County of Santa Cruz

Health Services Agency - Environmental Health

Fish and Wildlife Advisory Commission

(831) 454-2022 TDD/TTY - Call 711 http://www.scceh.org

AGENDA

November 6, 2025, 6:30 PM

Agenda Item #	Start Time	End Time	Description
1 2 3 4	6:30	6:40	Call to Order Roll Call Approval of Consent Items: • September Meeting Minutes Public Comment for Items Not on The Agenda
5	6:40	7:30	Presentations by Public Grant Program Applicants
6	7:30	8:00	Presentation on the County Strategic Plan
7	8:00	8:15	Approval of Zone 0 Letter to BOS
8	8:15	8:30	Discussion of Western Pond Turtle Endangered Species Listing
9	8:15	8:30	Staff Reports Commissioner Reports and Announcements
10		8:30	Adjourn

Public Comment

None

Items of Interest:

Alaska officials impose ban on two kinds of invasive berry-producing trees | Alaska Beacon

Deadly bacteria threatening marine animals along Santa Cruz County's coast - Lookout Santa Cruz

CDFW Releases 2025 State Wildlife Action Plan

California to Counter Potential Federal ESA Withdrawal — Environmental Science Associates

The County of Santa Cruz does not discriminate on the basis of disability, and no person shall, by reason of a disability, be denied the benefits of its services, programs, or activities. This online meeting is available to anyone with a telephone. If you are a person with a disability and require special assistance in order to participate in the meeting, please contact Sean Abbey at (831) 454-2386 or TDD number (454-2123) at least 72 hours in advance of the meeting in order to make arrangements. Persons with disabilities may request a copy of the agenda in an alternative format. As a courtesy to those affected, please attend the meeting smoke and scent free.

Commissioner and Public Participation Information

Commissioners meet in person at the **Solarium Conference Room, 1060 Emeline Avenue**. Members of the public can join in person but are encouraged to join virtually using the link below.
PLEASE NOTE: The meeting room is on the second floor, above the Water Quality Lab entrance. The door must remain locked after hours, but staff will be able to provide access to all attendees as they arrive.

Microsoft Teams Need help?
Join the meeting now
Meeting ID: 263 985 117 079 5
Passcode: xL74Ne63

Click the "Click here to join the meeting" link above. If you are asked to join Teams with an application, click on "No thanks" and open in the browser. You should not need to download the application to join the meeting.

Please join the meeting a few minutes BEFORE 6:30 pm so that we can start at 6:30 pm. Staff will open the video conference at 6:25 pm. Cameras are optional for members of the public.

If you have questions, contact Sean Abbey at sean.abbey@santacruzcountyca.gov.

Meeting Roles and Rules:
Jenni Gomez, Chair, will lead the meeting. Chair Gomez will announce each agenda item, identify who will be leading an item and introduce discussion and public comment periods.
Sean Abbey, staff, will assist with roll call, note taking, and tracking who wants to speak. Please allow staff to make notes about any decisions. Sean will monitor email during the meeting.
There will be a public comment period for each item and the Chair will invite the public to participate at the appropriate time.

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Meeting Minutes
September 4, 2025

1. **CALL TO ORDER** – 6:32 pm
2. **ROLL CALL**

District	Commissioner	Status	Commissioner	Status
I	Chris Berry	E	Kevin Butler	P
II	Brian Woodward	P	David Somerton	P
III	Liz Alter	A	Jon Jankovitz	E
IV	Brooke Sampson	P	Daniela Suarez	E
V	Jenni Gomez	P	Joanne Brown	P

P = Present R = Remote E = Excused A = Absent

3. **APPROVAL OF MINUTES:**
   - **Motion to Approve Minutes:** Somerton, **Second**: Jankovitz,
   - **All Ayes:** Minutes approved

4. **PUBLIC COMMENTS:**
   - **Steve Kennedy**: Requests an agenda item be created to be released from a promise to not request additional funding.

5. **PRESENTATION ON EXPANSION OF LOW FLOW CLOSURE ORDINANCE:**
   Fisheries Biologist for CDFW, Sean Cochran, presented proposed changes to Low Flow fishing closures. In addition to language clean-up in the ordinance, the proposal would add Aptos and Soquel Creek to the closure criteria for San Lorenzo River. Available data indicates that these three water bodies are highly correlated and that 40 cubic feet per second (CFS) at San Lorenzo would indicate passage challenges exist in Aptos and Soquel Creek. This is Intended to be protective of steelhead which can be stranded by low flows and unable to escape anglers. This change would likely result in a 38% decrease in the number of fishing days in the season. The changes are to be reviewed by the Fish and Game Commission in Fall with approval in 2026.

6. **DISCUSSION OF PROPOSED CHANGES TO WILDFIRE HARDENING STANDARDS:**
Commissioners reviewed materials presented by the LA Audubon Society on Defensible Space, Zone Zero, and the New Fire Hazard Severity Zones. Commissioners had significant concerns about indiscriminate removal of plants in the Zone Zero (0-5 feet) space, particularly in the more populated areas like downtown Boulder Creek. Commissioners voted to create a sub-committee (Gomez, Brown, and Sampson) to write a letter notifying the Board of the coming change and encourage engagement in the drafting of any local variations, as allowed in proposed rulemaking. The letter will be presented at the November meeting for approval.
   - **Motion to create sub-committee:** Brown, **Second**: Sampson,
   - **All Ayes:** Sub-committee creation approved

7. **PUBLIC GRANTS PROGRAM APPROVALS:**
Commissioners reviewed the past grant reports, grant budget for this fiscal year, and the Request for Proposals (RFP) for the upcoming grant cycle. Commissioners requested that staff send a thank you to the past applicants for their excellent work. The commissioners approved the RFP for release, with Habitat Restoration made the Work Plan Goal for this year. Staff will investigate possibility of issuing a press release on the opening of the grant window.
   - **Motion to approve RFP:** Woodward, **Second**: Somerton,
   - **All Ayes:** RFP approved

8. **APPROVE 2025 WORKPLAN:**
Commissioners reviewed the 2025 Workplan and had no significant changes required.
   - **Motion to Approve 2025 Workplan:** Sampson, **Second**: Woodward,
   - **All Ayes:** 2025 Workplan approved

9. **STAFF AND COMMISSIONER REPORTS AND ANNOUNCEMENTS:**
   - **Staff Reports:**
     - CDI contacted staff about the STO update recommendations, which was forwarded to them by District 2 supervisor.
     - The Well Ordinance Update has gone into effect, which sets higher standards for new wells in the vicinity of fish bearing streams.
     - There are upcoming Board of Supervisor agenda items that relate to our workplan items.
       (1) A report on the Boulder Creek Water Quality and Recovery Project at the October 21st meeting
       (2) An update on the implementation of the Emergency Watershed Protection (EWP) Program on November 18th
       (3) An update on Measure Q implementation on November 18th.

- **Commissioner Reports:**
  - **Com Sampson:** The Measure Q Citizen Oversight Advisory Board meet on September 3rd to discuss the 5-Year Vision Plan. In response to the results of a public survey, the funding would be focused on 3 priority areas:
    (1) Water Resources Management,
    (2) Wildfire Risk Reduction and Forest Health,
    (3)Parks, Recreation and Public Access Equity.
  - **Com Woodward:** An invasive beetle called Shothole Borer is spreading in the Felton/Henry Cowell area. The beetle was recently found in Paradise Park and could be significant issue for trees in urban spaces in Santa Cruz.

10. ADJOURN. **Motion to Adjourn:** Somerton, **Second:** Sampson
All Aye: meeting adjourned at 8:32 pm.

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Health Services Agency ♦ Environmental Health

Fish and Wildlife Advisory Commission

701 Ocean Street, Room 312, Santa Cruz, CA 95060
(831) 454-3154 TDD/TTY -Call 711 www.scceh.com
EnvironmentalHealth@santacruzcounty.us

GRANT INFORMATION**: PROPOSAL**
*This information **will** be included in public documents*

Project Name: Mobile Whale Skull Display for Education Date: 10/14/25

Applicant name or Organization: Marine Life Studies

Project Description:

We will create a mobile whale skull and marine mammal exhibit to expand marine education and wildlife awareness across Santa Cruz County and beyond. Featuring a mounted minke whale skull, mandibles, and other specimens, the exhibit will be displayed on a custom-built trailer with plexiglass windows, allowing it to travel to schools and community events.
While funding for the trailer is secured, support is needed for displays and educational signage that share information about marine wildlife, watersheds, and vulnerable species. This exhibit brings marine science directly to inland and underserved communities, connecting people of all ages with the wildlife and watersheds that define our region—fostering appreciation and stewardship of the Monterey Bay National Marine Sanctuary.

Funding Requested	$4,019

ITEMIZED BUDGET ITEMS	Requested Funds	Matching Funds	Total Amount
Custom metal stand and platform for authentic minke whale skull and mandibles	$2,000	$1,000	$3,000
Educational signage for the custom built trailer	$2,019	$1,000	$3,019
TOTAL AMOUNTS	$4,019		

Each item description should be sufficient to clearly define the full item. In addition to funds being requested, note any matching funds committed to the proposed project.

For each section, provide a brief written response.

Background of the issue being addressed

This mobile exhibit transforms marine science into an engaging, hands-on experience that connects people directly to ocean life. Featuring authentic specimens like a minke whale skull and jawbones, it travels to schools, community centers, and public events, giving participants a rare, up-close perspective of whales and their environment.
By making marine education mobile and inclusive, the exhibit removes barriers for inland and underserved communities, fostering curiosity, empathy, and stewardship. Interactive visuals illustrate how rivers, wetlands, and riparian habitats influence ocean health—showing how pollution, sediment, and nutrients flow from land to sea.
As threats like entanglement, ship strikes, and climate change grow, education is key to conservation.

Project Goals

Project Goals and Objectives
1. Increase Public Awareness and Education
Bring marine science to communities by showcasing fin whales and other species, highlighting their biology, behavior, and conservation needs.
2. Promote Marine and Watershed Conservation
Interactive displays reveal how land-based activities affect ocean health, illustrating the land-to-sea connection through models of rivers, creeks, and wetlands. Visitors learn about threats like entanglement, pollution, and habitat loss.
3. Support Local Conservation Efforts
Partner with schools, environmental groups, and community organizations to connect visitors with local research, whale rescue, and restoration projects.
4. Create Hands-On Learning with Lasting Impact
The mobile exhibit provides immersive experiences that inspire stewardship and tangible actions—reducing waste, restoring habitats, and protecting native species

Project Logistics: how will the project be completed?

Approach:The mobile whale skull exhibit combines conservation education and community engagement through an interactive traveling display. The centerpiece—a juvenile minke whale skull/mandibles—will be mounted in a custom trailer with protective plexiglass, allowing safe transport to schools and public events.

Implementation Stages:
Fabrication: Design and fabricate mount for displaying skull and other specimens
Education Development: Create interpretive panels, QR-linked videos, and classroom kits illustrating whale ecology and land-to-sea connection.
Outreach: Launch at Whalefest Monterey, the Migration Festival, and Santa Cruz school programs, rotating across the region year-round.

The exhibit delivers lasting impact by bringing marine science to diverse audiences while highlighting how watershed health sustains ocean ecosystems. Cost-effective and durable, it will serve for years as a mobile learning asset promoting stewardship of Central Coast habitats and wildlife.

Project Completion Timeline

Winter–Spring 2026: Fabricate exhibit. Summer 2026: Exhibit Complete. Fall 2026 - Continued Outreach

Applicants Background.

MLS is a nonprofit dedicated to protecting marine wildlife through research, education, and whale rescue. Our mission is to inspire and empower the public to take action in preserving marine life and habitats for future generations, with a focus on the Monterey Bay National Marine Sanctuary.

We co-founded and lead the Whale Entanglement Team (WET)®, responding to whales caught in fishing gear and collaborating with NOAA and partners to protect endangered species like humpbacks and blues.

Our federally permitted marine mammal research and outreach programs—through events like Whalefest Monterey, the Migration Festival, and classroom presentations—foster public understanding, stewardship, and appreciation for the ocean and its wildlife.

Mobile Whale Skull Display

BENEFIT GIFT SHOP

Dive into a treasure trove of marine themed gifts. We showcase local artists to highlight and promote their talent. All proceeds help support our programs.

CONFERENCE CENTER

Host your next special presentation, meeting, community gathering, or celebration at this unique venue. We will be hosting a wide variety of scientific presentations.

Small Room - 202 sqft
Large Room - 1,032 sqft

EXPLORATORIUM

COMING SOON!

The Exploratorium will allow visitors to immerse themselves in the world of marine wildlife. You will be able to see and touch real specimens, learn about whales and dolphins, and stay up to date with current research. It will feature hands-on activities, exhibits, and informational displays about whales and other marine wildlife.

8142 Moss Landing Rd., Moss Landing, CA 95039

If you or someone you know is interested in sponsoring our space, please reach out!
We'd be happy to offer a tour of the facility.
Thank you for your support!

REPORT MARINE MAMMALS IN DISTRESS
24 hour Toll Free Hotline
877-SOS-WHALe (767-9425)
or hail the US Coast Guard on VHF CH-16

DONATE

Marine Life Studies is a 501(c)(3) nonprofit organization. All donations and gifts are tax deductible within the scope of current IRS rules. Please consider making a much appreciated donation to directly support our research, education and whale rescue programs. Over 90% of all donations go directly to our projects.

If you can't give, but still want to support our cause, please share our work with your friends, family, and coworkers. Thank you in advance!

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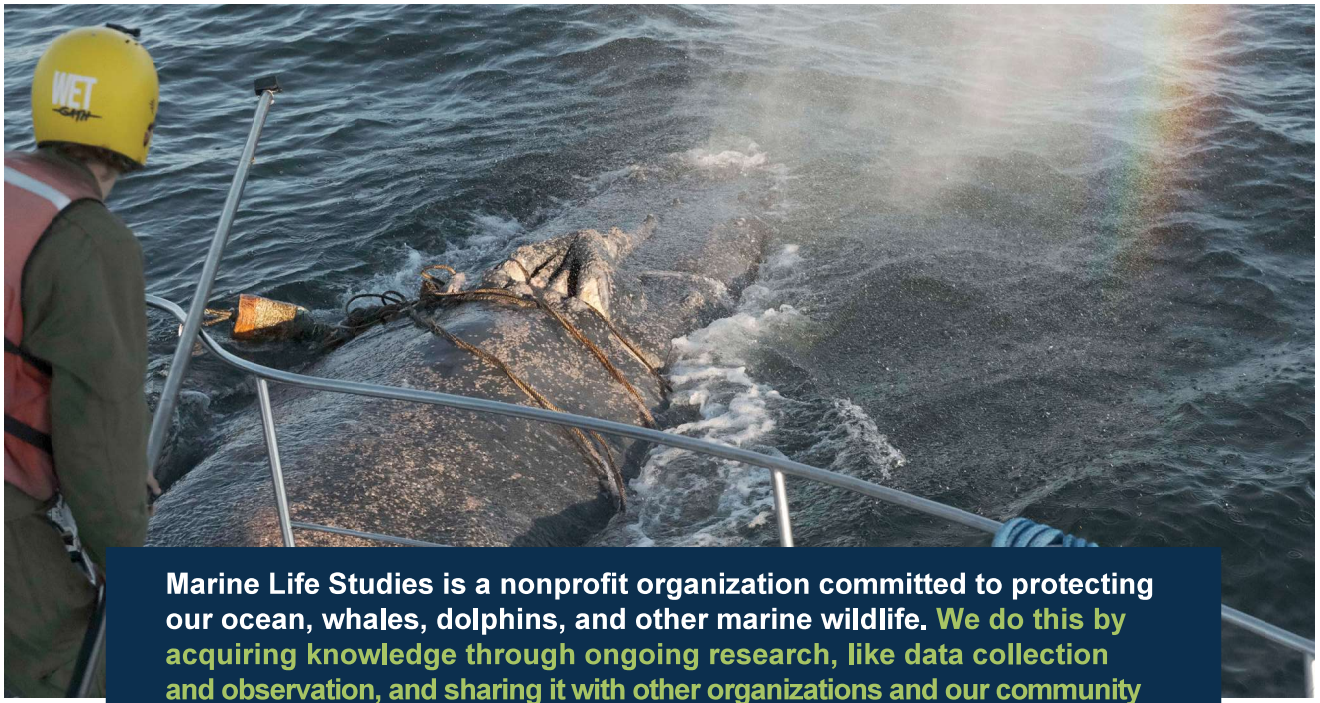
Marine Life Studies
P.O. Box 163, Moss Landing, CA 95039
Phone: 831-901-3833
info@marinelifestudies.org

MARINE LIFE STUDIES

RESEARCH, EDUCATION AND WHALE RESCUE

Inspiring the public to protect the ocean, whales, and dolphins

MarineLifeStudies.org



Marine Life Studies is a nonprofit organization committed to protecting our ocean, whales, dolphins, and other marine wildlife. We do this by acquiring knowledge through ongoing research, like data collection and observation, and sharing it with other organizations and our community so we can inspire the next generation of passionate conservationists.

RESEARCH

We record meticulous data which goes into an extensive database to track behavioral and migratory habits of marine life in the Monterey Bay National Marine Sanctuary. We share this data with the National Oceanic and Atmospheric Administration, other researchers, conservation groups, and students to expand our knowledge base and provide the baseline necessary to implement effective conservation strategies and educational programs.

EDUCATION

Our Ocean Literacy Education Programs encourage the public, especially children, to learn about, care for and protect our ocean and the marine life that depend on it. Our Research Scientist Program teaches skills needed to be a marine researcher while our community programs provide education on cetaceans, whale entanglements, marine debris and pollution. Our *Take it to the Streets*™ program encourages community cleanup in inland areas to eliminate pollution before reaching the ocean through storm drains and local watersheds.

WHALE RESCUE

We established the Whale Entanglement Team (WET)® to quickly respond when a whale becomes entangled in fishing gear or marine debris. We collect extensive data during entanglement responses that is critical to facilitate new practices, tools, and gear to mitigate future entanglements. In addition to responding to active entanglements, we developed a proactive prevention program to remove lost or abandoned fishing gear from the Monterey Bay National Marine Sanctuary. This project will reduce the likelihood of potential entanglements of whales, dolphins, sea turtles, sharks, and other marine wildlife, many of which are on the Endangered Species List.

WHALE ENTANGLEMENTS

The local and global economy has benefited greatly from the fishing industry in the last century. The fallout of this booming business are the creatures of the sea: whales, sea turtles, and dolphins who, during their journeys in the sea, find themselves tangled in fisheries like discarded nets and lines. These animals get entangled and have no real way of freeing themselves, often dragging the gear with them for miles. Sometimes the gear becomes anchored to the sea floor, impeding the whale from swimming and feeding. This is basically a death sentence for marine life, but that's where we come in.

We established the Whale Entanglement Team (WET)®, a group of trained individuals to rescue whales from a slow, painful death due to life-threatening entanglements. Our Whale Rescue Research Vessel, Current'Sea, is fully equipped with all the necessary tools for a complete disentanglement response. This "whale disentanglement ambulance" has been critical to our success in saving whales every year.

WhaleEntanglementTeam.org

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GRANT INFORMATION: **PROPOSAL**
*This information **will** be included in public documents*

Project Name: Resolving Human-Wildlife Conflicts in Santa Cruz County Date: 10/15/25

Applicant name or Organization: International Bird Rescue

Project Description:

We respectfully request renewed support for a small portion of the costs of necessary, clinic and medical supplies, and veterinary care costs, to provide temporary emergency treatment for ~300 native, wild, aquatic birds (many that live in riparian habitats) rescued from Santa Cruz County and transferred to us by local organizations for care.

Funding Requested	7500

ITEMIZED BUDGET ITEMS	Requested Funds	Matching Funds	Total Amount
Veterinary & rehabiltaton staff salaries/wages	4500	79,974	84,474
Clinical and Medical Supplies, incl. food	1000	13,914	14,914
Utilities for stable clinic & rehab environment	2000	18,938	20,938
Depreciation and insurance		10,099	10,099
Travel and transit		3809	3809
Facilities, vehicles, and equipment		6603	6603
Outside services (lab work), general expenses		268	268
TOTAL AMOUNTS	7500	133,605	141,105

Each item description should be sufficient to clearly define the full item. In addition to funds being requested, note any matching funds committed to the proposed project.

For each section, provide a brief written response.

Background of the issue being addressed

Experts agree that birds are in a global crisis of survival. Threats are mostly human-caused, including habitat disruption/loss, starvation, cruelty, pollution (incl. plastics, oil, chemicals), fishing, and deadly Highly Pathogenic Avian Influenza (Bird Flu) virus. Our area is important to hundreds of species of aquatic birds because of our central location on the Pacific Flyway migratory route. Negative impacts here, like repeated Brown Pelican crises, have concentrated effects in regional and global biodiversity.

Project Goals

1: Address multiple elements of CA Fish and Game Code. 2: Provide residents and wildlife with immediate, effective, ethical, and free-to-the-public solutions to the problem of native aquatic birds harmed by human impacts. 3: Maintain peak readiness to respond to unpredictable-yet-inevitable crises, such as the 2024 & 2025 Pelican Crises. 4: Act as the regional "referral hospital," annually treating 90+ species and ~1,750 cases (~300 from Santa Cruz County) that are beyond the capacity or skills of others.

Project Logistics: how will the project be completed?

We efficiently and effectively rescue so many wild birds because of our world-class protocols, developed through 54 years of direct, hands-on, professional experience:
1. Rescue: transport by volunteers, citizens, and other rescue agencies to our Center
2. Triage Assessment: by professional vet staff (vital signs, blood work, treatment plan)
3. Medical Intervention: after the first 24 hrs in care so that initial capture trauma abates
4. Recovery: treated birds go to recovery area where their progress is closely monitored
5. Rehabilitation: birds heal wounds & gain strength in predator-proof aviary enclosures
6. Release: back into the wild at species-appropriate locations

Project Completion Timeline

This project is annual and ongoing. Our fiscal year begins October 1 and runs through September 30.

Applicants Background.

We are a regional and global conservation organization, founded in 1971 right here in the Bay Area in response to a massive oil spill that covered 50 miles of coastline on all sides of San Francisco Bay, effecting between 7,000 and 15,000 birds. Since then, we have become a global leader in addressing man-made disasters affecting marine wildlife, such as oil spills and debris, and have pioneered life-saving techniques to address ongoing, daily, human impacts on aquatic birds. See attached for more detail.

Supplemental Information for the
Santa Cruz County Fish and Wildlife Advisory Commission:
Resolving Human-Wildlife Conflicts in Santa Cruz County

1. Funding Request and Project Description

International Bird Rescue respectfully requests renewed support of $7,500 from the Santa Cruz County Fish and Wildlife Advisory Commission. The goals of this project are to:

1. Addresses multiple elements of CA Fish and Game Code (13103 b, c, and i)
2. Provide residents and wildlife with immediate, effective, ethical, and free-to-the-public solutions to the problem of native aquatic birds harmed by human impacts.
3. Maintain peak readiness to respond to unpredictable-yet-inevitable crises, such as the 2024 and 2025 Brown Pelican Crises.
4. Act as the regional "referral hospital," annually treating 90+ species and ~1,750 cases (~300 from Santa Cruz County) that are beyond the capacity or skills of others.

As the "referral hospital" for over a dozen Northern California Counties, we treat the most challenging cases that are beyond the capacity or skills of other regional wildlife centers and clinics, and receive hundreds of birds from other local rescues and rehabilitation centers and from the general public for treatment at our Wildlife Center, including from our trusted partners at Native Animal Rescue of Santa Cruz County ***as described in these news stories from*** **Lookout Santa Cruz and KQED Radio*:***

https://lookout.co/young-pelicans-are-turning-up-starving-in-santa-cruz-county-scientists-are-working-to-understand-why/story

https://www.kqed.org/science/1996948/californias-pelicans-are-once-again-starving-this-year-its-the-babies

Our San Francisco Bay-Delta Wildlife Center admits ~1,750 local, native aquatic birds annually, and releases them back into the wild once they are successfully rehabilitated. We typically received ~300 birds annually from Santa Cruz County (**second only to Los Angeles County**). Locations of rescue include Santa Cruz, Aptos, Capitola, Watsonville, Pajaro Dunes, Davenport, Ben Lomond, and Soquel.

We treat over 90 different species of aquatic birds such as Common Murres, Snowy and Great Egrets, Green and Great Blue Herons, Brown Pelicans, and **endangered and near-threatened species** such as Western Snowy Plovers. Common causes of injury include orphaned, starvation from loss of habitat, fishing hook and line entanglements, and blunt force traumas from human cruelty or hit by vehicles.

The patients we treat are critical to riparian conservation. They are the living, natural, native resources that habitat conservation and other activities seeks to support. Our scientific data provides strong evidence that the patients that we successfully rehabilitate lead lives that are long and productive, participating in normal species behavior such as producing and rearing offspring, and propagating future generations. These outcomes are important components of a balanced ecosystem.

2. Meeting the Requirements of Section 13103 of the Fish & Game Code

Our work addresses **multiple elements** of California Fish and Wildlife Code Section 13103. **The proposed project is a direct expression of 13103(b): "Temporary emergency treatment and care of injured or orphaned wildlife."** The individual animals we return to the wild propagate future generations. When we work with Animal Control Officers and Game Wardens, we also address element **13103(c):** "Temporary treatment and care of wildlife confiscated by the department as evidence."

Our Avian Rehabilitation and Research, and our Wildlife Emergency Preparedness and Response programs protect and restore local wildlife populations, especially when human impact has negatively affected those populations and individual animals. Research leads to innovations and new standards in wild animal care (**13103(i)**). In addition, our public education and outreach efforts reach over 100,000 people annually through numerous social media channels and real-time events (**13103(a)**).

3. Project Need

Birds are sensitive indicators of changes in our environment, and their health is failing. Experts around the world agree that aquatic birds are in crisis:

- *"Since the 1970's, [North America] has lost **3 billion birds**" (Science, 2019)*
- *"H5N1 high pathogenicity avian influenza (also known as HPAI or "Bird Flu") is currently causing **unparalleled mortality of wild birds** and mammals worldwide with threats to population levels for some species already under multiple anthropogenic [human-caused] pressures. [The current and evolving variants are] expected to continue to spread and cause further negative conservation impacts"* (The United Nations-led *Scientific Task Force on Avian Influenza and Wild Birds*, 2023).

Most negative impacts are human-caused; they include injury from fishing (hooks, nets, and lines), human cruelty, illegal shootings, habitat disruption and loss, starvation, pollution (including plastics, chemicals, and oil spills), and **climate change induced hazards such as drought, algae bloom toxicity, and the accelerated spread of infectious diseases.**

California is especially important to hundreds of species of aquatic birds (many that are endangered or threatened) because of its central location on the Pacific Flyway: a major North-South migratory route along the coasts of North and South America. Immediate impact here has concentrated, long-term effects on the global wildlife population.

Despite these challenges, intervention makes a difference. It is why International Bird Rescue is a first-line responder in the crisis facing birds at the local, regional, and international level.

4. Organizational Qualifications and Mission

Most people know us from our decades of responding to the world's worst oil spills: Exxon Valdez in 1989, Deepwater Horizon in the Gulf of Mexico in 2010, and the Treasure Spill in South Africa in 2000 (which affected over 20,000 lives). **We also provide daily rescue and rehabilitation** to birds harmed by human impact, and have given second chances to over 170,000 avian lives. Today, we research best practices at our crisis response hospitals and share them worldwide, **and have pioneered life-saving techniques to address ongoing human impacts on aquatic birds.**

Our mission is to inspire people to act towards balance with the natural world by rescuing waterbirds in crisis. We dream of a world in which each person, every day takes action. Our goals are to:

A) Minimize and mitigate human and industrial impact on wildlife
B) Conserve local, regional, and global biological diversity
C) Inspire environmental stewardship

We are a founding partner in the State of California's Oiled Wildlife Care Network (OWCN), as well as a member of the Global Oiled Wildlife Response System (GOWRS), a consortium of leading experts trying to solve the challenges of oiled wildlife. Other partners include local, state, and federal Fish and Wildlife departments, multiple Audubon Society chapters, local Animal Control agencies, and dozens of fellow rescue and rehabilitation partners.

5. Project Budget and Funding

Our $7,500 request is based on Santa Cruz County community demand for our services, and the need for financial support to keep our work sustainable. Commission funds will partially offset the cost of service we provide *for free* to the people and wildlife of the County, and represents a reasonable and very modest portion of the project's annual costs of over $140,000 in FY26, which are matched by others. We have successfully managed prior grants from the Commission, and completed all reporting.

We have strict financial controls that ensure that any invoice submitted to one funding agency is not submitted to any other agency. Our financial records are audited annually, and we consistently achieve "clean" audit opinions. While it is difficult to say in advance during the granting process with exact certainty what each future invoice will contain, examples of some typical food and supplies (and their costs) include:

Enroquin tablets, 68mg x 250: $247.55/bottle
Clavacillin tablets (Clavamox), 62.5mg x 210: $64.52/bottle
Nitrile exam gloves, 100 count: $6.43/box
Meloxidyl, 1.5mg/ml x 200ml: $105.02/bottle
Clindamycin, 300mg quad x 100 count: $43.50/bottle
Peruvian Smelt, 30lbs/case x $2.65/lb x 42 cases: $3339.00
IQF Pacific Herring, 16kg(35.3lb)/case x $1.56/lb x 42 cases: $2312.86

Since 2019, Fish and Game commissions in the counties of Alameda, Contra Costa, Napa, Solano, Sonoma, Marin, Monterey, Santa Clara, Los Angeles, San Diego, and Santa Barbara provided modest financial support of between $2,500 and $20,720 annually to help ensure that our ability to be an effective, efficient, regional resource is sustainable. Without such support, we will be unable to continue to conserve vulnerable, natural aquatic/riparian resources, and unable to maintain our readiness to respond to unpredictable-yet-sadly-inevitable environmental crises like oil spills and species crashes.

6. Permits Status

We are one of the few organizations that possess the federal permit to band birds. Throughout a bird's time with us, from their initial triage assessment to their release, we record data and track their progress using RaptorMed software. In addition, treated birds are banded so that other scientists, volunteers, and enthusiasts can track them in the wild, and in case a treated bird returns to us for further care. Data from the banding effort, as well as our internal data, are analyzed by our veterinary care team as part of ongoing research, and the results freely shared with fellow professionals and partners.

7. Contact Info

Phil Kohlmetz, Grants Coordinator	Direct: 707-704-0350	Email: grants@birdrescue.org
International Bird Rescue	Office: 707-207-0380	https://www.birdrescue.org

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GRANT INFORMATION**: PROPOSAL**
*This information **will** be included in public documents*

Project Name: Ambassador Animal Enrichment Date: 10-17-25

Applicant name or Organization: Native Animal Rescue

Project Description:

We are an organization of expert rehabilitators who receive orphaned, sick and/or injured wildlife in our facility from concerned citizens. We care for wildlife with the goal of releasing healthy animals back into the wild. Over the past year we have expanded our educational program to more schools and organizations. We are in the process of adding an educational animal, a Kestrel, to our program who will require a separate structure from our raptors in rehabilitation, additional enrichment and require on-going veternary care, food and equipment.

Funding Requested	$3000.00

ITEMIZED BUDGET ITEMS	Requested Funds	Matching Funds	Total Amount
Falconry Gloves x3 (Gauntlets)	$305	$250	$555
Transport Carrier	$60	$221	$281
Bowperch & Scale	$270	$172	$442
Hood	$0	$82	$82
Anklets, Jesses, grommets, etc	$175	$225	$400
One Year of Food	$740	$400	$1140
Housing (Aviary, Nest Box, Etc)	$1200	$500	$1700
Enrichment (rope ladder, shredding materials,	$250	$126	$376
TOTAL AMOUNTS	$3000.00	$1976	$4976

Each item description should be sufficient to clearly define the full item. In addition to funds being requested, note any matching funds committed to the proposed project.

For each section, provide a brief written response.

Background of the issue being addressed

Over the last year Native Animal Rescue (NAR) has greatly expanded our education program. NAR now presents to all ages of children through school presentations, summer camps, KOA campground events and tabling at multiple community gatherings. Adults are also reached in our presentations through women's groups, library presentations, community tabling and presenting at events for local private organizations.
A very important piece of our education is having an ambassador animal that provides an up close and personal encouter to help spark one's desire to conserve our wildlife and the habitat we share with them.
Ambassador animals require life-long housing, care and food which is an extra financial burden for the organization. We provide these presenations at no charge to the community and therfor this is an additional expense on the budget.

Project Goals

NAR hopes to ignite more passion for wildlife and habitat conservation with an ambassador animal which will leave lasting impressions through presentations throughout the county. Through use of this grant we could ensure proper and continued care for the Kestrel. Although they are not endangered, the American Kestrel population is declining in North America and a cause has not been determined. We hope to bring awareness of this issue and encourage actions which promote conservation of the species and it's habitat.

Project Logistics: how will the project be completed?

We received a Kestrel this year who had sustained an injury to her right wing. She is otherwise healthy but unable to fly and be released back into the wild. She has been examined by our veternarian and deemed to be a good candidate for an ambassador animal. She is currently being handled by our raptor rehabilitator, training her to become handlable by others. Once permitting is complete she will visit classrooms and events across the county. She will be housed in a private aviary, away from birds which are being rehabilitated for eventual release. Daily enrichment will include time with her handler, shredding and foraging materials, rope ladders for climbing and multiple perchingperching areas.

Project Completion Timeline

June 2026 for training but care will be ongoing

Applicants Background.

Native Animal Rescue was formed in 1979 and became a 501(c)(3) in 1980. It moved to it's current location in 1993. We are the only organization licensed in Santa Cruz county by both the Federal and state of California Department of Fish & Wildlife to rehabilitate and release local wildlife. Our intake center receives animals 365 days a year from residents of the county of Santa Cruz, visitors, businesses, Animal Services, Police Departments, Lifeguards and State Parks. Our volunteers and small staff rescue animals, and receive and care for them in our center until they are ready to be released back to the wild. We also have a network of exerience volunteers who provide rehabilitation on their properties. We celebrate the successful release of every animal we care for.

County of Santa Cruz

Health Services Agency ♦ Environmental Health

Fish and Wildlife Advisory Commission

701 Ocean Street, Room 312, Santa Cruz, CA 95060
(831) 454-3154 TDD/TTY -Call 711 www.scceh.com
EnvironmentalHealth@santacruzcounty.us

GRANT INFORMATION**: PROPOSAL**
*This information **will** be included in public documents*

Project Name: Community-Driven River Health Days Date: 10/23/25

Applicant name or Organization: Coastal Watershed Council (CWC)

Project Description:

The Coastal Watershed Council (CWC) is working to benefit native fish and wildlife habitat along the lower San Lorenzo River in Santa Cruz through the removal of highly invasive species and seeding of biodiverse native plants. To accomplish this, CWC uses a community-driven approach engaging diverse groups such as school-aged students from local elementary schools, people experiencing homelessness and more.

Funding Requested	$5,000

ITEMIZED BUDGET ITEMS	Requested Funds	Matching Funds	Total Amount
Personnel (Project management, coordination, volunteer recruitment and field instruction)	$4,500	$56,811	$61,311
Materials & Supplies (tools, gloves, mulch, volunteer snacks, etc.)	$500	$7,472	$7,972
Contracted services (native seed collection, hauling, security, etc.)	$0	$14,010	$14,010
CWC actively pursues diverse funding sources to support this impactful program. Committed funds			
for the 2025-26 period to date include $50,000 from the CA Coastal Commission's Whale Tail grant program			
but a significant gap remains that the County Fish and Wildlife Advisory Commission can help support!			
TOTAL AMOUNTS	$5,000	$78,293	$83,293

Each item description should be sufficient to clearly define the full item. In addition to funds being requested, note any matching funds committed to the proposed project.

For each section, provide a brief written response.

Background of the issue being addressed

Starting from spring-fed headwaters in the Santa Cruz Mountains, the 29-mile long San Lorenzo River drains a 138-square mile watershed to the Monterey Bay National Marine Sanctuary. In its final 2.5-mile stretch, the river is channelized by a levee constructed in the 1950s that straightened and narrowed the river, drastically impaired the coastal estuary and left poor, compacted soils along its banks where invasive species have thrived. The loss of native riparian habitat compounded with urban challenges including nonpoint source pollution and the impacts of people experiencing homelessness living along the river corridor today challenge the riparian ecosystem in this watershed.

Project Goals

In 2025-26, CWC's goal for San Lorenzo River habitat improvement include: 1) Remove over 1,000 square feet of highly invasive species (as ranked by Cal-IPC), 2) Create 10 new native seed plots to improve biodiversity, 3) engage over 200 diverse volunteers including school-aged students, people experiencing homelessness and others.

Project Logistics: how will the project be completed?

CWC partners with the City of Santa Cruz and community groups to implement "River Health Day" volunteer events. CWC's River Ecologist develops an annually approved habitat enhancement plan and recruits, educates, and trains volunteers to execute it. The program includes the engagement of diverse groups such as youth events with CWC's elementary-aged Watershed Rangers, weekly sessions engaging people experiencing homelessness (previously in partnership with the Downtown Streets Team), monthly public events on second Saturdays, and scheduled group events with community partners. Activities address seasonal ecological needs, and staff measure outcomes including invasive species removal, species seeded and debris collected.

Project Completion Timeline

While an ongoing program, the goals and budget in this proposal span from July 2025 to June 2026

Applicants Background.

CWC is a local nonprofit with a mission to preserve and protect coastal watersheds, focusing on the lower San Lorenzo River. Its 30 years of watershed protection demonstrate a strong track record of grassroots, volunteer-driven initiatives that improve water quality and habitat. For the past 10 years, CWC has led habitat enhancement activities along the lower San Lorenzo River with diverse volunteer groups, making an impact on both the river ecosystem and community awareness. Volunteers learn to identify harmful invasive species and understand why native plants matter for thriving fish and wildlife habitats throughout Santa Cruz County. Thank you to the Fish and Wildlife Advisory Commission for your past support!

County of Santa Cruz

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GRANT INFORMATION**: PROPOSAL**
*This information **will** be included in public documents*

Project Name: WOLF School Student Salamander Study Date: 10/22/2025

Applicant name or Organization: UCCR Web of Life Field (WOLF) School

Project Description:

UCCR Web of Life Field (WOLF) School has been conducting a salamander study with WOLF's participating students in partnership with Camp Monte Toyon in Aptos since 1998 that provides critical data on amphibian populations and forest health. This project has contributed to efforts to monitor long-term trends in amphibian abundance and distribution, helping identify areas where populations may be declining. By maintaining and improving survey sites and following standardized protocols, our program ensures that the data collected are scientifically robust and can inform conservation strategies for diverse forest ecosystems. Funding for this project will support updating survey materials, enhancing survey sites, and training staff to conduct these surveys with elementary aged students.

Funding Requested	$1500

ITEMIZED BUDGET ITEMS	Requested Funds	Matching Funds	Total Amount
Obtain, Cut & Replace Wooden Salamander Cover Boards	250	150	400
Buy & Place Cover Board Labeling Survey Flags for Salamander Sites	50		50
Wages (40 hour) to update survey sites & review protocols	1200		1200
Wages (4 hrs x 20 Employees) to train on protocols	0	2400	2400
TOTAL AMOUNTS	$1500	$2550	$4050

Each item description should be sufficient to clearly define the full item. In addition to funds being requested, note any matching funds committed to the proposed project.

For each section, provide a brief written response.

Background of the issue being addressed

Salamanders play an important role in redwood and mixed evergreen forests around Aptos where they help regulate soil ecosystems and nutrient cycles by feeding on small invertebrates. Because they breathe through their skin and need moist, stable habitats, salamanders are sensitive to changes in temperature, moisture, and habitat conditions making them strong indicators of forest health. Since 1998, WOLF students have monitored salamanders at Monte Toyon, teaching students about local salamanders, conservation, and stewardship, while helping track population data to identify long-term trends in salamander diversity, climate impacts, and forest health. Data collected by students is available to schools, teachers, and state and national networks to help inform conservation strategies and support healthy redwood forest ecosystems.

Project Goals

The goal of this project is to enhance our two salamander study sites located within 100 feet of Mangels Creek at Camp Monte Toyon so WOLF School students can monitor presence or absence of salamanders and data collected can be used for education and to support efforts to track amphibian populations and forest health. Aging cover boards will be replaced, protocol reviewed and updated as needed, new markers installed, and educators retrained. Students who participate in the weekly study check cover boards, collect data, and add it to past data shared with educators, schools, and the scientific community. Our goal is to update the program which aligns with Next Generation Science Standards (NGSS) and allow students to gain meaningful experiences with wildlife while actively participating in scientific research and inspiring them to become stewards and future scientists.

Project Logistics: how will the project be completed?

The project is ongoing since 1998 with data being collected weekly from September to May when students are present at WOLF School Camp Monte Toyon. The project update will be completed by lead staff reviewing the Salamander Cover Board Protocol and updating it as needed. Then new boards will be obtained, trimmed to size, replaced, and labeled with new survey flags. Staff training will be planned and delivered to 20 staff naturalist teachers to update them on changes to the protocol and to review salamander identifications, best practices for teaching students to check cover boards, safety and expectations. Data will be added ongoingly to WOLF salamander data records and attending students will begin utilizing the salamander areas just after staff are completely trained. WOLF curriculum will also be revised to include any new protocols in other salamander-related educational activities including WOLF mock town hall meeting lesson, salamander songs, and habitat games and activities.

Project Completion Timeline

Project Completion Goal is March 1, 2026.

Applicants Background.

UCCR Web of Life Field (WOLF) School is a long-standing environmental education non-profit organization dedicated to building respect, appreciation, and stewardship within the web of life. Since 1989, WOLF School has provided hands-on experiential science education to K-12th grade students, with a strong track record in delivering high-quality outdoor learning programs in the forests at Camp Monte Toyon in Aptos. WOLF also operates several other Outdoor Science School programs--Camp SEA Lab in Aptos, Camp Arroyo in Livermore, and Camp Loma Mar in Pescadero, and serves over 10,000 students and summer campers yearly at its nature-based programs. WOLF has always had a healthy fascination with amphibians and strongly prioritizes salamander education and stewardship in the Santa Cruz area.

Fish and Wildlife Grant Supplemental Information

- Salamander Protocols Example (2 of 10 Pages)
- Example Student Data Sheet
- Coverboard Data Example
- Photos

Revised Protocol for Student Conducted Salamander Monitoring in the Coastal Redwood Ecosystem

Introduction

The purpose of this protocol is to provide a standardized and rigorous methodology for student monitoring of salamander populations in redwood habitat. The target audience for this protocol is adult teachers and program coordinators, who are expected to develop site- and group-specific instructions for student workers, as well as a reference for scientists analyzing or otherwise using data collected in the course of this program.

This protocol is itself subject to adaptive revision; however, all subsequent versions should be uniquely and chronologically labeled and curated, and stability should be the overarching objective, given that the goal of the project is to allow comparison across time periods up to twenty years or beyond. Whichever version may be in use, the protocol MUST be strictly adhered to. Any accidental deviations must be logged and this information must be permanently attached to the data either wholesale or via citation within the container (i.e. a note in the Excel spreadsheet).

The protocol has two modules: Basic Survey, and Survey for Fungal Pathogens.

.Basic Survey

. Overarching Methods and Assumptions

Salamanders will be surveyed through the use of **coverboards**, a well-tested survey method that has been demonstrated to be competent in coastal California forests to provide data on occupancy of two species of woodland (=lungless) salamanders of the family Plethodontidae: *Batrachoseps attenuatus*, and *Ensatina escholtzii* [1-3]. Both species are known to be good indicators of forest condition [4].

The fundamental **unit of analysis** will be the **coverboard**. Coverboards will be grouped into **arrays** of 15 boards, and arrays will be grouped into **sites** of 4 arrays. Arrays will be the **unit of comparison** among sites.

The dependent variable will be **number of individua**ls nested within **species** within coverboard.

It is assumed, and has been confirmed by prior testing, that observer error is generally flat among boards and among workers. Therefore this protocol provides latitude for assignment of student workers in the following ways:

1. At minimum, one student may survey all boards in all arrays. More students may be assigned as they are available, in the interest of instructing a larger student base and promoting speed of survey. Other examples of student assignments are: One student per array; two students per array (observer and recorder); one student per coverboard + one recorder; two students per board (one observer, one recorder).
2. Individual students can be assigned sites, arrays or individual coverboards for more than one sampling session within season or across years. Alternatively, different students can be assigned to sites, arrays or coverboards across seasons and/or years.
3. Observers and recorders may trade off assignments.

B. Establishing sites.

Sites are established because they may potentially harbor salamanders. Salamanders may be known or suspected from the site at the time the site is identified, or else they may be expected in future as an outcome of restoration. Sites should be coastal redwood, although coastal Douglas fir, coastal oak, coastal scrub, coastal bay laurel, and/or coastal riparian can also be the dominant habitat at any particular site.

Sites should be located within a $2km^2$ area within a single jurisdiction, e.g. within a State Park, National Forest unit, private campground, or other such area. Ideally the site should be sited such that all arrays share a common aspect, watershed and elevation.

Data from sites can be used to make conclusions intrinsic to the site; to make comparisons across sites; or to assess a rangewide trend.

Salamander Cover Board Data Sheet

DATE: 12/09/21 TIME: 2:58 WEATHER: clear skies, slightly chilly

Naturalist: Yselia Cortez School: Rocketship Discovery Prep

Site: MT Playing Field ___ MT Dining Hall ___ LB ___

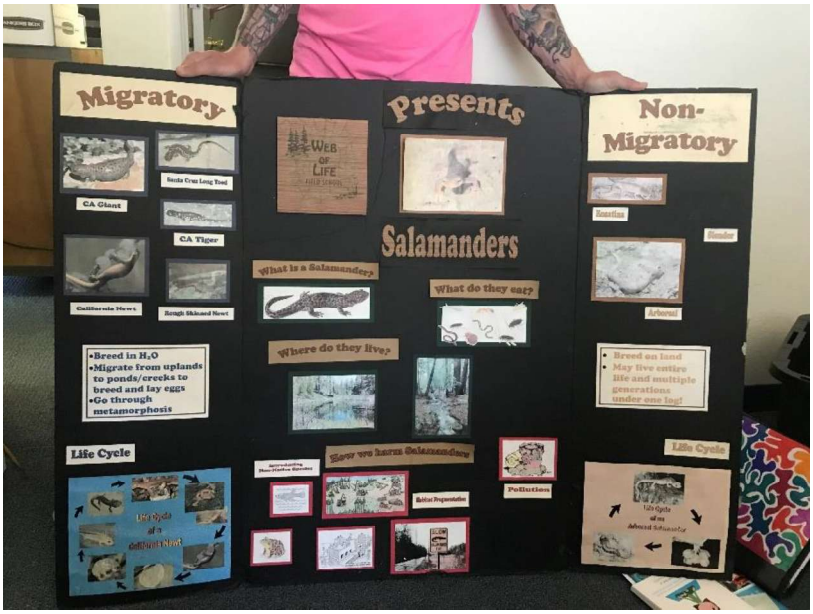
Site/ Board #	ENSATINA (Yellow Eyed Salamander)	BATRACHOSEPS (Slender Salamander)	ANEIDES (Arboreal Salamander)	DICAMPTODON (Giant Salamander)	NOTES (Other amphibians, insects, small mammals, reptiles, etc.)
FOR MULTI-BOARD STACKS: Use separate line for each "floor" of the stack. Ex: For board 35, note levels as: under topmost board = 35-3; under 2nd board down = 35-2; under 3rd board down = 35-1; on ground under 4th board down = 35-G (for "ground floor")					
17		✓			redwood needle, redwood cone, lichen
18					redwood needle, redwood cone, lichen
19					
20					cricket, redwood needle, redwood cone
21					redwood needle, twigs, dirt
22	✓				redwood needles, redwood cone, dirt
23		✓			redwood needle, redwood cone, sticks
24	✓				redwood needles, mushroom, redwood cones
25					redwood, mushrooms, lichen
26					
27					beetle, spiders, dirt
28					spider webs, beetles, moss
29					spiders, mushrooms, spider webs
30					mushroom, redwood needle, beetle
31					under tree
32	✓				redwood needles, redwood cones, dirt
33					
34					fungi, redwood cones,
35					centipede, redwood cones, redwood needles
36		✓			redwood cones, redwood needles, dirt, sticks

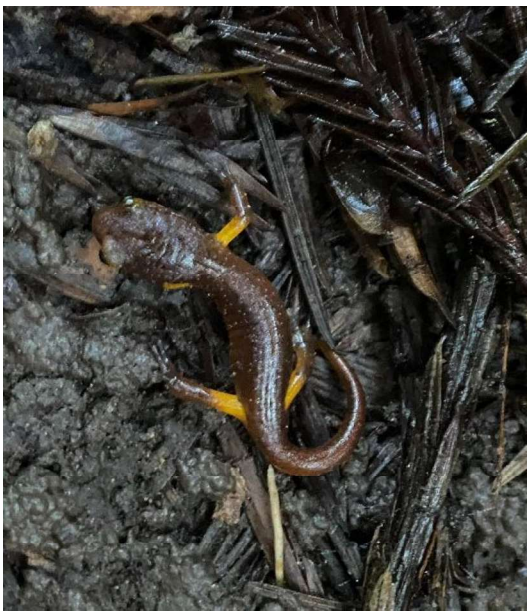
Salamander Cover Board Data Sheet (Include all findings and non-findings on this page)

Site & Board #	4/13/21	Time	Weather	ENSATINA (Yellow Eyed Salamander)	BATRACHOSEPS (Slender Salamander)	ANEIDES (Arboreal Salamander)	DICAMPTODON (Giant Salamander)	Other (Salamanders, Insects, Etc.)	Notes
DH #17	1/11/23	2:30 PM	rainy, cold	0	0	0	0	wet duff	
DH #18	1/11/23	2:30 PM	rainy, cold	0	0	0	0	wet duff	
DH #19	1/11/23	2:30 PM	rainy, cold	0	0	0	0	redwood duff	
DH #20	1/11/23	2:30 PM	rainy, cold	0	1	0	0	mushroom	
DH #21	1/11/23	2:30 PM	rainy, cold	0	0	0	0	chinese centipede	
DH #22	1/11/23	2:30 PM	rainy, cold	0	0	0	0	duff	
DH #23	1/11/23	2:30 PM	rainy, cold	0	0	0	0	centipede	
DH #24	1/11/23	2:30 PM	rainy, cold	0	0	0	0	slope w/ creek running through	
DH #25	1/11/23	2:30 PM	rainy, cold	1	1	0	0		
DH #26	1/11/23	2:30 PM	rainy, cold	0	0	0	0	tree sap	
DH #27	1/11/23	2:30 PM	rainy, cold	0	0	0	0	worm, wet	
DH #28	1/11/23	2:30 PM	rainy, cold	0	0	0	0	redwood leaves	
DH #29	1/11/23	2:30 PM	rainy, cold	0	1	0	0		
DH #30	1/11/23	2:30 PM	rainy, cold	1	0	0	0		
DH #31	1/11/23	2:30 PM	rainy, cold	0	0	0	0	redwood leaves	
DH #32	1/11/23	2:30 PM	rainy, cold	1	1	0	0	mushroom	
DH #33	1/11/23	2:30 PM	rainy, cold	0	1	0	0	cricket	
DH #34	1/11/23	2:30 PM	rainy, cold	0	0	0	0	duff	
DH #35	1/11/23	2:30 PM	rainy, cold	0	0	0	0	duff	
DH #36	1/11/23	2:30 PM	rainy, cold	0	0	0	0	big puddle	
DH #37	1/11/23	2:30 PM	rainy, cold	0	0	0	0	ball of red sparkly sap	
PF #1	2/10/23	1:00 PM	sunny, cool, clear	1	1	0	0	Earthworms, ground beetle	disturbed, many boards are flipped over or seem to be far from
PF #2	2/10/23	1:00 PM	sunny, cool, clear	0	0	0	0		
PF #3	2/10/23	1:00 PM	sunny, cool, clear	0	0	0	0		
PF #4	2/10/23	1:00 PM	sunny, cool, clear	0	0	0	0	camel cricket	
PF #5	2/10/23	1:00 PM	sunny, cool, clear	0	0	0	0		
PF #6	2/10/23	1:00 PM	sunny, cool, clear	0	0	0	0		
PF #7	2/10/23	1:00 PM	sunny, cool, clear	0	0	0	0		
PF #8	2/10/23	1:00 PM	sunny, cool, clear	1	0	0	0		
PF #9	2/10/23	1:00 PM	sunny, cool, clear	0	0	0	0	millipede, earthworm	
PF #10	2/10/23	1:00 PM	sunny, cool, clear	0	0	0	0	earthworm	
PF #11	2/10/23	1:00 PM	sunny, cool, clear	0	0	0	0	mole cricket	
PF #12	2/10/23	1:00 PM	sunny, cool, clear	0	0	0	0		
PF #13	2/10/23	1:00 PM	sunny, cool, clear	0	0	0	0		
PF #14	2/10/23	1:00 PM	sunny, cool, clear	0	0	0	0		
PF #15	2/10/23	1:00 PM	sunny, cool, clear	0	0	0	0	ground beetle	
PF #16	2/10/23	1:00 PM	sunny, cool, clear	0	0	0	0		
PF #1	2/17/23	12:00 PM	nice, chilly	0	1	0	0		
PF #2	2/17/23	12:00 PM	nice, chilly	0	0	0	0		
PF #3	2/17/23	12:00 PM	nice, chilly	0	0	0	0		
PF #4	2/17/23	12:00 PM	nice, chilly	0	0	0	0		

Salamander Cover Board Data Sheet (Include all findings and non-findings on this page)

Site & Board #	4/13/21	Time	Weather	ENSATINA (Yellow Eyed Salamander)	BATRACHOSEPS (Slender Salamander)	ANEIDES (Arboreal Salamander)	DICAMPTODON (Giant Salamander)	Other (Salamanders, Insects, Etc.)	Notes
PF #5	2/17/23	12:00 PM	nice, chilly	0	0	0	0		
PF #6	2/17/23	12:00 PM	nice, chilly	0	0	0	0		
PF #7	2/17/23	12:00 PM	nice, chilly	0	0	0	0		
PF #8	2/17/23	12:00 PM	nice, chilly	0	0	0	0		
PF #9	2/17/23	12:00 PM	nice, chilly	0	0	0	0		
PF #10	2/17/23	12:00 PM	nice, chilly	0	0	0	0		
PF #11	2/17/23	12:00 PM	nice, chilly	0	0	0	0		
PF #12	2/17/23	12:00 PM	nice, chilly	0	0	0	0		
PF #13	2/17/23	12:00 PM	nice, chilly	0	0	0	0		
PF #14	2/17/23	12:00 PM	nice, chilly	0	0	0	0		
PF #15	2/17/23	12:00 PM	nice, chilly	0	0	0	0	beetle	
PF #16	2/17/23	12:00 PM	nice, chilly	0	0	0	0		
DH #17	2/28/23	3:00 PM	rainy, cold	0	0	0	0	cricket	
DH #18	2/28/23	3:00 PM	rainy, cold	0	0	0	0		
DH #19	2/28/23	3:00 PM	rainy, cold	0	0	0	0	worms	
DH #20	2/28/23	3:00 PM	rainy, cold	0	1	0	0	cricket	
DH #21	2/28/23	3:00 PM	rainy, cold	0	0	0	0	fungus, spider	
DH #22	2/28/23	3:00 PM	rainy, cold	0	0	0	0	sap	
DH #23	2/28/23	3:00 PM	rainy, cold	0	0	0	0	bugs	
DH #24	2/28/23	3:00 PM	rainy, cold	0	0	0	0		
DH #25	2/28/23	3:00 PM	rainy, cold	0	0	0	0		
DH #26	2/28/23	3:00 PM	rainy, cold	0	0	0	0	sap	
DH #27	2/28/23	3:00 PM	rainy, cold	0	0	0	0		
DH #28	2/28/23	3:00 PM	rainy, cold	0	2	0	0	beetles	
DH #29	2/28/23	3:00 PM	rainy, cold	0	0	0	0	flooded	
DH #30	2/28/23	3:00 PM	rainy, cold	1	0	0	0		
DH #31	2/28/23	3:00 PM	rainy, cold	0	0	0	0		
DH #32	2/28/23	3:00 PM	rainy, cold	1	0	0	0		
DH #33	2/28/23	3:00 PM	rainy, cold	0	0	0	0		
PF #1	3/1/23	unrecorded	clear, cold	0	0	0	0	worm	
PF #2	3/1/23	unrecorded	clear, cold	0	0	0	0	hopping insects, earthworm	
PF #3	3/1/23	unrecorded	clear, cold	0	0	0	0	wet dirt	
PF #4	3/1/23	unrecorded	clear, cold	0	0	0	0	worm, sider, hopping insects	
PF #5	3/1/23	unrecorded	clear, cold	0	0	0	0	tiny centipede, wet	
PF #6	3/1/23	unrecorded	clear, cold	0	0	0	0	flying insects	
PF #7	3/1/23	unrecorded	clear, cold	0	0	0	0	worm, spider	
PF #8	3/1/23	unrecorded	clear, cold	0	0	0	0	wet, flower, sticks	
PF #9	3/1/23	unrecorded	clear, cold	0	0	0	0	fungi, sprout	
PF #10	3/1/23	unrecorded	clear, cold	0	0	0	0	jumping bugs	
PF #11	3/1/23	unrecorded	clear, cold	0	0	0	0	wet, bugs, leaves	
PF #12	3/1/23	unrecorded	clear, cold	0	0	0	0	mud bubble, bugs	


Migratory
Presents
Non-
Migratory
Web of Life
Salamanders
CA Giant
CA Tiger
What is a Salamander?
What do they eat?
Where do they live?
•Breed in H₂O
•Migrate from uplands to ponds/creeks to breed and lay eggs
•Go through metamorphosis
Life Cycle
How we learn Salamanders
Pollution
Life Cycle



County of Santa Cruz

Health Services Agency - Environmental Health

Fish and Wildlife Advisory Commission

701 Ocean Street, Room 312, Santa Cruz, CA 95060

(831) 454-2022 TDD/TTY - Call 711 http://www.scceh.org

[Date]

Santa Cruz County Board of Supervisors
701 Ocean Street, Room 500
Santa Cruz, CA 95060
Re: Proposed "Zone Zero" Home Hardening Regulations (Effective January 1, 2026)

Dear Members of the Board,

The County Fish & Wildlife Advisory Commission, as part of its mandate to advise the BOS on matters related to Fish and Wildlife and watershed protection, would like to offer comments and raise concerns regarding the draft "Zone Zero" home hardening requirements, as currently proposed to take effect on January 1, 2026 for the identified "Very High" Fire Hazard Severity Zones (FHSZ) as delineated by CalFire in the State and Local Responsibility Areas, SRA's and LRA's.

We support the overall objective of reducing wildfire risk in the very high FHSZ; however, in our review of the current draft there are ecological and policy issues that merit further consideration. We urge the Board to comment on the proposal to ensure that regulations are scientifically defensible, implementable, and balanced in terms of fire safety, cost burden, and habitat/ecological values.

Definitions

Cal Fire defines home hardening as vegetation management compliance and building materials used to resist the intrusion of flames or embers projected by a wildland fire. Cal Fire defines defensible space as a vegetation-free "buffer zone" around a home or structure. The Board of Forestry defines Zone Zero as an ember-resistant defensible zone the first 5 feet around a structure.

Key Concerns

1. Scope of Vegetation Removal in Zone Zero (0-5 feet from structures)
- The draft appears to require removal of essentially all vegetation in Zone Zero, with limited exceptions (mature, healthy trees, potted plants under narrow conditions). This may be overly restrictive in many settings.
- Such a requirement could impose substantial cost, aesthetic, ecological, and habitat impacts.

2. Scientific Evidence and Cost-Benefit Tradeoffs
- Peer-reviewed research suggests that combining home hardening with defensible space improves survival odds. For example, a 2025 UC Berkeley study found that home hardening and defensible

space together can double survival rates.
- Removing vegetation within 5 feet of homes alone reduced structure loss by ~17% (UC Berkeley, 2025).
- Other studies (npj Natural Hazards, 2024) emphasize a fuel-free near-home zone, but also note that some low-flammability plantings may provide benefits.

-Mockrin et al. (2023) studied the Woolsey Fire in the Santa Monica Mountains and found that "vegetation around buildings was not a strong predictor of building-level damage outcomes compared to building materials and landscape features such as paved land cover per parcel, elevation, building density, and distance to road networks".

3. Potential for Unintended Consequences/Ecological Impacts
- Eliminating all vegetation could reduce soil stability, increase erosion, harm pollinators, and alter microclimates.
-Mass clearing of urban vegetation may lead to unknown environmental consequences, such as rising urban heat island effects and declines in native biodiversity

- Cost burden may shift focus away from effective home hardening steps (installation of vent screening to prevent embers, fire-resistant double pane windows, siding and roofing materials, etc.).
- Some moist, low-flammability natives (e.g. ferns) may act more like ember traps than fuels.

4. Local/Jurisdictional Variation and Flexibility
- Fire risk varies widely by slope, aspect, and distance from other structures.
- The draft acknowledges not all areas are the same. Local jurisdictions should retain authority to adapt requirements.

Suggested Refinements

Suggested Change	Rationale
Allow limited low-flammability or irrigated moisture-rich vegetation	Reduces ecological harm, preserves beneficial vegetation, allows flexibility without major safety compromise
Allow healthy, well-maintained vegetation within Zone 0, including trees (Urban Wildlands Group, 2025)	
Clarify or cap homeowner cost burden; provide incentives and/or phased compliance	Avoids undue hardship, especially for lower income homeowners

Encourage home hardening measures alongside vegetation management	These measures have high impact for survival odds
Include criteria for assessing vegetation types (fuel load, flammability) rather than blanket removal	Aligns with empirical research and avoids unnecessary loss of low-risk native plants
Provide variance/appeal mechanisms for local conditions	Ensures fairness, ecological preservation, and adaptability

Scientific Authority and Uncertainties

- Many studies model defensible space and home hardening together, making isolation of Zone Zero effects less precise.
- Vegetation type, moisture, and maintenance play a large role in real outcomes.
- Long-term ecological and cost impacts remain insufficiently studied.

Conclusion

We praise the Board's initiative toward reducing wildfire risk, and believe that well-crafted Zone Zero regulations could contribute meaningfully to property survival. However, the regulations should be refined for fairness, ecological soundness, and cost-effectiveness. We urge that the final draft be revised accordingly.

Sincerely,

[Name]
Chair, County Fish & Wildlife Advisory Commission
Santa Cruz County

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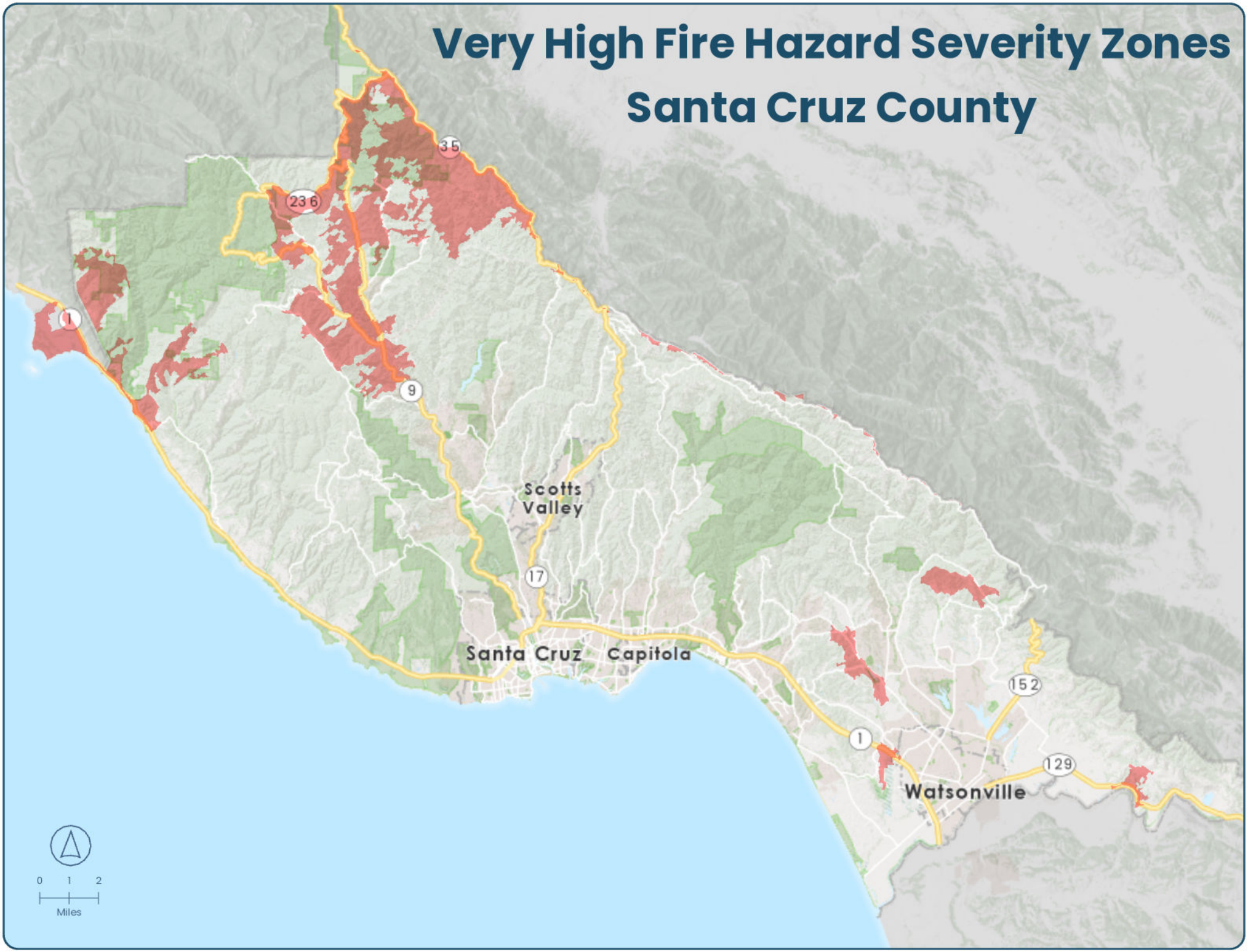
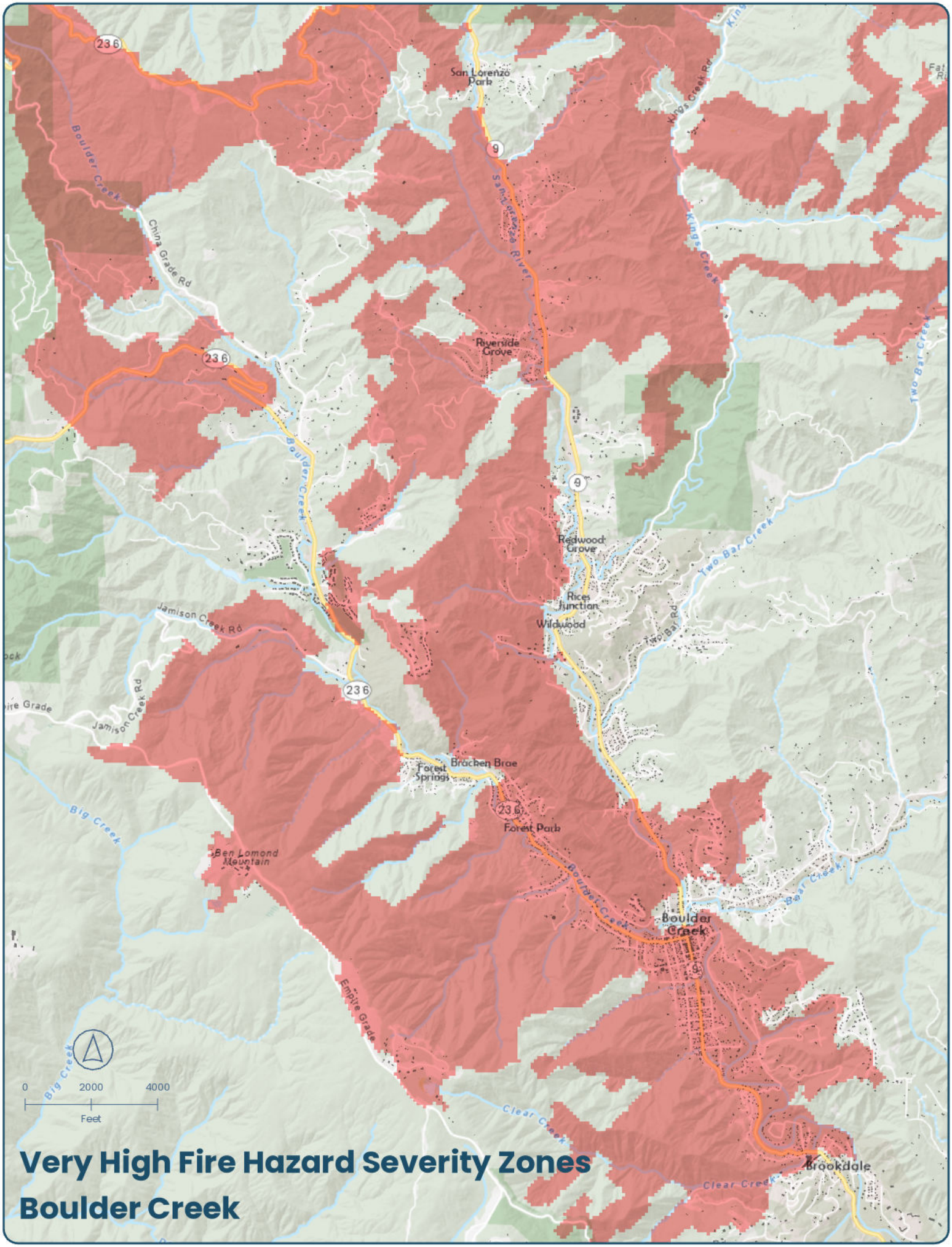
Very High Fire Hazard Severity Zones
Santa Cruz County





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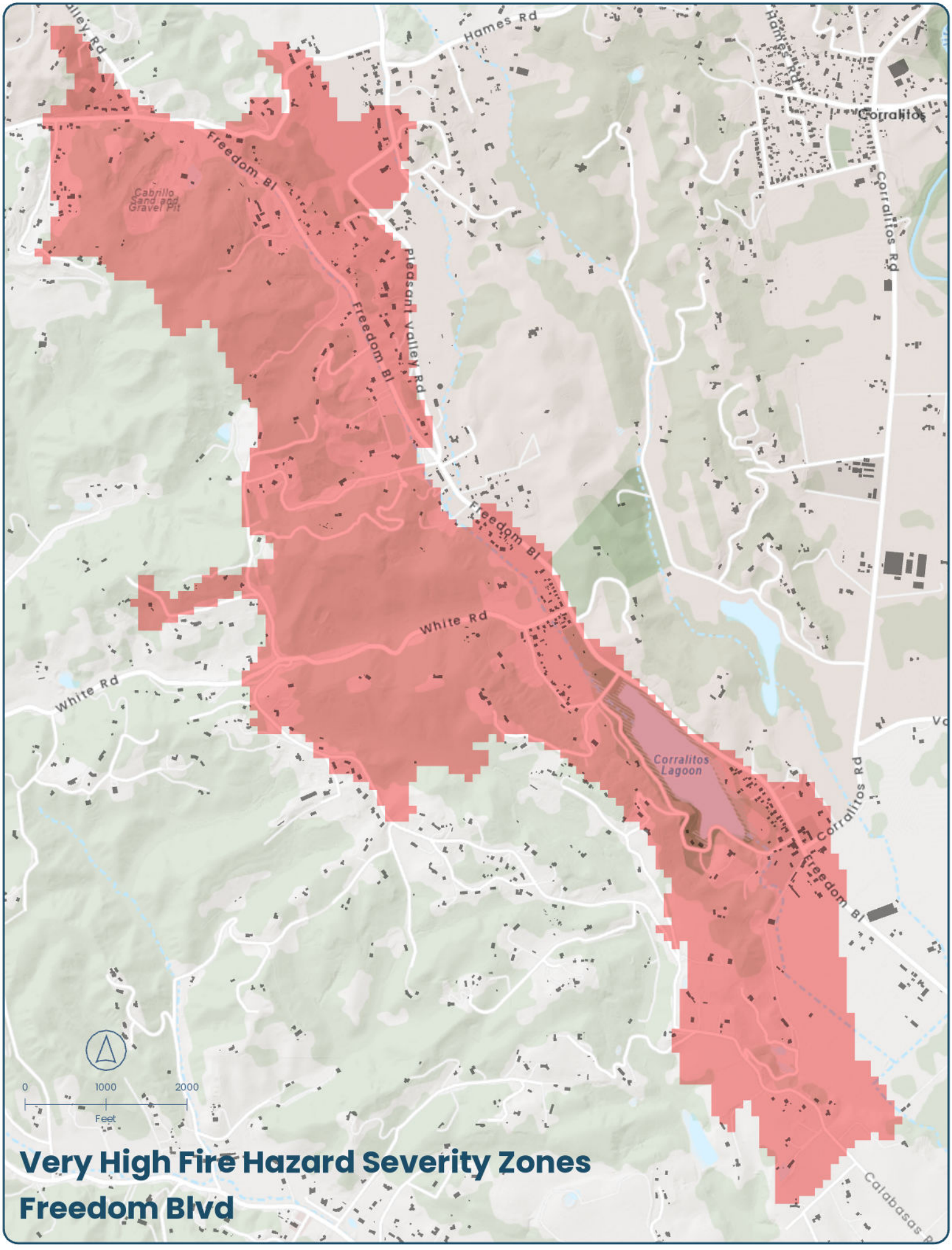
Boulder Creek



Very High Fire Hazard Severity Zones
Freedom Blvd

Los Angeles Times

Voices

Max Moritz and Luca Carmignani

California's proposed ban on plants near homes could be dangerously bad advice

Don't blame the vegetation: Many structures appear to have ignited even though surrounding plants did not, such as this house on Santa Rosa Avenue in Altadena. Other homes may have been protected by well-watered landscaping plants. (Chris Pizzello / Associated Press)

By Max Moritz and Luca Carmignani
Guest contributors

June 2, 2025 3 AM PT

One of the most striking patterns in the aftermath of many urban fires is how much unburned green vegetation remains amid the wreckage of burned neighborhoods.

In some cases, a row of shrubs may be all that separates a surviving house from one that burned just a few feet away.

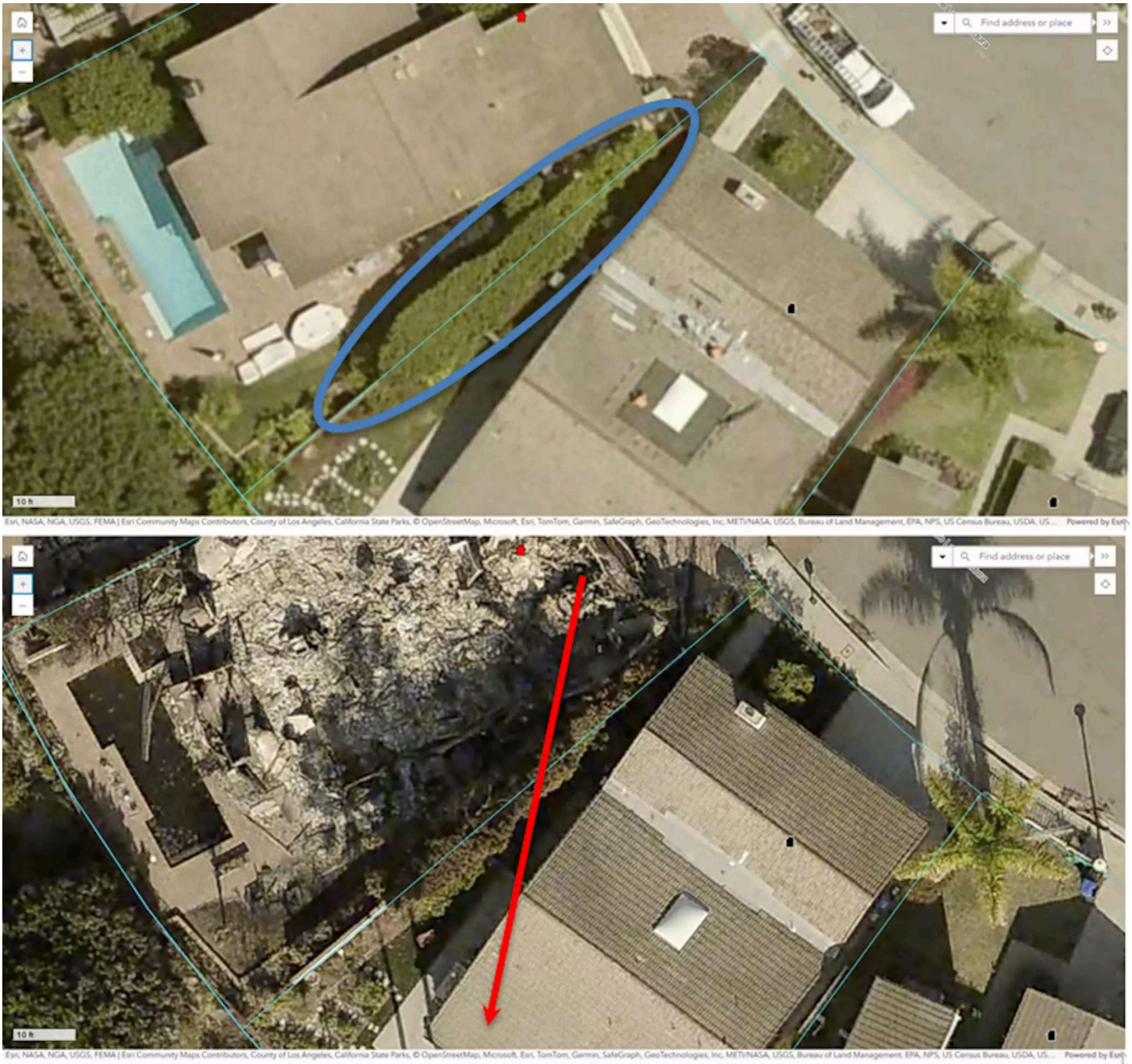
As scientists who study how vegetation ignites and burns, we aren't surprised by these images: We recognize that well-maintained plants and trees can help protect homes from wind-blown embers and slow the spread of fire in some cases. So we are concerned about new wildfire protection regulations being developed by California that would prohibit almost all plants and other combustible material within 5 feet of homes, an area known as "Zone 0."

Wildfire safety guidelines have long encouraged homeowners to avoid having flammable materials next to their homes. But the state's plan for an "ember-resistant zone," being expedited under an executive order from Gov. Gavin Newsom, goes further by also prohibiting grass, shrubs and many trees in that area.

If that prohibition remains in the final regulation, it's likely to be met with public resistance. Getting these rules right also matters beyond California, because regulations that originate here often ripple outward to other fire-prone regions.

Research into how vegetation can reduce fire risk is a relatively new area of study. However, the findings from plant flammability studies, as well as examination of sites where vegetation and homes survive large urban fires, highlight its importance.

When surviving plants appear scorched after these fires, it is often on the side of the plant facing a nearby structure that burned. That suggests that wind-blown embers ignited houses first: The houses were then the fuel as the fire spread through the neighborhood.



Photos before and after the 2025 Palisades fire show thick green vegetation between two closely spaced homes. The arrow shows the direction of the fire's spread. When surviving plants appear scorched after these fires, it is often on the side of the plant facing a nearby structure that burned. That suggests that wind-blown embers ignited houses first: The houses were then the fuel as the fire spread through the neighborhood. (Max Moritz; Cal Fire damage inspection photos)

We saw this repeatedly in the Los Angeles area after wildfires destroyed thousands of homes in January. The pattern suggests a need to focus on the many factors that can influence home losses.

Several guides are available that explain steps homeowners can take to help protect houses, particularly from wind-blown embers, known as home hardening. Some

examples include installing rain gutter covers to keep dead leaves from accumulating, avoiding flammable siding and ensuring that vents have screens to prevent embers from getting into the attic or crawl space.

However, guidance related to landscaping plants varies greatly, and some of it is bad advice.

For example, some “fire-safe” plant lists contain species that are drought tolerant but not necessarily fire resistant. When it comes to keeping plants from becoming fuel for fires, what matters more than species selection is how well vegetation is maintained and whether it’s properly watered. Location matters too: Dry, unmanaged plants under windows or near fences may ignite rapidly and make it more likely that the house itself will catch fire.

When well-watered, living plant material is heated by a nearby energy source, such as a fire, the moisture inside it must be driven off before it can ignite. That evaporation cools the surrounding area and lowers the plant’s flammability.

In many cases, high moisture keeps a plant from igniting. We’ve seen this in some of our experimental work and in other studies that test the flammability of ornamental landscaping.

With enough heat, dried leaves and stems can break down and release volatile gases. At that point, a nearby spark or flame can ignite these gases and set the plant on fire.

Even when the plant does burn, however, its moisture content can limit other aspects of flammability, such as how hot it burns.

Green, well-maintained plants can slow the spread of a fire by serving as heat sinks, absorbing energy and even blocking embers. This apparent protective role has been observed in both Australia and California studies of home losses.

How often vegetation buffers homes from igniting during urban conflagrations is still unclear, but this capacity has implications for regulations.

Many of the latest Zone 0 recommendations, such as prohibiting mulch and attached fences made of materials that can burn, stem from large-scale tests conducted by the National Institute of Standards and Technology and the Insurance Institute for Business and Home Safety. These features can be systematically analyzed.

But vegetation is far harder to model. The state's proposed Zone 0 regulations oversimplify complex conditions in real neighborhoods and go beyond what is currently known from scientific research regarding plant flammability.

Vegetation is not monolithic. A mature, well-pruned shrub or tree with a high crown may pose little risk of burning and can even reduce exposure to fires by blocking wind and heat and intercepting embers. Aspen trees, for example, have been recommended to reduce fire risk near structures or other high-value assets.

As California and other states develop new wildfire regulations, they need to recognize the protective role that well-managed plants can play, along with many other benefits of urban vegetation.

We believe the California proposal's current emphasis on highly prescriptive vegetation removal, instead of on maintenance, is overly simplistic. Without complementary requirements for hardening the homes themselves, widespread clearing of landscaping immediately around homes could do little to reduce risk and could even aggravate the danger.

Max Moritz is a Cooperative Extension wildfire specialist and an adjunct professor of environmental science at UC Santa Barbara. Luca Carmignani is an assistant professor of mechanical engineering at San Diego State University. This article was produced in partnership with the Conversation.

VENTURA COUNTY SUPES CALL FOR REVISIONS TO STATE'S "ZONE 0" WILDFIRE RULES

MON, 10/27/2025

Ventura County leaders are urging the state to amend preliminary wildfire prevention rules for properties, which were mandated by Assembly Bill 3074 (2020).

On Tuesday, October 21, the Board of Supervisors voted unanimously to approve a resolution calling for changes to the state's draft ember-resistant Zone 0 regulations and Assembly Bill 3074 in order "to provide increased local control, secure funding, and allow for regionally adaptable implementation."

Under the draft Zone 0 rules, homeowners in high-risk fire areas would have to remove any combustibles such as plants, mulch, or wood fencing from within five feet of their homes. To ensure compliance, Ventura County fire staff

would need to inspect some 60,000 additional parcels.

The county says the requirements would incur enormous costs for both property owners and county agencies without any additional support from the state.

“Wildfire prevention is a top priority for Ventura County, but one-size-fits-all rules don’t work,” said District 4 Supervisor and Board Chair Janice Parvin. “We need solutions that are both effective and realistic for our communities. This resolution shows our commitment to keeping residents safe without putting an unfair burden on them.”

“We all want safer communities and stronger wildfire protections,” said Vice Chair Jeff Gorell, who represents the 2nd District. “However, state regulations must reflect the real-world challenges our residents face. When Sacramento sets blanket rules without funding or flexibility, it shifts the burden to local governments and homeowners – and that’s not sustainable.”

Read more **here**.

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