

# COVER PAGE

**To:** NOAA Office for Coastal Management

**Purpose:** NOAA Climate Resilience Regional Challenge (2023)

**Project Title:** Indigenous Knowledge, Working Waterfront Skills, and BlueSTEM Approaches to Inform and Implement Equitable and Inclusive Strategies for Coastal Climate Resilience in Northern California

**Funding Track:** Track 2

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**Federal Funding Request:** \$25,740,550

**Geographic Description:** (north to south) Del Norte County, Humboldt County, Mendocino County, Sonoma County - California

**Participating Jurisdictions:** Kai-Poma - Sherwood Valley Band of Pomo Indians, Round Valley Indian Tribes, Coyote Valley Band of Pomo Indians partnership  
City of Fort Bragg  
Noyo Harbor District  
Mendocino-Lake Community College District

**Collaborators:** Northern California Harbors (Crescent City, Humboldt Bay, Noyo Harbor, Point Arena, Spud Point)  
Noyo Center for Marine Science  
Fort Bragg Unified School District (K-12)  
CA Sea Grant (Coastal Resilience, Workforce and Aquaculture Specialists working from Scripps Institute of Oceanography, Moss Landing Marine Laboratories, Bodega Bay Marine Laboratories and CalPoly Humboldt)  
The Nature Conservancy (California Kelp Program)

**Period of Performance:** October 2024 – December, 2028

## Resilience Vision

Our proposal includes projects designed to build climate resiliency in the northern California coastal region. It centers on the area in and around Fort Bragg, a low-moderate income community that serves as the commercial center for the Mendocino Coast, and stretches out through a network of harbors, from Del Norte County to Sonoma County. Our Resilience Vision includes efforts to position our coastal region for blue economy investment through infrastructure that supports workforce training and blueSTEM education, and connecting these workers and thinkers to a network of secure harbors - all while strengthening relationships with, and learning from, our tribal communities.

Climate resiliency depends on inclusive and transformational investment. Our proposal is committed to amplify voices of marginalized, underserved and underrepresented communities because we understand that it is the community that is impacted, and the community that will realize resiliency goals. To support inclusivity and equitable results, our proposal weaves together: 1) traditional knowledge of indigenous people who have occupied this land since time immemorial; 2) the unique skill sets possessed by the men and women of our working waterfronts; and 3) high impact research to further scientific understanding.

The northern California region is facing multiple and challenging issues. Fort Bragg is ground zero for the urchin barren / kelp dynamic, and there is an immediate need for infrastructure to support restoration efforts. Changing fisheries have weakened our local fleet, evidenced in the social/economic vulnerability of our community members who use, live and work on the water, and it is vital to leverage local skill sets to sustainability jobs before skills are lost. And although Governor Newsom signed the historic SB 231 into law, which allows the State of California to transfer 172 acres along the Pacific Ocean to Native American tribes, the indigenous people that came together to steward these ancestral homelands deserve support to build capacity within the Kai Poma organization that is tasked to manage this land for the benefit of the public and all Mendocino Tribes.

## Regional Context

Our collaboration spans four counties and five harbors in Northern California: Del Norte County (Crescent City Harbor); Humboldt County (Humboldt Bay Harbor); Mendocino County (Point Arena and Noyo Harbor), and Sonoma County (Spud Harbor). Del Norte sits on the California-Oregon border with 37 miles of coastline and a population of 27,743. Humboldt County is directly south with 110 miles of coastline and a population of 91,601. Below Humboldt County is Mendocino County, with an impressive 131 miles of coastline and a population of 91,601. Sonoma County is the southernmost county in this collaboration with 76 miles of coastline and a population of 488,863.

Much of this region is rural and characterized by rugged, often steep mountains, bisected with rivers and home to magnificent redwood, Douglas fir and oak forests. It is important to note that each participating collaborator represents Historically Disadvantaged Communities, marginalized, low income, and/or rural communities. Both Crescent City and Humboldt Bay are identified as Federal Opportunity Zones, and the Mendocino-Lake Community College District is both a Minority Serving Institution (MSI) and Hispanic Serving Institution (HSI) as designated by the U.S Department of Education. The Sherwood Valley Band of Pomo Indians, Coyote Valley Band of Pomo Indians, and Round Valley Indian Tribes are federally recognized.

Historically, this region has been economically dependent on resource extractive industries such as logging and fishing. However the changing climate, regulations, and unsustainable past practices have caused declines. The declines in these industries, coupled with recent climate-related natural disaster such as drought and the loss of the kelp forest, demographic shifts and the COVID-19 pandemic, have

exposed a fragile economy. This economy lacks the resiliency needed to weather transitions as environmental and economic changes occur. In an attempt to create climate resiliency along the Mendocino Coast, the Noyo Ocean Collective formed.

Founding members of the Noyo Ocean Collective (NOC) include the City of Fort Bragg, Noyo Harbor District, Mendocino College, Sherwood Valley Band of Pomo Indians, Noyo Center for Marine Science, West Business Development Center and Mendocino County. This collective effort continues to gain partners and expand, now grown to include Fort Bragg Unified School District, CA Sea Grant, The Nature Conservancy and Mendocino Sonoma Economic Development District. Several agencies have invested funding to support our success, such as the California Coastal Commission, CA Sea Grant Program, U.S. Department of Commerce, Coastal Conservancy California Employment Department, and others.

For example, the California Coastal Commission awarded the City of Fort Bragg \$898,990 to develop the Noyo Harbor Blue Economy Visioning, Resiliency, and Implementation Plan. This effort will result in baseline information about the existing environment, physical and economic conditions of Noyo Harbor in order to prepare the area for a changing climate and position our region for sustainable blue economy investment and coastal resiliency. A portion of this grant will cover the City's funding match for a two-year CA Sea Grant Extension Fellow to work from City Hall and assist City staff and Harbormaster with planning effort.

The California Employment Development awarded \$3.1 million of CERF funds to the Noyo Harbor District and West Business Development Center to implement a Noyo Harbor Revitalization Project. This project focuses on stabilizing commercial fishing-based jobs by installing a new ice-making facility, developing Community Fish Markets, and hosting the Marine-Based Entrepreneurial Training Program.

West Business Development Center also partnered with the Noyo Center for Marine Science and received \$ from the U.S. Department of Commerce Economic Development Administration to develop a comprehensive business plan and complete a Blue Economy Feasibility Study to support the Noyo Center for Marine Science's ocean science facility.

## **Proposed Activities and Outcomes**

### **Traditional Knowledge and Indigenous Peoples Stewardship**

Kai Poma is a tribally-chartered 501(c)(3) nonprofit organization incorporated under the laws of the Hoopa Valley Tribe and formed pursuant to Section 118.9 of Streets and Highway Code authorizing California Department of Transportation ("Caltrans") to return 171-acres of State owned land within the ancestral lands of the Sherwood Valley Band of Pomo Indians, the Round Valley Indian Tribes, and the Coyote Valley Band of Pomo Indians (the "Tribes"). The property overlooks the Pacific Ocean and contains numerous critically significant and highly vulnerable cultural and natural resources that have been disturbed or damaged over the many decades of lack of management and oversight. Kai Poma has a continued interest in fulfilling their obligation to protect and restore these resources, and seeks funding to implement the following activities:

- Protect and restore critical habitat for imperiled species including conducting cultural burning to promote the health of vegetation and bring life back to Tribal landscapes.
- Build climate resilience and increase coastal biodiversity by restoration and stewardship of ecologically vulnerable and damaged cultural and natural resources.
- Develop and implement resource protection guidelines and co-management plans to expand protection and restoration of ecologically and culturally linked lands including wetlands, wildlife habitats and cultural resources.

- Conduct educational, cultural, and scientific activities including workshops and youth programs about local Tribes' relationship and history, and Indigenous land stewardship practices.
- Advance scientific and cultural research into the process of land restoration using traditional ecological models and practices.
- Revitalize California Coastal Indigenous Peoples' cultural ways of life, traditional land practices, and spiritual relationship.

### **blueSTEM / Workforce Infrastructure and Capacity Building**

Developing the infrastructure and framework to support a robust, inclusive, regional, and climate resilient workforce is crucial to reduce risks associated with a changing climate and ensure enduring capacity for generations to come. Our vision is to train local people to enter marine and climate-focused jobs at every level.

Proposed projects are integrated and designed to deliver marine and climate-focused jobs by connecting students and workforce to: Science Technology Mathematics Engineering (blueSTEM) curriculum, internships, certificate programs, a robust dual-enrollment program and expansion of Construction, Engineering and Technician (CET) program. Collaborators include Fort Bragg Unified School District, Mendocino-Lake Community College District, CA Sea Grant, The Nature Conservancy, Noyo Center for Marine Science, Noyo Harbor and West Business Development Center through the following activities:

- K-12 educator to specialize in supporting pathways to Blue Economy. This includes classroom instruction, career exploration and guidance, internships support, and transition to school or work programs.
- Update Coast Campus to support current kelp restoration efforts (diver infrastructure and training opportunities, including wet labs, SCUBA tank fill station, showers, lockers, etc), and faculty member to buildout blueSTEM and blueCET curriculum, internship opportunities, cooperative work experience programs and community training facility.
- Renovate Tommy's Marine Supply property to outfit the building with the necessary equipment to host incubator businesses and training programs within the Blue Economy sphere (program development funded through CERF grant). Providing a location and infrastructure for local workforce to diversify into sustainable ocean industries will reduce risk both for our marine ecosystems and the people that work in the marine environment. This site would also support and service SCUBA divers who play a critical role in kelp ecosystem restoration activities.
- CA Sea Grant and The Nature Conservancy are committed to advise and inform the build out of blueSTEM and blueCET infrastructure and programs, ensuring that development aligns with the current and future research priorities, state/federal policies, and the best available climate science.
- Advancing planning and permitting for the Noyo Marine Science Center's ocean science facility, which will create a physical space for researchers, students, families and visitors to explore the dynamic relationship between humans and the marine environment. The community identified the need for an ocean science facility during the visioning process for reuse of the Georgia Pacific mill site and supported formation of the Noyo Center for Marine Science. The Noyo Center is committed to advancing ocean conservation through education, exploration and experience. 11.6-acres of the former mill site was transferred from the City to the Noyo Center for Marine Science in 2020.
- The City of Fort Bragg will take the lead to continue planning and permitting work to advance the municipal seawater intake project. Bringing seawater to the Noyo Center for Marine Science, aquaculture businesses and other blue economy enterprises dependent on seawater is a high

priority, and the cost and complexity of infrastructure is a barrier for entry.

### **Sustainable Network of Northern California Harbors**

Harbors are the backbone for the commercial and recreational fishing industry, and a critical component of the New Blue Economy. However, time, the harsh marine environment, and declines in local prosperity have deteriorated critical pieces of harbor infrastructure. Add high swells, rain and flooding events with increasing winter storms, we see that many of our harbors require attention and investment. Since 2006, the northern California harbors have submitted over 30 different projects to FEMA as a result of storm damages. Currently, Noyo Harbor, Humboldt Bay and Crescent City have over \$11 million in claims from the 2022-2023 winter storms. And the tsunami in 2011, created over \$100 million in damage at ports and harbors statewide.

Our proposal includes harbors stretching from the California/Oregon border to Bodega Bay that will work together on a planning effort to ensure that the effects of climate change are mitigated and harbor infrastructure is secured. These projects will secure a vital network of harbors by reducing the likelihood of damage due to storm surges, sea level rise and natural disasters. This project includes the following activities:

- Develop shared strategies that individual harbors can implement to off-set negative impacts of day-to-day operations. Specific focus on utilizing nature-based solutions, innovative blueTECH and shared resources.
- Marina redevelopment plans for Humboldt Bay and Noyo Harbor for shovel ready project.
- Flood control planning for Point Arena and Crescent City to prevent and control flooding that is undercutting roadways and preventing access to private and public infrastructure.

**Conclusion.** We are committed to implementing a shared resiliency vision with broad community understanding and support. Our approach includes making strategic, direct investments into marginalized, underserved and underrepresented communities, offering benefits far beyond our geographic scope. For example, funds will be directly invested in the tribally led organization, Kai Poma, to promote cultural autonomy, self-governance, and sovereignty of Native American tribes in and around what is present-day Mendocino County. Investing in the success of Kai Poma would support healing of harms done to Native American communities, while also providing an opportunity for the broader community and public to engage in restorative activities based in traditional knowledge. As original stewards of the lands and waters, tribal communities hold extensive knowledge that is critical to our regional climate resilience.

A direct investment will be made to meet education and workforce needs in order to improve livelihoods and the quality of life in our low-moderate income community. Mendocino College, which is a federally recognized Hispanic Serving Institution, primarily serves students from historically marginalized, underserved, and underrepresented communities. The college has the highest number and percentage of Native American students at all California Community Colleges. Empowering a community through education and skill building is the foundation for a sustaining a level of community readiness, continuous adaptation, and workforce capabilities to ameliorate the impacts of changing weather and climate to our coastal communities. Establishing an anchor space to bring together regional partners fosters the identification of shared needs and priorities to grow the future workforce and support a vibrant marine ecosystem. K-14 education is key in the changing reality facing coastal communities to adapt and alleviate multiple stressors within communities.

Funds would also be directly invested in the harbors that serve northern California. New Blue Economy

initiatives will need to rely on these smaller safe havens, as the northern most sizeable port in California is Oakland/San Francisco.

That said, the real benefit might reside in the collaborative work itself and relationships that will strengthen in this process. We appreciate the opportunity to submit our vision for this unprecedented funding opportunity. Please don't hesitate to reach out for clarification or with questions. We are open to revisions and look forward to developing a successful application.

**Budget Summary**

Budget Categories	Description	Estimated Cost
<b>Personnel</b>		
<i>Position Title</i>	<b>Project Director</b>	<b>\$500,000.00</b>
<b>Contracts</b>		
<i>Vendor Name</i>		<b>\$00.00</b>
<b>Sub-awards</b>		
<i>Kai-Poma</i>	Indigenous ecosystem resiliency and restoration practices	<b>\$2,389,000.00</b>
<i>Noyo Harbor District</i>	Sustainable Network of Northern California Harbors	<b>\$4,614,000.00</b>
<i>Noyo Center for Marine Science</i>	Research facility for marine science and ocean resiliency	<b>\$1,500,000.00</b>
<i>Mendocino College</i>	K-14 blueSTEM pathways through curriculum, internships, workforce training and certification programs	<b>\$13,265,000.00</b>
<i>Fort Bragg Unified School District</i>		<b>\$500,000</b>
<i>City of Fort Bragg</i>	Seawater intake, infrastructure permitting, and community partnerships	<b>\$2,100,000.00</b>
<i>CA Sea Grant</i>	Technical assistance re build out of for blueSTEM & workforce infrastructure/programs/training	<b>\$80,000</b>
<i>The Nature Conservancy</i>		<b>\$20,000</b>
<b>Travel</b>	In State	<b>\$3,000.00</b>
<b>Indirect</b>	5%	<b>\$1,249,000.00</b>
<b>TOTAL</b>		<b>\$25,740,550.00</b>

**Anticipated Technical Assistance Needs**

We have incorporated technical assistance needs into grant proposal from both CA Sea Grant and The Nature Conservancy. That said, we value your expertise, and would like your input on implementation of proposed projects.