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

AGENDA
December 7, 2023, 7:00 PM

Commissioners will meet in person at **the Solarium Conference Room, at 1060 Emeline Avenue**. Members of the public can join in person but are encouraged to join virtually using the provided link.

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.

Agenda Item #	Start Time	End Time	Description
1 2 3 4	7:00	7:10	Call to Order Roll Call Approval of Minutes Public Comment for Items Not On The Agenda
5	7:10	7:25	Cotoni Coast Dairies Planning Process Discussion
6	7:25	8:35	Determine Public Grant Recipients and Amounts Awarded
7	8:35	8:45	Updated Invasive Species Letter Approval
8	8:45	9:00	Staff Reports Commissioner Reports and Announcements
9		9:00	Adjourn

Public Comment
None

Items of Interest:
Federal Register :: Endangered and Threatened Wildlife and Plants; Threatened Species Status With Section 4(d) Rule for the Northwestern Pond Turtle and Southwestern Pond Turtle
DOC-2023-901 Drafting Low-Impact Camping Ordinance - Santa Cruz County, CA (iqm2.com)
DOC-2023-911 Report on progress of the Boulder Creek Water Quality and Recovery Project - Santa Cruz County, CA (iqm2.com)

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 and Guidelines

Microsoft Teams meeting

Join on your computer, mobile app or room device

Click here to join the meeting

Meeting ID: 240 630 953 568

Passcode: WERjPA

Download Teams | Join on the web

Click on 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 7:00 pm so that we can start at 7:00 pm. Staff will open the video conference at 6:50 pm. Cameras are optional for members of the public.

If you have questions, please contact Sean Abbey at sean.abbey@santacruzcounty.us.

Meeting Roles and Rules:

Chris Berry, Chair, will lead the meeting. Chair Berry 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 time for staff to make notes about any decisions. Sean will monitor both email and text messages 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
November 2, 2023

1. **CALL TO ORDER** – 7:03 pm
2. **ROLL CALL**

District	Commissioner	Status	Commissioner	Status
I	Chris Berry	P	Samuel Adelson	P
II	Warren Barry	E	David Somerton	P
III	Liz Alter	P	Jon Jankovitz	R
IV	Brooke Sampson	P	Daniela Suarez	P
V	Jenni Gomez	P	Jen Michelsen	A

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

3. **OATH OF OFFICE**: Commissioners completed Oath of Offices

4. **APPROVAL OF MINUTES:**
   - **Motion to Approve Minutes:** Somerton, **Second**: Gomez
   - **Abstain:** Berry
   - **All Ayes:** Minutes approved

5. **PUBLIC COMMENTS:**

   - Commissioners received two mailed comments regarding the sensitive species list at the Cotoni Coast Daires site. Will add that to an agenda for a future meeting.

   - Commissioners received notice of a land purchase for habitat protection. Staff to forward meeting information to commissioners of appropriate district.

6. **PRESENTATION OF GRANT APPLICATIONS WITH DISCUSSION**

   - Commissioners received presentations from applicants and asked questions. The commissioners will prepare a draft score for each applicant and finalize that score at the December meeting. Applicant scores will inform how funding is allocated.

7. **INVASIVE SPECIES LETTER FOLLOW UP:**

   - The Invasive Species subcommittee plans to reach out to Supervisor Cummings after a conversation that Com Alter had with him. He had not seen the original letter prior to that conversation and recommended a simpler summary of action items be part of the letter. Subcommittee intends to finalize the letter rewrite for approval at the next meeting.

8. SIGNIFICANT TREE ORDINANCE LETTER FOLLOW UP:

- No significant movement on changes to this ordinance. Staff will reach out to contact at the Planning office to determine if there are any updates on changes to Title 16 of county code.

9. DISCUSS SUPPORT FOR FISH DESCENDING DEVICE REQUIREMENT:

- Com Somerton did not receive any response from Monterey County FWAC. Com Alter spoke with a contact at NMFS who said that there might be potential for this to happen at the January meeting of the CA Fish and Game Commission. Staff will provide a link to that meeting information.

10. STAFF AND COMMISSIONER REPORTS AND ANNOUNCEMENTS:

- **Commissioner Reports:**
  - Com Berry:
    (1) Loch Lomond replaced the inlet and outlet of the dam, which included some mitigation work that installed biological stabilization.
    (2) San Lorenzo lagoon overflow pipe keeps getting vandalized, which has required that the so the sand bar continues to be breached.
    (3) In talks with the Army Corp of Engineers to improve fish passage in Branciforte

- **Staff Reports:**
  - The BOS Oct 17th meeting accepted several recommendations from the Santa Cruz Like Me report group, including:
    (1) Providing a commissioner stipend of $75 per meeting for all commissioners, with the option to opt out of receiving a stipend.
    (2) Require annual election of Chair and Co-Chair with a limit of two consecutive years for officers. A future item will need to be created to bring this into effect.
    (3) Further discussion on restructuring of commissions in January. The report found that commissions require significant staff time to run, with many commissions being difficult to fill or not meeting regularly. There is discussion of combining the WAC and the COE into a single commission, but that does not appear to be under consideration for the FWAC.
  - CAAP report: OR3 has created a Working Group and Steering Committee to design the framework for implementation and accountability of the CAAP priorities. This work will be presented to the Board of Sups in early 2024.
  - Caltrout is on schedule to install its PIT tag attend in Branciforte by the end of November. Updates to come.
  - A project to remove a culvert where Highway 9 crosses the San Lorenzo River has received substantial funding for design and implementation. Located north of Boulder Creek, the final design will replace the ~10' wide culvert with a ~50' bridge, removing a significant barrier to fish passage.
    (1) The Biden-Harris BIL is created a large sum of funds to address passage issues, like this one.

11. ADJOURN. **Motion to Adjourn:** Berry, **Second:** Somerton
All Aye: meeting adjourned at 9:02 pm.

County of Santa Cruz

Health Services Agency ♦ Environmental Health

Fish and Wildlife Advisory Commission

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(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: Resolving Negative Santa Cruz County Huma

Date: 10/10/23

Applicant name or Organization: International Bird Rescue

Project Description:

We respectfully request a first-time grant to support a small portion of the costs of necessary, expendable clinic and medical supplies, and a small portion of the utilities necessary to provide a stable clinic and rehabiltation environment for 300 native, wild, aquatic birds rescued from Santa Cruz County and transferred to us by local organizations for care.

Funding Requested	7,500

ITEMIZED BUDGET ITEMS	Requested Funds	Matching Funds	Total Amount
Clinical and Medical Supplies, incl. food	5,000	8,275	13,275
Veterinary & rehabiltaton staff salaries/wages		66,094	66,094
Utilities for stable clinic & rehab environment	2,500	17,400	19,900
Depreciation and insurance		5,230	5,230
Travel and transit		2,880	2,880
Facilities, vehicles, and equipment		5,755	5,755
Outside services (lab work), general expenses		552	552
TOTAL AMOUNTS	7,500	106,186	113,686

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 include Human-Wildlife Conflicts from habitat disruption/loss, starvation, cruelty, pollution (incl. plastics, oil, chemicals), and fishing, and also the new, deadly, Highly Pathogenic Avian Influenza (HPAI) virus. The Bay Area is especially important to hundreds of species of aquatic birds because of our central location on the Pacific Flyway migratory route. Negative impact here has concentrated effects in regional and global biodiversity.

Project Goals

Our wildlife rescue and rehabilitation work provides people and native wildlife with effective, immediate, ethical, humane, and free-to-the-public solutions to the problem of native aquatic birds harmed by human impacts. Our SF Bay-Delta Wildlife Center serves as the “referral hospital” for over a dozen Northern California Counties, annually treating 2,000 cases (300 from Santa Cruz County alone) and over 100 species that are beyond the capacity or skills of other regional wildlife clinics. Our daily rescue and rehabiltation work keeps us ready to respond to unpredictable-yet-sadly-inevitable crises.

Project Logistics: how will the project be completed?

We efficiently and effectively rescue so many wild birds because of our well-established protocols, developed through 52 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 Se

Applicants Background.

International Bird Rescue is a regional and global conservation organization. We were 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.

Application to the
Santa Cruz County Fish and Wildlife Advisory Commission:
Resolving Negative Santa Cruz Human-Wildlife Conflicts

1. Funding Request and Project Description

International Bird Rescue respectfully requests a first-time, $7,500 grant from the Santa Cruz County Fish and Wildlife Advisory Commission.

The goal of this project is to address known, ongoing Human-Wildlife Conflicts (negative human-wildlife interactions) in Santa Cruz County, and to benefit Santa Cruz residents and wildlife by providing an effective, ethical, human, and immediate solution to the problem of native aquatic birds that have been harmed by human impact. The grant's purpose is to offset the costs of essential, expendable items necessary to serve birds referred from Santa Cruz County to our San Francisco Bay-Delta Wildlife Center in Fairfield, CA between October 1, 2023 and June 30, 2024.

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 Native Animal Rescue of Santa Cruz County *as described in the attached news story, and linked here*.

Our San Francisco Bay-Delta Wildlife Center admits ~2,000 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 100 different species, from Common Murres, Snowy and Great Egrets, Green and Great Blue Herons, to Brown Pelicans, to endangered and near-threatened species such as Western Snowy Plovers. Common causes of injury include orphaned, fishing hook and line entanglements, starvation from loss of habitat, and birds that suffer blunt force traumas (from human cruelty or hit by vehicles).

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)**). 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 (HPAI) 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. Notably, important breeding colonies on oceanic islands are at risk"* (The United Nations-led *Scientific Task Force on Avian Influenza and Wild Birds*, 2023).

Negative human impacts 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 human impact here has concentrated, long-term effects on the global wildlife population.

Despite these challenges, intervention can make 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, Mission, and Programs

International Bird Rescue is a regional and global conservation organization. We were 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 human impacts on aquatic birds.**

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 160,000 avian lives. Today, we research best practices at our crisis response hospitals and share them worldwide.

Our mission is to inspire people to act towards balance with the natural world by rescuing waterbirds in crisis. We pursue this mission through three inter-related programs:

Avian Rehabilitation and Research: Our specialty veterinary hospitals in Southern California (Los Angeles) and Northern California (San Francisco Bay-Delta) rescue and rehabilitate 3,500 native aquatic birds annually and release them back into the wild. Rigorous scientific research improves animal care and clinical outcomes for the animals that depend on us for life-saving treatment. We conduct clinical

trials to compare treatments, investigate pathologies, and perform post-release studies to evaluate our efforts, *such as our ongoing blue-banded pelican citizen science project.* Our long-standing experience and proven results have been integral to establishing the standards, protocols, and best practices for the fields of wildlife emergency response and clinical wildlife medicine.

Wildlife Emergency Preparedness and Response: We respond to environmental crises around the world. Since 1971, we have **led wildlife rescue efforts in over 250 incidents on six continents**.

Conservation, Education, and Community Engagement: Education of emergency first responders, industry workers, youth, and the general public is essential to provide **better long-term outcomes for people and wildlife**. We use a variety of in-person and virtual trainings, digital media, and live events to raise awareness, share best practices, engender hope, and give people ***actionable steps*** **to minimize human impact**. Leading initiatives include:

- *Our free Bird HelpLine*
- *Conservation Action Program*
- *Wildlife Responsibility Program*
- *Near-threatened Elegant Tern Task Force*
- *Endangered Snowy Plover Support Initiative*
- *Cordelia Slough Youth Outdoor Education*

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, and local Animal Control agencies.

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 the program sustainable. Commission funds will partially offset the cost of service we provide to the people and wildlife of Santa Cruz County, and represents a reasonable and very modest portion of the project's annual costs (over $100,000 in FY24), an expense we had borne exclusively for 20+ years.

Unlike traditional veterinary clinics, we provide services to the general public at no-cost. Our wild, native patients come to us with no funding, no insurance, and no one directly responsible for paying the bill. Birds injured by human impact require skilled staff and large volumes of food and vitamins in order to be rehabilitated successfully and returned to the environment. Because our services are offered at no charge to the general public and referring agencies, it is only with philanthropic support from concerned citizens, foundations, corporations, and municipal agencies are we able to meet the community's demand for our services. **Our $7,500 request for funding is to support the Santa Cruz County share of the costs of necessary, expendable, clinic and medical supplies (including food) ($5,000), plus a portion of the utilities necessary for stable habitat and recovery environments ($2,500)**.

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: $286.12/bottle
Clavacillin tablets (Clavamox), 62.5mg x 210: $75.30/bottle
Nitrile exam gloves, 100: $19.41/box
Meloxidyl, 1.5mg/ml x 200ml: $95.15/bottle
Clindamycin, 100mg quad tabs x 100, $50.75/bottle
Peruvian Smelt, 30lbs/case x $1.54/lb: $46.20/case X 60 cases/typical order = $2772.00
Night Smelt, 40lbs/case x $1.96/lb: $78.40/case X 20 cases/typical order = $1568.00

As much as skilled veterinary and rehabilitation personnel are essential to our work (animals injured by humans don't heal themselves), **this grant request focuses on portions of the critical medicine, surgical and rehabilitation supplies, nutrition**, **and clean, temperature-controlled water to maintain consistent environments for the wild patients in our care**.

Since 2019, Fish and Game commissions in the counties of Alameda, Los Angeles, Solano, Sonoma, Santa Barbara, Napa, Monterey, Contra Costa, Marin, San Diego, and Santa Clara provide modest financial support of between $2,500 and $16,000 annually to help ensure our ability to be an effective, efficient, regional resource is sustainable. Without such support, we will be unable to continue to conserve these vulnerable natural 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. The data generated by the banding effort, as well as our internal data, is analyzed by our veterinary care team as part of ongoing research, and the results shared at professional conferences and with our partners in the Global Oiled Wildlife Response System, a consortium of leading experts solving the challenges of oiled wildlife globally.

7. Contact Info

Phil Kohlmetz, Grants Coordinator
International Bird Rescue
4369 Cordelia Rd.
Fairfield, CA 94534

Direct: 707-704-0350
Office: 707-207-0380
Email: grants@birdrescue.org
https://www.birdrescue.org

8. Attachments

W9
Lookout Santa Cruz News Article from 10/8/23

Native Animal Rescue of Santa Cruz County recently rescued this pelican entangled in fishing line in the Santa Cruz Harbor. (Via Connie Maschan)

OPINION FROM COMMUNITY VOICES

I have worked for Native Animal Rescue for seven years — calls have exploded since 2021

BY AMY RED FEATHER

Source: Lookout Santa Cruz

Quick Take

Native Animal Rescue of Santa Cruz County makes close to 3,000 rescues a year — nearly double what it did as little as two years ago. Here, Amy Red Feather, the agency's wildlife supervisor, makes a plea to humans to be more careful of other species. She also takes us through the recent rescue of a Seabright pelican who got her foot hooked and tangled in a fishing line.

OCT 8, 2023 | 5:00 AM

Lookout SANTA CRUZ

SIGN IN

Community Voices

Have something to say? Lookout welcomes letters to the editor, within our policies, from readers. Guidelines here.

The injured pelican sat immobile on a piece of pipe at the Santa Cruz Harbor, near Seabright State Beach.

Its foot was bloody and it was tethered to rocks 20 feet away by a long piece of fishing line. Miraculously, it had managed to swim to the rampart pipe and had stationed itself there, staring out at the water.

Maria Viveros, a Native Animal Rescue (NAR) volunteer, had noticed the pelican and called me via the NAR hotline to see if there was anything we could do. I immediately contacted our rescuer, Connie Maschan, to get eyes on it, then Greg Cotten, who hopped into his dinghy right away and went over to Seabright.

Native Animal Rescue volunteer Greg Cotten was able to corral this pelican entangled in fishing line. (Via Connie Maschan)

I have worked for Native Animal Rescue for seven years, first as a volunteer and now as wildlife supervisor. When I first signed on with the organization as a volunteer, it was during the spring baby season, and it was mainly to help with the feeding of the baby songbirds, which I was proficient at since acquiring a wildlife degree in college some 20 years ago.

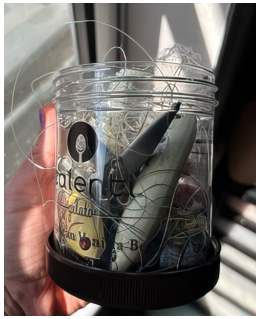
Most wildlife rehabilitation facilities cater to one type of animal, birds or mammals, seabirds or carnivores, but I realized quickly that Native Animal Rescue catered to absolutely everything. Seabirds, songbirds, raptors, all mammals (excepting mountain lions), even our beloved dusky-footed woodrat, are welcome here.

Unfortunately, stories like this poor pelican's happen regularly.

From 2016 to 2021, we rescued around 1,500 animals a year. In the past two years, those numbers have doubled to about 3,000 a year.

Native Animal Rescue has been around 44 years, and most of the animals come because of human conflict or contact. That could be a car strike, a fishing entanglement or a cat-caught songbird. Often, wild creatures — raccoons, rabbits, skunks, pelicans — have ingested or become entangled in plastic.

Too many situations that could be avoided.



A container full of fishing hooks and line Native Animal Rescue has pulled out so far in 2023.
(Via Connie Maschan)

That's why NAR, a community based nonprofit, is open every single day of the year. Wildlife doesn't take holidays, so neither do we. We rescue, rehabilitate and release back to the wild the injured, orphaned or entangled wildlife. We partner with International Bird Rescue to ensure the best veterinary care for our seabirds and the Exotic Pet Clinic of Santa Cruz for our other birds, mammals and reptiles.

We train rehabilitators and volunteers, who go out into the community to rescue the wildlife that cannot be brought to us, an invaluable service in a place like Santa Cruz, which is a city, but is still a very, very wild place.

We recently helped a gray fox who had a tight piece of plastic around her neck. A group of neighbors spotted and captured her. We removed the plastic, rehabilitated her for several weeks, then returned her to her home and to her mate. The entire neighborhood came out (and hid at a distance) to watch her bolt out of the kennel and head to her den and family.

Many times we receive dozens of calls a day about birds with fishing hooks in their mouths or bodies that people can't capture or help. I've been on numerous daring rescues myself, particularly in those first few years, which I will always remember. Many times, pelicans would be hobbled on the beach in Davenport, and I would be overjoyed to help.

Lookout SANTA CRUZ SIGN IN

bird and snipped the fishing line that attached her to the rocks. He then brought her to us, where we worked to remove two hooks and the line.

She weighed about 6.9 pounds and stayed with us for two days before being transported to International Bird Rescue. The hooks and line caused damage to her legs, but the prognosis is good, and we are all hopeful.

Without help, the pelican surely would have perished.

Native Animal Rescue of Santa Cruz County recently rescued this pelican entangled in fishing line in the Santa Cruz Harbor.
(Via Connie Maschan)

When I hear stories like this, I'm still as amazed as I was that first day I walked in here. Watching the animals, some in very bad shape upon arrival, thriving under this roof makes the work worthwhile.

Amy Red Feather is the wildlife supervisor at Native Animal Rescue of Santa Cruz County.
(Via Amy Red Feather)

We can't keep all wildlife safe. But we can be careful. I understand, fishing lines can often be irretrievable. But, if you do lose a line, please make an effort to find it. And clean up your discarded line when possible. If you do happen to snag a seabird, please don't tear the hook out, as this can cause irreparable harm. Call us. We will help.

Living in such a wild place, it is inevitable that most people will run into wildlife at some point. Knowing what to do when that happens can not only help our wildlife thrive, but can help prevent wildlife/human conflicts from becoming an issue.

If you see an injured creature, call us. We would be happy to come and help.

Amy Red Feather is the wildlife supervisor at Native Animal Rescue of Santa Cruz County. The NAR hotline is 831-462-0726.

More from Lookout's Community Voices opinion section

Let's hold our state accountable for pesticide regulation: Urge Gov. Newsom to sign AB 652 →

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

Project Name: Wildlife Rehabilitation Date: 10-20-23

Applicant name or Organization: Native Animal Rescue

Project Description:

Native Animal Rescue cares for orphaned, sick and injured wildlife with the goal of releasing healthy animals back into the wild. For the past few years we have admitted over 3000 animals per year. The costs are always rising on food, medical supplies and general supplies. The FWAC grant will help support the care of the animals we rehabilitate.

Funding Requested	3,000

ITEMIZED BUDGET ITEMS	Requested Funds	Matching Funds	Total Amount
Food costs for wildlife	2,140	19,260	21,400
Medication & vet service	470	4,230	4,700
Operational supplies	390	3,510	3,900
TOTAL AMOUNTS	3,000	27,000	30,000

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

Native Animal Rescue cares for injured, sick and orphaned wild animals with the ultimate goal of release back into the wild. Last year 2974 animals were admitted. We are applying for a FWAC grant to financially assist with the care of distressed wildlife since costs keep going up.

Project Goals

As indicated in the budget, our major need is for funding to provide food to the animals we rehabilitate. We had the successful release of 35 raptors last year and meat for them was costly. Living on the bay we take in a great number of seabirds needing fish. Every spring and summer, orphaned birds and mammals are fed a specific formula. The sheer number of babies make spring and summer our busiest times, but we operate 365 days a year and always have patients. Our goal is to feed appropriate food to each animal that we receive to help it attain optimum health so it can be released to the wild.

Project Logistics: how will the project be completed?

Since the care of wildlife is our top concern, we must always make sure we are able to have adequate funds to do so. We receive grants from the cities of Santa Cruz and Capitola, grants and donations from individual donors and funds from Environtoken programs. With everyone's help we can purchase what is needed. We are fortunate to have local vet, Hillary Stern, examine animals without cost to us. We have to pay for medication and other medical services like xrays. We pay for vaccines which are given to orphaned raccoons before release. Supplies that keep our facility running include transport boxes, bleach, laundry soap, Cleanser, paper towels and toilet tissue.

Project Completion Timeline

We operate year round with costs being greatest in Spring/Summer which is the baby season.

Applicants Background.

Native Animal Rescue was formed in 1979 and became a 501(c)(3) non-profit in 1980. It moved to its present location in 1993. NAR is the only organization licensed by both the Federal & California Dept. of Fish & Wildlife to care for wildlife. Our intake center receives wildlife 365 days a year from residents, businesses, Animal Services, Police Depts. Lifeguards & State Park personnel. Our volunteers rescue animals, feed animals at our center and keep things running smoothly. We also have a network of experienced volunteers rehabilitating animals on their property. We celebrate the successful release of every animal we have cared for.

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

Project Name: Santa Cruz Cypress Broom Removal Date: 10/24/23

Applicant name or Organization: Jodi McGraw Consulting

Project Description:

Jodi McGraw Consulting (JMc) will work with staff from the California Department of Fish and Wildlife (CDFW), UCSC interns, and community volunteers to remove invasive French broom from an approximately 5.5-acre area within the Bracken Brae Stand of the State Endangered and Federally threatened Santa Cruz cypress. The treatment will prevent the invasive shrub, which established following the CZU Lightning Complex Fire, from outcompeting the cypress seedlings, and also reduce the risk of a subsequent fire that could extirpate the cypress as well as threaten the community.

Funding Requested	$6,481

ITEMIZED BUDGET ITEMS	Requested Funds	Matching Funds	Total Amount
CDFW Biologist and Sci Aides (4 people for 3 days)	0	$2,880	$2,880
CDFW Habitat Asst (1 person for 2 days)	0	$480	$480
Chipper and Trailer Rental (1 day) plus Dump Fees	$1,450	$800	$2,250
Equipment, Materials, Private Vehicle Use	$1,359	$0*	$1,359*
JMc Restoration Technician (48 hrs)	$1,632	$1,632	$3,264
JMc Restoration Ecologist (48 hrs)	$2,040	$2,040	$4,080
JMc Lead Ecologist (40 hrs.)	$0	$5,760	$5,760
*JMc will supply additional equipment and materials.			
TOTAL AMOUNTS	$6,481	$13,592*	$19,513*

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

French broom (Genista monspessulana) established within the Bracken Brae stand of Santa Cruz Cypress following the CZU Lightning Complex fire in August 2020. A recent study conducted by Jodi McGraw Consulting and funded by the California Department of Fish and Wildlife found that French broom is a primary threat to persistence of the State endangered, federally threatened tree, which occurs in only 5 locations totaling 188 acres in the world.

Project Goals

1. Remove through hand pulling all adult French broom as well as all plants that could produce seed in 2024.
2. Flame or hoe dense aggregations of seedlings.
3. Convene community restoration groups who can assist with maintenance of the broom removal in future years.

Project Logistics: how will the project be completed?

With the assistance and matching services from California Department of Fish and Wildlife and local community restoration volunteers, Jodi McGraw Consulting staff and interns sponsored by UC Santa Cruz will manually removal all adult French broom using the 'Bradley Method' to work the species back from the interior of the stand to where the invasion began (and is densest) near the adjacent residences. The team will also flame or hoe the new French broom seedling cohort that establishes in winter 2023-24 to reduce reinvasion. All adult shrub biomass will be chipped and offhauled to the dump (transfer station). Removing the biomass from this highly flammable species will reduce the risk of fire which could eliminate (extirpate) the closed-cone tree from the stand and present a hazard for the community.

Project Completion Timeline

January 2024 - May 2024.

Applicants Background.

Jodi McGraw Consulting is a small, woman-owned biological consulting firm that assists conservation agencies and organizations with projects to conserve biodiversity including conservation, restoration, habitat management, and applied research projects. JMc will donate time by the principal (100%) and half the time of the JMc Restoration Ecologist and Habitat Restoration Technician, both of whom have extensive experience conducting large-scale broom removal in sensitive habitat. JMc also sponsors UCSC Restoration Ecology interns that will participate in the project. CDFW will contribute staff time and in-kind match of equipment to the project.

Jodi McGraw Consulting

PROPOSAL:
Bracken Brae Cypress Stand French Broom Removal
Santa Cruz County
Fish and Wildlife Advisory Commission (FWAC)

Project Summary

This project will remove French broom (*Genista monspessulana*) from an approximately 5.5-acre area where the exotic shrub has invaded the Bracken Brae stand of Santa Cruz cypress (*Hesperocyparis abramsiana*)—a State Endangered and Federally Threatened tree that is endemic to the western slopes of the Santa Cruz Mountains, where it is known from only 188 acres.

Project Need

Removal of the invasive plant is imperative to promote regeneration of the Santa Cruz cypress population at the site following the CZU Lightning Complex Fire, which burned through four of the five populations of the endangered tree. In the absence of this treatment, French broom will spread throughout the site and suppress the growth and survivorship of the seedling trees that established post-fire. The shrubs will also degrade the plant community, which is recognized as sensitive by the State of California, and increase the risk of another fire which could extirpate Santa Cruz cypress.

French broom at Bracken Brae cypress

Project Team

The project is being implemented by Jodi McGraw Consulting (JMc) in coordination with the California Department of Fish and Wildlife (Bay Delta Region) and the United States Fish and Wildlife Service (Ventura Fish and Wildlife Office). As part of a separate study of the effects of the fire on Santa Cruz cypress, which was funded by a Section 6 grant to the Santa Cruz Mountains Bioregional Council, JMc determined that French broom is one of the largest threats to successful regeneration of the pre-fire population and thus persistence of the species.

Applicant

As the applicant for the Project Team, Jodi McGraw Consulting is a small, woman-owned consulting firm that assists conservation agencies and organizations with projects to conserve biodiversity including habitat protection, restoration, and management, as well as applied research projects. JMc Restoration Ecologist and Habitat Restoration Technicians have extensive experience conducting large-scale broom removal in sensitive habitat including the Santa Cruz sandhills. JMc also sponsors UC Santa Cruz Restoration Ecology interns who are anticipated to participate in the French broom removal project. The Project Team will also invite local community groups to assist with work including the California Native Plant Society, Friends of Quail Hollow Ranch County Park, and the Santa Cruz Mountains Bioregional Council. This will provide an opportunity for community involvement and education while leveraging funding as described below.

Project Goals

1. Remove through hand pulling all adult French broom as well as all plants that could produce seed in 2024.
2. Flame or hoe dense aggregations of seedlings
3. Educate the community about the sensitive habitat and endangered species by engaging community groups who can assist with maintenance of the broom removal in future years.

Methods

With the assistance and matching services from California Department of Fish and Wildlife and local community restoration volunteers, JMc staff and interns sponsored by UC Santa Cruz will manually remove all adult French broom using the 'Bradley Method' to work the species back from the interior of the stand to where the invasion began (and is densest) near the adjacent residences. The team will also flame or hoe the new French broom seedling cohort that establishes in winter 2023-24 to reduce reinvasion. All adult shrub biomass will be chipped and off-hauled to the dump (transfer station). Removing the biomass of this highly flammable species will reduce the risk of fire which could eliminate (extirpate) the closed-cone tree from the stand and present a hazard for the community.

Budget

JMc is requesting a $6,481 grant from the FWAC, which will be used to fund:

- 24 hours of work by the JMc Restoration Technician ($1,632)
- 24 hours of work by the JMc Restoration Ecologist ($2,040)
- Fees to rent a chipper, trailer, and pay for dumping of the biomass off site (2 Days) ($1,450);
- Equipment and materials including 4 additional weed wrenches (to supplement those JMc is providing), 10 tarps to carry the broom to the chipping area and private vehicle mileage reimbursement to travel to the site ($1,359).

The FWAC grant funds will be matched by $13,592 in kind services contributed by CDFW and JMc.

JMc will supply 6 weed wrenches and donate the following labor valued at $9,432:

- 40 hours of work by JMc's Principal who will help coordinate the project and conduct broom removal ($4,800);
- 24 hours of staff time for JMc's Restoration Ecologist ($2,040); and
- 24 hours of staff time for JMc's Restoration Technician ($1,632).

JMc will also fund participation by UCSC Restoration Ecology interns, who sign up in January 2024 so the precise number of participants is unknown, but based on prior cohorts are anticipated to number include 4 interns for 2 days each.

CDFW is contributing the following staff time and additional in-kind match valued at $4,160:

- CDFW Biologist staff time (3 person days) ($1,440)
- CDFW Scientific Aide staff time (9 person days) ($1,440)
- CDFW Habitat Assistant staff time to haul and run chipper (2 person days) ($480)
- Rental for chipper for 1 day ($500)
- Rental fee for trailer to haul chips ($200)
- Dump fees ($100)

JMc Staff and Interns working with CDFW on a Prior Endangered Species Protection Project

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

Project Name: Advancing Community-Led Ecological Restora

Date: 10/2/23

Applicant name or Organization: Alexandra ('Ali') Boutros; University of California, Santa Cruz

Project Description:

As demonstrated in the ecological restoration literature, community involvement is key to restoration. Yet, how best to leverage community involvement and leadership is not well understood. Using two California (CA) examples of community-led kelp restoration efforts, I will identify best practices for community-led restoration with findings to inform development of CA's Kelp Restoration & Management Plan.

Funding Requested	4,171

ITEMIZED BUDGET ITEMS	Requested Funds	Matching Funds	Total Amount
Mileage to Mendocino County	645	N/A	645
Mileage to Monterey County	230	N/A	230
Food for Mendocino Fieldwork	248	N/A	248
Lodging for Mendocino Fieldwork	800	N/A	800
Food for Monterey Fieldwork	248	N/A	248
Stipend (living expenses)	2,000	N/A	2,000
TOTAL AMOUNTS			4,171

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

The 2014-16 marine heatwave led to > 90% loss of northern CA kelp forests, patchy kelp loss in Monterey Bay, a commercial red sea urchin federal fisheries disaster, the closure of the recreational red abalone fishery, and reduced kelp harvest. Among other notable aspects, kelp is important to the economic and cultural livelihood of coastal communities, is a NOAA-designated Essential Fish Habitat, and is a state-managed fishery. Therefore, its restoration is critical and should have both ecological and social impacts.

Project Goals

My project goals are to (1) both increase the effectiveness of community involvement and leadership in ecological restoration performance and to make community participation more meaningful for those who participate, and (2) synthesize and publish considerations and criteria for best practices gleaned from the literature and from personal field experience. For the latter, I will study two case studies of kelp restoration that have been led by community members: Tanker's Reef in the Monterey Bay region and Caspar Cove in the Mendocino region.

Project Logistics: how will the project be completed?

I will conduct a comparative case study to document how these two restoration efforts came to be, how community members were recruited and participated, and how their participation and diverse backgrounds influenced their contributions. I will use literature reviews, archival research, participant observation, semi-structured interviews, and qualitative data analysis to (i) characterize these efforts as two case studies of kelp restoration enabled by community involvement; and (ii) use this information to clearly identify the criteria and key elements that should be considered when thinking about the feasibility and application of community-led kelp restoration moving into the future.

Project Completion Timeline

June 2024.

Applicants Background.

Alexandra 'Ali' Boutros is an evolving steward of human-environmental systems. She is a second year Masters Fellow in the UC Santa Cruz Coastal Science & Policy Program. She is also a newly selected member in the 2023-2024 cohort for the Sustainable Ocean Alliance/Environmental Defense Fund Fellowship: Leadership for Climate Resilient Fisheries. She graduated from University of California, Los Angeles with a Bachelor of Science in Marine Biology in 2020.

Santa Cruz County Fish & Wildlife Advisory Committee RFP: Supplemental Information
Advancing Community-Led Ecological Restoration
Alexandra 'Ali' Boutros

As aforementioned, climate change has had devastating impacts on kelp along the CA coastline. From 2013-2016, the strongest marine heatwave ever recorded hit the northeast Pacific (Di Lorenzo and Mantua 2016). Kelp loss in central CA was patchy (Smith et al. 2021); in northern CA, more than 90% of bull kelp disappeared along the Sonoma & Mendocino coastline (8). The ecological, cultural, and economic consequences associated with this loss has prompted an urgent call for kelp restoration in CA. The CA Ocean Protection Council (OPC), CA Department of Fish & Wildlife (CDFW), and CA Sea Grant have just released a second request for proposals to provide $5 million of funding to accelerate and scale up kelp research and restoration across the state. Unprecedented marine heatwaves have not only affected kelp growth and recruitment, but they have also facilitated the explosion and overpopulation of purple urchins. Termed "urchin barrens", once plentiful and diverse kelp forests have been transformed into homogenous fields of purple urchins, which have lowered the productivity and resilience of these ecosystems. Purple urchins are native to the CA kelp forest ecosystem. However, this population explosion is impacting the structure, function, and balance of kelp forest ecosystems – much like the presence of an invasive species.

The growing need for ecological restoration is reflected by the United Nations' global designation of the Decade of Ecosystem Restoration (2021-2030). This has become especially important with rapid urbanization, development, and climate change (Suding et al. 2015). Community involvement in ecosystem restoration is now widely recognized as a key component in environmental management projects. Some of the most successful restoration programs have been attributed in part to community involvement (Fox and Cundill 2018; McGaughey et al. 2022; Gómez-Ruiz et al. 2022; Phalen 2009). Community involvement is considered key to the success of ecosystem restoration, as it employs local knowledge and expertise to develop innovative, contextually appropriate solutions to complex environmental problems (McGaughey et al. 2022; Gómez-Ruiz et al. 2022; Zimmer et al. 2022). It can also enhance participants' understanding of and appreciation for restoration science and policy (Miles, Sullivan, and Kuo, n.d.; Stone et al. 2008). With the growing demand for community-led restoration programs, it is imperative that guidance and "best practices" be developed and shared for effectively leveraging communities in ecological restoration. To address this knowledge gap, I will study kelp forest restoration in CA. Specifically, I will investigate two case studies of kelp restoration that have been led by community members: Tanker's Reef in the Monterey Bay region and Caspar Cove in the Mendocino region.

Project Background

In response to tremendous public political pressure, the California Fish and Game Commission (FGC) enabled an emergency and temporary (3 year) regulation amendment to the California Code of Regulations, Title 14, Section 29.06: i) at Caspar Cove, recreational fishers/divers with a sport fishing license may cull or remove an unlimited number of purple urchins for the purpose of restoring kelp; ii) at Tanker's Reef, recreational fishers/divers with a sport fishing license may cull or remove an unlimited number of purple and red urchins for the purpose of restoring kelp.

The goal of this temporary regulation change is to explore whether or not the recreational community can self organize to cull urchins down to a targeted density to facilitate kelp growth and return.

For Tanker's Reef specifically, it is very important to note that the social and ecological communities in the Monterey Bay Area are highly interconnected. Tanker's Reef is located in Monterey County, however much of the engagement and community workforce comes from Santa Cruz. Ecologically, the kelp forest ecosystems within the Bay follow no county lines. While kelp forests in Santa Cruz county are currently "healthy", climate change is creating a very unpredictable landscape, with environmental degradation occurring at astonishing rates. This project would enhance preparedness in Santa Cruz county - both for possible kelp loss and any other type of environmental degradation (marine or terrestrial). Understanding how best to leverage community leadership and involvement in ecological restoration will be key to ecological restoration projects moving forward.

The temporary regulation change is set to expire April 1, 2024. However, the FGC has recommended that the regulation be extended for 5 more years at Caspar Cove and is considering a 5 year extension at Tanker's Reef. My research is centered around the institutional arrangements around these two sites: how community members have tackled the problem, what the arrangements have looked like, what has worked well, limitations, and lessons learned. I will be revisiting these two sites in the late winter and spring of 2024 to track the decision made by the FGC, share my results with participants, and garner feedback from community members and restoration practitioners. I am requesting funding from the Santa Cruz County Fish & Wildlife Advisory Commission to support me in this fieldwork. There is significant state-level significance with this work. However, the opportunity to re-engage with these community members in early 2024 would strengthen the local resonance and impact of this project and my findings.

Project Team

My academic advisors, Dr. Mark Carr, Professor in Ecology and Evolutionary Biology at UC Santa Cruz, and Dr. Carrie Pomeroy, a research social scientist with the Institute of Marine Sciences at UC Santa Cruz and an adjunct faculty with the Coastal Science & Policy Program, are engaged in ongoing kelp restoration research. Dr. Carr is a marine ecologist and Dr. Pomeroy is a social scientist. Both are participants in an NSF-funded study on kelp restoration as a social-ecological system (SES). My work will also inform that research project. This work is being grounded, in part, by Dr. Kristen Elsmore, environmental scientist at California Department of Fish and Wildlife and lead on California's Kelp Restoration and Management Plan and Tristin McHugh, Kelp Project Director at The Nature Conservancy. This highly intellectual and expert team of advisors and partners will help ensure that the results of my work will have a large impact and be used to inform future community-led kelp restoration efforts in the state of California.

JEDIA (Justice, Equity, Diversity, Inclusion, and Access) Focus & Enhancement

I will synthesize case studies, detailing: personal accounts, objectives, outcomes, obstacles, successes, and lessons learned from two systems of community-led kelp restoration in California. My research will highlight the power that community members - some of the people most affected by kelp loss - have to lead the restoration of local ecosystems. Specifically, my research will legitimize the importance of having diverse expertises, knowledge, and perspectives engaged in ecosystem restoration efforts. I will share these findings with state agencies - specifically CDFW, who I am partnered with - so that my research can be incorporated into the development of a statewide Kelp Restoration and Management Plan. In doing so, I will further enable and facilitate the integration and adoption of community-led kelp restoration programs moving into the future. This will inadvertently increase the inclusion and access of community members to kelp restoration and coastal natural resources.

Applicants Background (Continued)

As a Lebanese woman living in the US, Ali is keenly aware of how detrimental political corruption, greed and war have been to Lebanon's natural resources and ecosystems. She understands how interconnected human and environmental health are and has watched the Lebanese people - including her family - suffer as a result of environmental degradation. In Lebanon, the citizens have no say in how their environment is managed or protected. Ali understands the privilege she has in the US, where citizens can advocate for themselves and the environment. This insight has inspired her to work with human-environmental systems, where she hopes to have a positive impact. Her academic and professional goals are to: leverage community involvement in ecological restoration; and identify best practices for such efforts based on her capstone thesis research on community-led kelp forest restoration in California.

Relevant/Work experience:

- Fellow - Sustainable Ocean Alliance/ Environmental Defence Fund Leadership for Climate Resilient Fisheries Fellowship (October 2023 - Present).
- UC Santa Cruz MARINE (Monterey Area Research Institutions' Network for Education) Liaison, Santa Cruz, California (September 2022 - Present)
- Senior Communications Specialist, Checkerspot, Inc., Alameda, California (February 2021-May 2022);
- Bull Kelp Recovery Program Intern, Greater Farallones Association, San Francisco, California (August 2020 - February 2021)
- Founding Group Member, The Beirut Fund, San Francisco, California (August 2020 - Present)
- Intern/Founder Shark Stewards at UCLA, Los Angeles, California (August 2019 - June 2020)
- Student Member, UCLA Surfrider Foundation, Los Angeles, California (January 2019 - June 2020)
- Intern, Greater Farallones Association, San Francisco, California (June 2019 - September 2019)
- Tropical Marine Ecology Intern, Cape Eleuthera Institute, The Bahamas (June 2018 - August 2018)
- Public Programs/Conservation Intern, The Marine Mammal Center, Sausalito, California (June 2017 - August 2017)

Budget:
Calculations Explained:

1. Mileage for Mendocino fieldwork $645 (UCSC- Fort Bragg r/t *2 trips @ $0.625 per mile).
2. Mileage for Monterey fieldwork $230 (UCSC-Monterey r/t *4 trips @ $0.625 per mile).
3. Lodging Mendocino Fieldwork: $800 (approximately $200/night * 4 nights).
4. Food (Mendocino fieldwork) $248 (per diem @ $62/day * 4 days)
5. Food (Monterey fieldwork) $248 (per diem @ $62/day * 4 days)

Other sources of funding:

1. Institute of Marine Sciences, UC Santa Cruz: $750
2. Sustainable Ocean Alliance & Environmental Defense Fund: Leadership for Climate Resilient Fisheries Fellowship: $10,642
3. Sigma XI: $1,000 (Pending approval)

*To note: these secured funding sources do *not* cover the expenses requested in this grant proposal.

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

Project Name: Transportation for Ocean Stewards Date: October 25, 2023

Applicant name or Organization: O'Neill Sea Odyssey

Project Description:

Transportation for Ocean Stewards will enable Santa Cruz County classes that want to participate in O'Neill Sea Odyssey's (OSO) free, ocean-going science and environmental field trip with the financial support to secure bus transportation from their school to OSO's facility at the Santa Cruz Harbor. OSO is committed to eliminating barriers for local youth to access our coasts and oceans.

Funding Requested	$2,500

ITEMIZED BUDGET ITEMS	Requested Funds	Matching Funds	Total Amount
Transportation for Ocean Stewards Busing	$2,500	$8,700	$11,200
TOTAL AMOUNTS	$2,500	$8,700	$11,200

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

O'Neill Sea Odyssey provides hands-on watershed and marine science experiences for youth. The field trip is free of charge, but the cost of bus transportation has become an obstacle for many schools. Bus transportation is effective in the recruitment of classes to participate in our program, and in removing barriers to vulnerable communities. Districts are facing increase costs and operational challenges serving all students equitably. Grant funds will support transportation scholarships for PVUSD schools. In the 2022-23 school year, OSO provided trips to 3,242 students from 136 classes, and granted $52,280 in bus transportation scholarships for 92 classes.

Project Goals

OSO's mission is to provide hands-on educational experience to encourage the protection and preservation of our living sea and communities. The Transportation for Ocean Stewards project will support three or four Santa Cruz County classes with bus transportation funding. OSO has developed a partnership with the PVUSD transportation department, but bus costs have increased and range anywhere from $600 to $1,000 each. Classes that apply for transportation support are selected based on (a) school's income status as determined by their percentage of students that are economically disadvantaged, (b) school's ability to pay for a bus, and (c) commitment to actively seek the best price for a bus. Together we will eliminate barriers for school age youth to access experiences to learn and understand about the ocean ecosystem and wildlife within.

Project Logistics: how will the project be completed?

The OSO Program Manager selects participating Title I classes from our applicant pool each spring. Each class can then apply for transportation scholarships as needed. To qualify for the scholarship, the teacher will send a letter or email to the Program Manager showing evidence that: 1) the school acknowledges how much the bus will cost, 2) the teacher will actively make an effort to keep the cost as low as possible, and 3) there are no other sources of funding for bus transportation available to that class. Once the class attends, the teacher will submit the transportation invoice to OSO. Every attempt will be made to utilize buses from school district transportation department to maximize Transportation Grant funds available. Transportation challenges have created barriers and caused many youth to have missed critical field based learning experiences. This project provides access for youth to access and gain a deeper understanding of our natural world.

Project Completion Timeline

March 2024 - December 2024 PVUSD classes will be served during OSO Spring & Fall 2024 season

Applicants Background.

O'Neill Sea Odyssey (OSO) engages 4th - 6th grade youth with a free, hands-on science education field trip on a 65-foot catamaran on Monterey Bay and in a shore-side education center. The program is broken down into three phases and provides over 8 hours of support with: 1) pre-curriculum classroom lessons, 2) Three-hour immersive field experience, and 3) each class completes a student led community service project. The OSO experience focuses on STEM lessons designed to provide an introduction to oceanography, ecology and biology. The OSO program is free and is committed to eliminating barriers for youth. In 2022 we received the Monterey Bay National Marine Sanctuary Foundation Sea Star Award for Education and Outreach. In over 25 years of service, we have served over 123,000 youth.

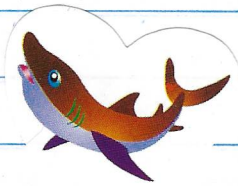
June 1, 2023

Dear Supervisor Zach Friend,

My name is Lupita and I am a 4th grader at MacQuiddy Elementary School in Watsonville. This year I learned all about our cool Marine Sanctuary in Monterey Bay. I am writing to you today because I am worried about too much trash on our beaches. We need more tash cans on the beach! In my opinion the trash can look like a voceno trash can. We need more and more trash cans. This issue affects me, my family and whole community. I believe this is so important because the wind will carry trash into the ocean and birds and animal's will suffer. Thank you for your help I believe we can help the ocean.

Sincerely,

Lupita

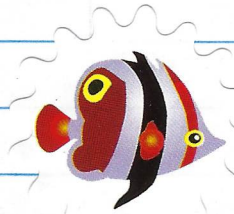


June 1 2023

Dear supervisor Zach Friend,
My name is Brianna and Im a 4th grader at MacQuiddy Elementary School at Watsonville.

This year I learned all about our amazing marine sanctuary in Monterey Bay. I am writing to you today because Im worried about our beaches!

Because we need more trash cans on the beaches! The Garbage is like a volcano its so disgusting! This issue affects everone in our community! This issue is so Important because the wind blows the trash that meahs animals suffer. Thank you for reading this and hope this helps!
I belive this can be a positive change!



Sincerely
Brianna

County of Santa Cruz

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

Project Name: Black Surf Santa Cruz Youth Cohort Date: 10/24/2023

Applicant name or Organization: Black Surf Santa Cruz

Project Description:

See attached

Funding Requested	2,500

ITEMIZED BUDGET ITEMS	Requested Funds	Matching Funds	Total Amount
Organizing youth cohort (staff time)	1,000	2,500	3,500
Staffing youth cohort activities (including water	1,000	2,500	3,500
Supply Costs: Food, equipment rentals	500	500	1,000
TOTAL AMOUNTS		5,500	8,000

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

See attached

Project Goals

See attached

Project Logistics: how will the project be completed?

See attached

Project Completion Timeline

See attached

Applicants Background.

See attached

Black Surf Santa Cruz Youth Cohort Proposal

Project Description:

Black Surf Santa Cruz will launch our first youth cohort(s) specifically for Black youth and other youth of color throughout Santa Cruz County in the Spring of 2024. Funding support from the Fish and Wildlife Advisory Commission will support the activities of 15 BIPOC youth in the cohort. In a community centered around coastal culture, all residents and visitors benefit from Black Surf Santa Cruz's efforts to dismantle barriers that limit participation in coastal recreation and conservation experiences, whether participants have experienced a lack of safety, an unwelcoming environment, or lack of the knowledge and skills to feel at home.

This project will involve community building through shared time at weekly meetups such as communal meals and trips to the beach, skill building by learning about water safety both in the pool and along the coast (how to protect head and neck, read tide charts, etc.), conservation activities such as beach cleanups and education about ocean and tide pool organisms unique to Monterey Bay National Marine Sanctuary including hearing from conservation representatives about the importance of actions like preventing and removing invasive species and removing marine debris among other projects, leadership building through opportunities to engage in ocean and coastal advocacy and access issues, recreation, and environmental justice education.

Youth will feel a sense of safety and connection by learning together, forming meaningful bonds with one another and with Black Surf Santa Cruz as an organization, and feeling a sense of place and belonging in Santa Cruz County as valued conservation leaders and beloved community members on land and at sea.

Background of the Issue being Addressed:

Due to systemic racism, redlining, segregation at swimming pools and beaches, and the legacy of slavery, Black community members have been excluded from coastal and ocean spaces, including conservation careers, alongside other historically and presently excluded community groups. The exclusion and lack of feeling of safety while at the ocean has prevented Black and other community members from being able to access the ocean and participate in the many sustainability and conservation related activities associated with Monterey Bay. Black youth continue to endure this legacy of racism and exclusion and, as a result, are not afforded the same opportunities and benefits that result from connecting with nature and feeling accepted and included in the predominantly white conservation community. By specifically supporting Black youth and other youth of color through this skill building cohort, youth will increase their confidence not only at the ocean, but in learning about and participating in conservation activities.

Project Goals:

This project aims to engage a minimum of 15 youth through Black Surf Santa Cruz's first youth cohort in the spring of 2024. It aims to support youth, their parents, and other family members with wrap-around educational materials and experiences including beach cleanup activities, sanctuary educational scavenger hunt and tide pooling, water safety and ocean skill building, marine science curriculum including understanding invasive species (such as threats like sargassum species), and indigenous land and ocean acknowledgements and connections. The

youth cohort and their families will be invited to connect with the coast and ocean, have a fun and comfortable experience on the beach and in the water, participate in conservation activities such as a beach cleanup, and learn about endangered and endemic species to Monterey Bay National Marine Sanctuary through educational programming provided over multiple weeks. All program offerings including rental of wetsuit, kayaks, surfboards, life jackets, all food, educational programming, and celebratory activities are zero cost to the participants to eliminate any barriers to their participation.

Project Logistics (how will the project be completed?):

Bella Bonner and support staff will recruit youth cohort participants in the beginning of 2024 through a vast network of BIPOC community members and organizational partners, including Black Surf Santa Cruz's participant membership which includes over 200 people. Black Surf Santa Cruz staff will register participants, select dates for meet ups based upon group availability, organize activities such as skill building, beach visits, cleanups and conservation activities, surf pop ups, etc. Black Surf Santa Cruz staff will also organize the appropriate water safety staffing, partner organization collaboration (such as Surfrider or Save Our Shores in the past for cleanups), special guests, and more. The cohort will "graduate" in alignment with the annual Liberation Paddle Out in June and will be recognized for their accomplishments.

Project Completion Timeline:

The first cohort will be recruited, organized, participate, and graduate following the completion of the school year's Spring 2024 semester and will be celebrated at the Liberation Paddle Out event in June 2024.

About the Applicant:

Black Surf Santa Cruz was founded by Bella Bonner following the murder of George Floyd in 2020 at the hands of racist police officers. Bonner recognized the lack of inclusivity and diversity in local surf lineups and in ocean activities in general, and the lack of access for Black and many other historically and presently excluded community members. Members of the ocean/surf and sustainability community held paddle out events to honor Floyd, yet they did not plan for ways for Black and other people of color to attend the event. Bonner started a volunteer club called Black Surf Santa Cruz to recruit Black community members and other excluded groups, primarily people of color, to create a group where people felt safe, seen, supported, and valued. She procured donated boards, wetsuits, fundraised sponsors to cover costs, and recruited water safety support. The success of Black Surf Santa Cruz as a club grew quickly with high demand from thousands of community members who had not felt like they were part of the ocean community and ocean conservation community. As a result, Bonner recruited her Board of Directors and filed for nonprofit status, becoming a certified California nonprofit in 2022. As of this date, Black Surf Santa Cruz now serves the community with Pop Up surf lessons, Prepare to Pop Up programming to teach community members how to swim in swimming pools and provide safety training, equity and environmental justice educational programming, conservation and climate related wrap around educational programming, and the annual Liberation Paddle Out event. Black Surf Santa Cruz has received funding from Justice Outside, Coastal Conservancy's Explore the Coast program, the Ocean Conservancy and their Ocean Justice

program, and hundreds of individual supporters. Bonner serves as the sole full-time staff member, with one part time staff member as support.

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

Project Name: MBSTP 2024 Summer Salmon Camp Date: 10/20/23

Applicant name or Organization: Monterey Bay Salmon & Trout Project (MBSTP)

Project Description:

MBSTP will host a 4-5 day educational summer camp for up to 15 children aged 9-14 (Grades 3-8). The camp will be based upon a strong experiential learning component from the field trip modules of MBSTP's Next-Generation Science Standards (NGSS)-aligned Salmon & Trout Education Program (STEP) curriculum. Potential topics include: estuary/headwater field trips, 2) field trips to MBSTP's Kingfisher Flat Hatchery, 3) field trip to Loch Lomond, 4) field trip to Moss Landing/Monterey Bay Aquarium, and 5) a day on Monterey Bay in a chartered fishing or whale watching vessel. The camp will include transport to/from Santa Cruz each day, a bagged lunch, and ~6 hours of field trip content. Camp will be MBSTP sponsored/supported, with registration fees and general donations covering most expenses.

Funding Requested	$3,630

ITEMIZED BUDGET ITEMS	Requested Funds	Matching Funds	Total Amount
Camp Coordinator (150 hrs @ $40/hr.)	$1,500	$4,500	$6,000
2 X Camp Assistant (80hrs. total @$40/hr.)		$3,200	$3,200
Transport - 1 week rental of 15 passenger van	$1,280		$1,280
Field Trip materials (youth waders, water quality test kits, BMI sampling gear)	$500		$500
1 x daily charter of fishing/whale watching vessel		$2,000	$2,000
Bagged lunches for camp attendees (qty: 75)		$1,025	$1,025
Insurance		$2,400	$2,400
Fuel	$350		$350
TOTAL AMOUNTS	$3,630	$13,125	$16,755

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

MBSTP operated the Salmon & Trout Education Program (STEP) in local K-12 classrooms for over 25 years (1995-2020). The program has struggled to become re-established in local schools since COVID protocols were enacted in 2020. The MBSTP Summer Salmon Camp is an effort to re-connect local kids with our mission of watershed stewardship and the conservation of native salmon & steelhead. Former STEP teachers frequently request out-of-classroom field trip content that engages their students in the proscribed curriculum. The Summer Salmon Camp will help kids connect with their local watersheds and foster long-term stewardship of the habitats of native salmon and steelhead.

Project Goals

The immediate goal of the MBSTP Summer Salmon Camp is to engage local kids in watershed science topics in an experiential, hands-on (and fun) learning experience. Learning outcomes of the camp will be assessed with pre/post student surveys and coordination with local science teachers. The longer-term goal of this project is to help create future generations of watershed stewards who are engaged in local conservation efforts for salmon, steelhead, and other native species. This program will also contribute to the return of STEP to local classrooms in the long run, by helping MBSTP refine & improve upon field trip content before fully engaging with school districts for relaunch of the program.

Project Logistics: how will the project be completed?

MBSTP will facilitate camp signups/registration in early Spring of 2024. MBSTP will provide instruction/supervision, transport, lunches, lesson materials, etc. for each field trip. MBSTP will be responsible for hiring staff and securing adequate volunteers to conduct camp activities.

MBSTP's NGSS-aligned science curriculum lessons will serve as the foundation for the field trip modules. The goal will be to orient students with different aspects of salmonid life history at each field location: headwaters for eggs/fry, streams/rivers/estuaries for juveniles, and the ocean for adults. Each site will include both hands-on and instructive learning opportunities, with guidance provided by local K-12 school teachers on lesson delivery, content, and retention.

Project Completion Timeline

Camp will take place in Summer of 2024 (potential dates: week of 6/10, week of 6/17, week of 8/5)

Applicants Background.

MBSTP is a 501c3 nonprofit organization dedicated to the recovery of native salmon & steelhead of the Monterey Bay region MBSTP works in partnership with federal, state, and local natural resource agencies to accomplish goals in fisheries conservation. MBSTP historically operated the the Salmon & Trout Education Program (STEP) in local schools for over 25 years. MBSTP staff has experience in hosting field trips to local watersheds for elementary/middle school students.

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GRANT INFORMATION**: PROPOSAL**
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Project Name: Family Stewardship for the San Lorenzo River Date: 10/26/23

Applicant name or Organization: Coastal Watershed Council (CWC)

Project Description:

CWC's education program engages over 800 elementary-aged youth annually to learn about the San Lorenzo River, its fish, wildlife and plants, how we rely on and impact it, and how to take action to benefit the environment, including by removing invasive species. On every second Saturday of the month, CWC invites community members to join River Health Day volunteer events to remove invasive species and improve biodiversity along the lower San Lorenzo River and Riverwalk. CWC seeks funding from the Fish and Wildlife Advisory Commission to engage students and their families in habitat enhancement activities, including invasive species removal, beyond the classroom and in their community.

Funding Requested	$5,000

ITEMIZED BUDGET ITEMS	Requested Funds	Matching Funds	Total Amount
Personnel	$4,750	$0	$4,750
Materials & Supplies	$250	$0	$250
TOTAL AMOUNTS	$5,000	$0	$5,000

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

The final 2.5 mile stretch of the San Lorenzo River before it drains into the Monterey Bay National Marine Sanctuary is channelized by a levee system that has impaired the coastal estuary and left poor, compacted soils where invasive species (e.g. Himalayan Blackberry, ice plant) have thrived. The loss of habitat compounded with the challenges associated with maintaining an urban river system have caused harm to fish and wildlife species that depend on the riparian ecosystem for food, breeding and shelter. Many of the same invasive species found on the San Lorenzo River levee are found throughout Santa Cruz County and require broad community education to address.

Project Goals

CWC engages people of all ages, abilities and backgrounds to remove highly invasive species from the river levee, to seed biodiverse native species, and to improve ecosystem function. In the classroom CWC teaches over 800 elementary-aged youth each year about riparian systems, including why native plants matter for providing habitat, preventing pollution improving biodiversity and more. CWC is seeking funding to engage students beyond the classroom by inviting whole families to learn about native and invasive species and participate in River Health Day volunteer events, which are held each 2nd Saturday of the month. CWC will measure its success by engaging 300 youth and adults to remove 700 square feet of highly invasive plant cover in areas where native plants are out-competed along the lower San Lorenzo River as well as the number of students who receive education about native plants.

Project Logistics: how will the project be completed?

Children can be the learning leaders of their families, bringing home what they learned at school to teach their parents and siblings. CWC will work to make this even easier for students by bridging the gap between what they learn about the San Lorenzo River and its habitat in the classroom and what they can do outside of school to improve the habitat conditions where they live by removing invasive species, planting native plants and improving biodiversity. Through bilingual (English/Spanish) materials sent home with students, opportunities to remove invasive species and tend to native plants at volunteer days, and educational events to reach multi-generational families, CWC will engage diverse families in education and action to remove invasive species and care for native habitat in Santa Cruz County.

Project Completion Timeline

This project will take place during the Spring 2024 school semester from January to June 2024.

Applicants Background.

CWC is working to transform the lower San Lorenzo River into a community destination by inspiring people to explore, enhance and protect this critical natural resource. In its 28-year history, CWC has engaged thousands of volunteers and students to monitor water quality, enhance habitat and implement best management practices for a cleaner, healthier San Lorenzo River. Moreover, CWC has demonstrated its ability to effectively use FWAC for long-term impact, as evidenced by the Downtown Streets Team partnership. This program, funded as a pilot by the FWAC in 2022-23, continues to be held every Tuesday afternoon, engaging people experiencing homelessness in habitat enhancement activities.

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

Project Name: Determination of seasonal shark distribution in near-shore waters Date: 10/26/2023

Applicant name or Organization: Pelagic Shark Research Foundation (PSRF) and Sean Van Sommeran

Project Description:

To determine the seasonal distribution of sharks in the near shore environment, 26 biweekly surveys will be flown throughout the year using a drone equipped with a high resolution camera. Sighting will identify the shark species, the number of individuals and their behavior. The sightings will be summarized by season and made available to the public and other researchers through placement on PSRF's website and our social media outreach.

Funding Requested	$6,000

ITEMIZED BUDGET ITEMS	Requested Funds	Matching Funds	Total Amount
Mavik 3 - Drone and Batteries	1,000		1,000
Computer	1,000		1,000
Salary	3,000		3,000
Fliers/Posters - Public Outreach	500		500
Travel - In County	500		500
TOTAL AMOUNTS	$6,000		$6,000

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

The seasonal distribution of sharks in the near-shore environment of Santa Cruz County is poorly understood and for at least one species, white sharks, recently changing as a result of climate change. Prior to the marine heat wave of 2014-2016, juvenile white sharks were restricted to the waters south of Los Angeles, but since then they have routinely been sighted in the waters off Santa Cruz County. This has resulted in non-consumptive killings of sea otters in the waters off Santa Cruz County. Other species may also be changing their distribution patterns.

Project Goals

The primary goal is to monitor the seasonal distribution and behavior of various shark species in near-shore environments. The project has two main objectives: 1) data collection utilizing state-of-the-art drones equipped with high-resolution cameras and sensors to conduct biweekly flights. These flights will enable us to collect real-time data on the presence, abundance, and behavior of different shark species; and 2) increase public awareness by integrating the data to educate and inform the community about the significance of sharks in these ecosystems and the necessity of responsible coexistence.

Project Logistics: how will the project be completed?

26 biweekly drone surveys will be flown from the coastline to one mile offshore using a drone with a 4K video camera. Surveys will cover the waters of southern Santa Cruz County from the Pajaro River to Pt Santa Cruz. Based on our prior knowledge of sharks in this area, the surveys will be concentrated in the area between Rio Del Mar and Capitola Wharf. Surveys will be flown at an altitude of xxx feet by a FAA certified drone pilot with an observer monitoring the video for sightings. When a sighting occurs, the drone will descend to take photographs for the id of the animals and determination of their behavior. Once a survey is completed, analysis of the video will be performed by viewing it on a large screen: sightings will be enumerated, identifications made and behavior described and stored in a Google database. Videos will be uploaded to the cloud for storage. Data will be summarized seasonally. PSRF's website will have videos and summaries of sightings for public outreach.

Project Completion Timeline

Surveys will be conducted biweekly through 2024, and a final report issued by June 2025.

Applicants Background.

Pelagic Shark Research Foundation is a volunteer organization dedicated to developing a better understanding of elasmobranchs, their conservation and management through research, coordination with other conservation organizations, and an educational outreach program. PSRF was founded in 1990 by Sean Van Sommeran and has worked with scientists from UCSC, Stanford University, Moss Landing Marine Lab, NOAA and other institutions. Over 20 articles have appeared in the peer-reviewed literature as a result of these collaborations. It has successfully lobbied for protection of leopard sharks in Elkhorn Slough, and an end to shark finning in US waters. It has made presentations at the Santa Cruz Museum of Natural History, at Shark Week on the Santa Cruz Wharf and many local schools.

Pelagic Shark Research Foundation

Marine Wildlife Consultant since 1990.

Pelagic Shark Research Foundation. An Independent - Not for Profit - Research - Education and Conservation Advocacy org. Santa Cruz, California

Original Sponsor of (California Assembly Bill 522/SB177) white shark protected status in California and subsequent protections within California's National Marine Sanctuaries.

Work History:

2022 Carnobacterium maltaromaticum associated with meningoencephalitis and otitis in stranded common thresher sharks (Alopias vulpinus). Published and printed 2022. Authors Laura Martinez Steele, Mark S. Okihiro, Renaud Berlemont, Jesse G. Dillon, Kelly A. Young, Shohreh Hesami, Sean Van Sommeran, Christopher G. Lowe.

2018 Basking Shark (Cetorhinus maximus) Movements in the Eastern North Pacific Determined Using Satellite Telemetry. Science Journal Frontiers. Authors: Heidi Dewar, Steven G. Wilson, John R. Hyde, Owyn E. Snodgrass, Andrew Leising, Chi H. Lam, Réka Domokos, James A. Wraith, Steven J. Bograd, Sean R. Van Sommeran and Suzanne Kohin.

2017 Metagenomic next-generation sequencing reveals Miamiensis avidus (Ciliophora: Scuticociliatida) ; 2017 epizootic of leopard sharks (Triakis semifasciata) in San Francisco Bay, California. Biorix Science Journal. Authors: Hanna Retallack, Mark S. Okihiro, Elliot Britton, Sean Van Sommeran, Joseph L. DeRisi.

2013 Meningoencephalitis associated with Carnobacterium maltaromaticum-like bacteria in stranded juvenile salmon sharks (Lamna ditropis). Journal of Veterinary Pathology. Authors: Paula A Schaffer , B Lifland, Sean Van Sommeran, Dave R Casper, Corrine R Davis.

2012 Comparative morphology of rostral cartilages in extant mackerel sharks (Chondrichthyes, Lamniformes, Lamnidae) using CT scanning. Science Journal Zootaxa, 2012. Authors: FREDERIK H. MOLLEN, SABINE P. WINTNER, SAMUEL P. IGLÉSIAS, SEAN R. VAN SOMMERAN, JOHN W. M. JAGT.

2011 DRAFT GUIDELINES FOR SHARK AND RAY RECREATIONAL FISHING IN THE MEDITERRANEAN. United Nations Environment Programme for Mediterranean Action Plan; Regional Activity Centre for Specially Protected Areas,(RAC/SPA). Tunis. With the participation

of : Daniel Cebrian, Ian Cowx, Sheldon Dudley, Edgardo Di Giacomo, Samuel Gruber, Lucy Harrison, Pilar Hernandez, Ali Hood, Steve Kessel, Nancy Kohler, Bruce Mann, Meaghen McCord, Gabriel Morey, Jack Musick, Lisa Natanson, Gemma Parkes, Richard Pierce, Scottish Sea Angling Conservation Network, Fabrizio Serena, Bernard Seret, Rowland Sharp, Sean van Sommeran and Pelagic Shark Research Foundation. Charlott Stenberg, Alen Soldo, Sergi Tudela, Daniel Turner.

2009 Philopatry and migration of Pacific white sharks. Royal Society of Biology, UK. Authors: Salvador J. Jorgensen, Carol A. Reeb, Taylor K. Chapple, Scot Anderson, Christopher Perle, Sean R. Van Sommeran, Callaghan Fritz-Cope, Adam C. Brown, A. Peter Klimley and Barbara A. Block.

2002 Five Species of Parasitic Copepods (Siphonostomatoida: Pandaridae) from the Body Surface of a White Shark Captured in Morro Bay, California; Pacific Science. Project: Evolution of Pacific Elasmobranchs: Paleontology, Taxonomy, & Biogeography. Authors: George Benz, Henry F. Mollet, David A. Ebert, Sean Van Sommeran.

2001 The hunting strategy of white sharks at a pinniped colony. Journal Marine Biology. Authors: Klimley AP, Le Boeuf BJ, Cantara KM, Richert JE, Davis SF, Van Sommeran S and JT Kelly.

2001 Radio-acoustic positioning as a tool for studying site specific behavior of the white shark and other large marine species. Authors: A. Peter Klimley, Burney J. Le Boeuf, Kelly M. Cantara, John E. Richert, Scott F. Davis, S. Van Sommeran.

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GRANT INFORMATION**: PROPOSAL**
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Project Name: Population Ecology of Caifornia White Sharks Date:

Applicant name or Organization: California White Shark Project 501 (c)(3)

Project Description:

The California White Shark Project is a designated 501(c)(3) nonprofit led by Dr. Paul Kanive and Scot Anderson. For over thirty years, our researchers have been collecting data on white sharks, creating the longest data-set in the world on a white shark population. This data has been instrumental in generating over 25 peer-reviewed scientific papers, increasing our understanding of these animals, and helping guide regulation and policy around the protection of white sharks. Our goal for this project is to sample for white sharks at known aggregation sites that include Tomales Point and the Farallon Islands. We identify individuals via photos of their dorsal fins and catalogue these observations into a database that can be readily used to estimate important population parameters.

Funding Requested	$7000

ITEMIZED BUDGET ITEMS	Requested Funds	Matching Funds	Total Amount
Farallon Island Boat Charter ($1000/day)	7000	7000	14000
TOTAL AMOUNTS	$7000	7000	14000

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

Determining whether the number of individuals in a population is increasing, decreasing or stable over time is a central goal for assessing the status of wildlife populations such as white sharks (Williams et al., 2002). Understanding the white shark population is paramount to our environment at large as these apex predators play a crucial role in maintaining the balance of marine ecosystems by controlling the populations of prey species, which ultimately helps preserve the health and diversity of the oceanic food web.

Project Goals

Our project goals are to conduct 14 days of observation from boats, gathering photographs and underwater videos of white sharks. We then collate new data into existing datasets, documenting 'new' sharks and matching 'known' sharks that have been identified in previous years. These data can then be used for statistical analysis aimed to estimate important population parameters such as abundance and associated population trends of white sharks in this area. Our ongoing research will help advise public policy and regulation in the future.

Project Logistics: how will the project be completed?

During peak coastal residency (September to January), white sharks are attracted to a research boat using a seal decoy, and motivated to circle the boat with a small (<2kg) piece of salvaged marine mammal blubber (permitted use by National Marine Fisheries Service) tethered against the boat at the water line (Kanive et al., 2015). Individual sharks are identified from photo and video images of the natural and unique patterns on the trailing edge of their dorsal fin as fin morphological patterns have been validated for stability over periods exceeding 25 years (Anderson et al., 2011). These methods of data collection that identify individuals, along with sex and size class, over time have been used to estimate demographic specific population parameters (Kanive et al., 2015, 2019, 2021).

Project Completion Timeline

December 2024

Applicants Background.

The California White Shark Project is led by researchers Dr. Paul Kanive and Scot Anderson. Paul has been studying white sharks since 2008. After earning a Master's degree in Fish and Wildlife Management in 2015, he continued his work on white shark population dynamics earning a Doctorate degree in Fish and Wildlife Biology in 2020. Scot Anderson, after graduating with a degree in Environmental Studies, he pioneered white shark research that started in 1987. Paul and Scot have several decades of experience on research boats attracting white sharks for purposes of research. Their efforts have led to over 35 peer-reviewed scientific publications.

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GRANT INFORMATION**: PROPOSAL**
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Project Name: 41st Salmonid Restoration Conference Date: 10/26/2023

Applicant name or Organization: Salmonid Restoration Federation

Project Description:

The Annual Salmonid Restoration conference offers an unparalleled opportunity for stakeholders with a vested interest in the recovery of California's native salmonid populations to engage in technical education. The four-day conference, which will be held in Santa Rosa from March 26 - 29, 2024, will highlight regional and topical issues that affect salmonids and their diverse habitats by offering exemplary field tours, technical workshops, concurrent sessions, and a plenary session on the state of salmonid recovery in California.

Funding Requested	$2,000

ITEMIZED BUDGET ITEMS	Requested Funds	Matching Funds	Total Amount
Conference Scholarships (2 @ $450 each)	**$900**	**$1800**	**$2,700**
Personnel- SRF Staff		**$45,000**	**$45,000**
Facility and Catering Contract		**$215,000**	**$215,000**
Subcontractors: AV, tech support, videographer	**$1,100**	**$8,000**	**$9,100**
Cvent and other registration costs		**$6,500**	**$6,500**
Printing: Conference Proceedings, Agenda packet, final schedule and Signage		**$10,000**	**$10,000**
Per diem: Mileage & Lodging		**$5,000**	**$5,000**
Transportation		**$3,000**	**$3,000**
TOTAL AMOUNTS	**$2,000**	**$294,300**	$296,300

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

Anadromous fisheries in California are in a steady state of decline. Chinook and Coho salmon are extinct in much of their historic range and are listed as threatened / endangered under the Endangered Species Act. It is vital that restoration practitioners, landowners, and agencies that are entrusted to uphold public trust values have an opportunity to learn from each other's habitat restoration successes and failures so that together we can advance salmonid recovery efforts. The 2024 Conference will highlight restoration techniques and priority recovery strategies to address groundwater supply, fish passage barriers, prescribed fire and post-fire restoration opportunities, dam removal, streamflow enhancement, and other salmonid restoration strategies and techniques.

Project Goals

- Improve salmonid habitat restoration efforts,
- Teach California Department of Fish and Wildlife (CDFW) and NOAA Fisheries protocols and methodologies to help recover salmon populations,
- Educate resource professionals about restoration techniques that address limiting factors to salmon,
- Engage the watershed community about the need and mechanisms to protect and restore wild salmon populations.

Project Logistics: how will the project be completed?

SRF produces the largest salmon watershed restoration conference in California. Our conference history has demonstrated success based on our track record of developing pertinent curriculum to advance watershed restoration in California. The SRF conference successfully engages a broad spectrum of the watershed restoration field including agency personnel, practitioners, scientists, planners, consultants, watershed groups, tribal members, students, and landowners.

The production and coordination of the conference is accomplished by collaborating with regional restoration partners including tour, workshop, and session coordinators, building a strong conference agenda, working with co-sponsors and restoration partners, conducting targeted outreach, and coordinating conference logistics. SRF also produces a Conference Proceedings, videotapes the Plenary and other sessions, and offers a mentor-mentee program as part of the conference.

Project Completion Timeline

The timeline starts about 10 months prior to the Conference and concludes 3-month after.

Applicants Background.

SRF was formed in 1986 to help stream restoration practitioners advance the art and science of watershed restoration. Our organization promotes restoration, stewardship, and recovery of California native salmon, steelhead, and trout populations through education, collaboration, and watershed capacity building. Our goals are to restore and recover California salmonids, improve water quality in California watersheds, and enhance watershed restoration efforts in California. To accomplish these goals SRF coordinates workshops and tours to highlight water conservation techniques, programs, and strategies to improve instream flows for both humans and fish. SRF has been producing the premiere salmonid restoration conference in California for 40 years.

COUNTY OF SANTA CRUZ

FISH AND WILDLIFE ADVISORY COMMISSION

701 OCEAN STREET, ROOM 312, SANTA CRUZ, CA 95060
(831) 454-3154 FAX: (831) 454-3128

November 30, 2023

RE: Request that the County of Santa Cruz Develop an Exotic/Invasive Species Staff Working Group

Dear Honorable Supervisors,

The Fish and Wildlife Advisory Commission (FWAC) previously corresponded with you to encourage greater County leadership on exotic/invasive species management on February 5, 2023. This letter specifically asked that the Board work with relevant departments to **develop a staff working group** that will enable the County to more proactively manage this growing problem.

More proactive management of exotic/invasive species now may ultimately be less costly than managing their impacts in the future. Invasive species can compound or worsen a number of issues concerning the County, including fire risk, mosquito-borne diseases, and loss of fish habitat. The following points provide additional justification for a more proactive County approach on this issue:

- French broom is increasingly exacerbating wildfire conditions along County roadsides. The recent tragic fires in Lahaina, Maui, illustrate how invasive vegetation can magnify fire risk. Broom (along with other exotic/invasive plants) is also pushing out natives (including the federally threatened Santa Cruz cypress and other rare plants) in our open spaces - particularly in the CZU burn zone.
- Zoonotic mosquito-borne illnesses such as Zika, Avian Influenza, etc. are an increasing concern for public health. Additionally, management of exotic/invasive mosquitoes, while entirely justifiable from a public health perspective, may result in inadvertent impacts to native aquatic biota.

- Some exotic/invasive species such as giant reed, which can negatively impact fish habitat, are only beginning to become established and proactive management may enable their long-term control or even elimination.
- New exotic/invasive species are emerging routinely and may be more effectively managed with early detection and better alignment of County policies and operations.

There are already significant sources of support for such an effort. Technical information is available from our local Weed Management Area (WMA), the County of Santa Cruz Resource Conservation District, the California Invasive Species Council and other sources. External financial support from sources such as the California Noxious Weed Grant Program may also be available. The County will be more competitive for funding opportunities by developing a more proactive stance on exotic/invasive species management.

Thank you again for your consideration. If you have any questions or concerns about this recommendation for the development of a staff exotic/invasive species working group please do not hesitate to reach out to the FWAC.

Sincerely,

Chris Berry
Fish and Wildlife Advisory Commission Chair

Att: Feb 5, 2023 FWAC letter to the BOS
CC: COE, WAC, WMA, RCD, CNPS

COUNTY OF SANTA CRUZ

FISH AND WILDLIFE ADVISORY COMMISSION

701 OCEAN STREET, ROOM 312, SANTA CRUZ, CA 95060
(831) 454-3154 FAX: (831) 454-3128

February 5, 2023

County of Santa Cruz
Board of Supervisors
701 Ocean Street, 5th Floor
Santa Cruz, CA 95060

Subject: Recommendation for invasive, non-native species management

Dear Honorable Supervisors,

The Fish and Wildlife Advisory Commission recommends that the Board of Supervisors work with the Agricultural Commissioner's Office, Community Development and Infrastructure, Public Works and other relevant County departments to form a staff working group that will evaluate County policies and programs related to the management of invasive, non-native species, provide direction on necessary policy development and identify alternative funding resources necessary for proactively managing this growing threat.

Invasive, non-native species are an increasing challenge to the effective management of our local native biodiversity. In addition, they can impact crucial activities in Santa Cruz county, including fire preparedness, water system operations, commercial agriculture, mining, forestry and other sectors. Invasive, non-native species of particular management concern in the County include (but are not limited to) French broom (as well as other broom species), giant reed, quagga and zebra mussels, English and German ivy, poison hemlock, crofton weed, blackwood acacia, forget-me-not, blue gum eucalyptus, oblong spurge, American bullfrog, Norway and roof rats, turkeys and many others. For more information on this problem please see the following links:

https://wildlife.ca.gov/Conservation/Invasives/About
https://www.cal-ipc.org/wp-content/uploads/2017/03/TheTopOffenders_20171114.pdf

Santa Cruz County has amongst the highest biodiversity of any county in the State of California. While there are many non-native, invasive species challenging our County, the Fish and Wildlife Advisory Commission (FWAC) is currently focused on invasive, non-native *plants* and their effects on local biodiversity. While projects that address all invasive species affecting the County's biodiversity will be considered, the FWAC has focused its 2022 grants program on projects which prioritize weed management. While some plants may warrant sales prohibitions similar to what was enacted by the County for American bullfrogs in 2012, other plants already have wide-spread existing populations and their management may require other strategies. For example, while French broom can be legally purchased in nurseries, it is already well-established in the County and education and support for eradication efforts may be a more effective strategy for controlling it. Similarly, many local non-native, invasive plants such as giant reed are already prohibited from being sold and yet still pose a threat of population expansion in the County. Fortunately, species such as giant reed may be manageable if resources for education and eradication are directed toward that effort in the near term.

It is our understanding that the County's Integrated Pest Management program (which has a substantial focus on non-native, invasive plant management) is currently in a rebuilding phase. We are also aware that fuel management standards along County roads are currently being re-evaluated. Fuel management along roads can exacerbate non-native, invasive plant issues if not carefully implemented. Finally, our local Weed Management Area (WMA) has been advocating for additional County resources to be targeted toward management of non-native, invasive plants for the past several years.

Therefore, the FWAC feels this is an opportune time to re-evaluate how the County is handling weed management, as well as other non-native, invasive species in general. It is evident that a comprehensive County-wide program is necessary in order to effectively manage the growing threat presented by these species. While the State of California has several programs focused on these issues and the County Agricultural Commissioner's office and various NGOs such as California Native Plant Society have existing programs, we are unaware of a unified strategy in the County government, nor are there dependable long term resources available for continuing this work in a rigorous manner. Dedicating a staff working group that would identify key stakeholders, County policy needs and priority areas for management, develop tolerance levels, monitoring standards and thresholds for action, prioritize target species, evaluate alternative funding sources, provide opportunities for collaboration and alignment amongst County departments and other activities would facilitate the County having greater control over this growing threat.

Examples of similar programs can be found in nearby jurisdictions including Valley Water, Marin Municipal Water Department, Solano County Water Agency, Santa Cruz Water Department, East Bay Regional Parks District, City of San Francisco, City of Salinas, City of Monterey, Santa Clara County Parks Department, Midpeninsula Regional Open Space District, California Department of Parks and Recreation and many others. These examples may provide additional ideas for further refining the program concept described above and related costs/benefits and opportunities/constraints. In lieu of additional dedicated staff to work on these issues, the chair of this staff working group could serve as the County's point-person on invasive species management issues with support from the local WMA and FWAC. State natural resource

agencies would likely support such a program with technical and financial support to the extent it is possible as well.

Thank you for your consideration. Please do not hesitate to reach out to the FWAC if you have further interest in these issues.

Sincerely,

Chris Berry, Chair
Fish and Wildlife Advisory Commission
County of Santa Cruz
701 Ocean Street, Room 312
Santa Cruz, CA 95060

cc: WMA, CNPS, CDFW, Fire Safe Council of Santa Cruz County