carbon farm plans and implement additional projects as opportunities arise	Outreach is underway to expand CFP development through the grant term

Delegation of Authority - Augmentation Policy



Public Forum for Items not on Agenda

Stay Safe and Healthy, Enjoy the Rest of Your Day!
Next Board Meeting, May 23, 2024