

CALIFORNIA OCEAN PROTECTION COUNCIL

Staff Recommendation

November 29, 2010

**THE CENTRAL COAST GROUND FISH PROJECT:  
CONSERVING A WORKING SEASCAPE/ Trawl Impact Study**

File No.: 08-099-02

Project Manager: Valerie Termini

**RECOMMENDED ACTION:** Authorization to disburse up to \$455,356 thousand dollars to The Nature Conservancy to support Years Two and Three of the Trawl Impact and Recovery Study that is part of the Central Coast Groundfish Project

**LOCATION:** Central Coast: Point Reyes to Point Conception (see Exhibit 1)

**STRATEGIC PLAN OBJECTIVE:** Ocean and Coastal Ecosystems and Research and Monitoring

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**EXHIBITS**

Exhibit 1: Project Location and [Site Map](#)

Exhibit 2: Ocean Protection Council [Staff Recommendation for the Central Coast Groundfish Project](#): Conserving a Working Seascape project (File No. 08-099-01, September 10-11, 2008)

Exhibit 3: [Study design](#) and summary of [external peer review](#)

Exhibit 4: [Letters of Support](#)

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**RESOLUTION AND FINDINGS:**

Staff recommends that the Ocean Protection Council adopt the following resolution pursuant to Sections 35500 *et seq.* of the Public Resources Code:

“The Ocean Protection Council hereby approves the disbursement of an amount not to exceed \$455,356 to The Nature Conservancy (TNC) to carry out Years Two and Three of the Trawl Impact and recovery Study that is part of the Central Coast Groundfish Project.

This authorization is subject to the condition that prior to disbursement of funds, TNC shall submit for the review and approval of the Secretary to the Council:

1. A work plan, including schedule and budget.
2. Evidence that all permits and approvals necessary to implement the project have been obtained.”

Staff further recommends that the Council adopt the following findings:

“Based on the accompanying staff report and attached exhibits, the Council hereby finds that:

3. The proposed project is consistent with the purposes of Division 26.5 of the Public Resources Code, the Ocean Protection Act.
4. The proposed project is consistent with the Ocean Protection Council's grant program funding guidelines.”

**PROJECT SUMMARY:**

Staff is recommending that the Ocean Protection Council (OPC) authorize disbursement of up to \$455,356 to The Nature Conservancy (TNC) to support the Central Coast Groundfish Project (CCGP)'s Trawl Impact and Recovery Study.

TNC began the CCGP in 2005 and is working to build a lasting approach to sustainable fishing by making use of existing fishery and research assets (fishing vessels, federal trawl permits, remotely-operated vehicle (ROV)), incorporating conservation objectives into business decision-making, engaging fishermen as resource stewards, and conducting collaborative fisheries research to inform management and best practices. A 2008 OPC authorization provided funds for the overall CCGP, including one year of study to assess the impacts of bottom trawling on seafloor communities and evaluate the recovery of those habitats and communities over time. TNC is now requesting funds to complete Years 2 and 3 of this collaborative research study.

Approving this project will help to inform area-based management decisions and best practices for the trawl fishery in the Central Coast and beyond, including direct input to ongoing management discussions at the state and federal levels. Understanding the impact of trawl gear on different types of soft-bottom habitats and the time it takes for seafloor communities to recover from trawl impacts will also help inform recommendations to managers on the appropriate intensity of trawling effort as well as identify the most appropriate locations in the ocean to minimize this fishery's adverse impacts on sea-floor habitats.

**PROJECT DESCRIPTION:**

***Background:***

In 2003, TNC completed a Marine Ecological Assessment for Northern California. The Central Coast emerged as a region of particular interest for TNC due to its rich collection of diverse marine habitats and associated wildlife. The assessment also identified bottom trawling as the principal threat – an activity that causes substantial damage to benthic habitats and yields large amounts of by-catch.

Bottom trawling is a type of fishing in which weighted nets and heavy door-spreaders are dragged across the seafloor. This type of fishing has been identified as a significant threat to seafloor habitats<sup>1</sup>. There is some evidence that soft-bottom habitats may recover more quickly than rocky habitats. Currently, flatfish (petrale sole, rock fish, black cod), which are an

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<sup>1</sup> National Research Council (NRC) 2002. *Effects of Trawling and Dredging on Seafloor Habitat*. National Academy Press, Washington, DC

important component of the groundfish fishery in central California, can potentially be caught in commercial quantities only by using trawl gear. Understanding the impact of trawl gear on soft-bottom habitats where flatfish resources are abundant will help managers determine the most appropriate locations for trawling in the ocean to minimize adverse impacts on seafloor habitats, while allowing the catch of economically important fishes. Assembling these types of data will help reconcile the conflicts between the fishing and conservation sectors in central California and provide a knowledge platform to advance spatial planning in the ocean. Current assumptions about impacts of trawling on seafloor habitats have relied upon limited studies comparing trawled sites long after the trawling took place and where the intensity of the trawling effort was not known.

In 2005, TNC partnered with regulatory agencies and trawl fishermen in Central Coast communities to develop a collaborative proposal that would implement recommendations of the National Academy of Sciences report aimed at reducing the impact of bottom trawling, including the implementation of closed areas associated with key habitats. TNC successfully petitioned the Pacific Fishery Management Council (PFMC) to have 3.8 million acres of Essential Fish Habitat (EFH) declared off-limits to bottom trawl gear. Simultaneously, to reduce bottom trawl fishing effort and to mitigate the economic impact of bottom trawl closures, TNC purchased several federal permits and vessels from local fishermen interested in leaving the trawl groundfish industry.

Because TNC owns all the federal trawl permits in the Morro Bay study area, it is in a unique position to establish a multi-year controlled experimental study to assess the impacts of trawling on seafloor communities and follow their recovery over time. Through private agreement with local fishermen, TNC has zoned current trawling effort in the area and can conduct directed trawling of known intensity in study plots, thus facilitating the first controlled study of trawl impacts and recovery on the west coast. In addition, with previous OPC support, TNC also operates an ROV that collects high-resolution video and still photo images along the seafloor, which are used to visually quantify the abundance of habitats and species composition.

In 2009, TNC received funds from OPC to initiate the CCGP as a whole, which includes the following components (see Exhibit 2):

1. Community Based Fishing Association (CBFA)/Exempted Fishing Permit – Demonstration project operating under regulatory approvals by the PFMC and the National Marine Fisheries Service (NMFS) in which up to six TNC-owned trawl permits have been transitioned to more selective, hook-and-line and trap methods used by participating fishermen, and are cooperatively participating in a harvest pooled catch limit. This project is demonstrating the feasibility of transitioning local trawl effort to alternative gear types and establishing shared community goals for harvest and sale of fish.
2. Conservation Fishing Agreements – Demonstration project in which TNC-owned trawl permits are used by fishermen subject to a private trawl lease agreement that incorporates specific conservation terms into the contract. The purpose is to evaluate the feasibility of improving trawling practices to reduce by-catch and habitat damage.

3. Central Coast Trawl Impact Study – Five-year study to assess the impacts of groundfish trawling on soft-bottom habitats and the amount of time it takes for seafloor habitats to recover from trawling effort. In 2009, OPC support was used to conduct the first year of surveys and directed trawling effort.

The requested funds for the trawl study are urgently needed to prevent disruption to the carefully orchestrated five-year research schedule. In Years 2 and 3 of this study, TNC is poised to obtain critical information on recovery of experimentally-trawled plots, as well as initiate the second phase of directed trawling to assess impacts of different intensities of trawling effort over time.

By making use of the TNC fishery assets (vessels, federal trawl permits, ROV) this project is capable of producing cost effective and timely research that informs some of the most significant fisheries reform efforts in the U.S. Further, information derived from this project will provide the basis for scientifically sound policies that broaden the range of fishing opportunities while protecting key species and habitats, as well as enable fishermen to better adapt to evolving regulatory measures, variable stock status, and changing market conditions.

In addition to zoning trawl effort and research trawl impacts, TNC has also been leasing numerous permits to Morro Bay fishermen over the last two years under an Exempted Fishing Permit (EFP) to use more selective hook and line gear, in addition to placing habitat constraints on fishing location. These leases are voluntary, private agreements designed to test new fishing methods, focusing on techniques to reduce by-catch and conserve habitat.

#### ***Collaborative research partners and dissemination of results***

An important aspect of the project is the broad partnership of collaborators involved including key staff and resources from non-governmental organizations, universities, fishermen, private corporations, state and federal governmental officials and community leaders. In addition, the research will be conducted using a NOAA vessel (the R/V *Fulmar*) and local fishing vessels. An experienced Morro Bay commercial fisherman will assist in the directed trawling effort.

The results from this study will be published in peer-reviewed journals, shared with fishery managers, the fishing community, and other stakeholder groups through a variety of innovative visualization technologies. The final products will render complex scientific information into compelling visuals that will make the project results more accessible to non-scientific audiences. The partners all value the importance of sharing results of the study to inform decisions in fisheries management and day-to-day fishery practices.

#### **Project Details and Scope of Work:**

##### ***Directed Trawl Impact and Recovery Study***

The trawl study will assess the impacts of bottom trawling gear on soft-bottom seafloor habitats on the continental shelf off Morro Bay, with the goal of also evaluating recovery of those habitats and related seafloor communities over time. The study design has undergone external scientific peer review, and was reviewed by the OPC's Science Advisor, and a scientific fishery consultant (details of study design and review in Exhibit 3). The reviewers' comments are expected to be adequately addressed by the applicants into the final project design.

The general research objective of this study is to compare the distributions of seafloor microhabitats and associated communities of animal species, and how these communities change with increasing trawl effort (e.g., number of times a trawl is conducted in the same place). In addition, TNC will evaluate the catch of flatfish and by-catch of other species in each trawling effort and analyze the habitat associations of flatfish and the relative amount of by-catch in different areas.

*Study Plan:*

Year 1 (August 1, 2009 – July 31, 2010): In September of 2009, TNC quantitatively surveyed eight study plots with a ROV to collect video and still photo images of sea-floor habitats, fishes, and invertebrates as a baseline. TNC also used a bottom grab sampler to collect samples of the seafloor sediment in order to quantify the number and diversity of species living in the sediment. Half of the study plots were trawled in October 2009 at a low-moderate level of trawl effort (relative to historic patterns) by a local fisherman under a TNC private agreement. TNC then re-surveyed all of the study plots in November 2009 (immediately after trawling) and again in May 2010 (six-months after trawling). A final report on Year 1 of the study is underway.

Years 2 and 3 (the focus of this proposal, August 1, 2010 – July 31, 2012): The second and third years of the study are critical for assessing recovery patterns and for further evaluation of how different intensities of trawling effort affect the seafloor. In Year 2, TNC conducted research cruises in late August through early September 2010 to collect ROV video and still photo data and sediment grab samples in all eight of the study plots to assess recovery one year after the initial low-moderate directed trawling effort. In October 2010, TNC will conduct additional directed trawling, at twice the intensity as previously, in the same “trawled plots.” All eight of the study plots will then be resurveyed within two weeks post-trawling (in November 2010), and again six-months later (in May 2011), to assess the immediate impacts of this higher-intensity trawling, as well as seafloor habitats’ and communities’ rates and patterns of recovery over time. In Year 3, TNC will conduct two research cruises to collect video and still photo data with the ROV to assess recovery one-year (September 2011) and one and a half years (May 2012) after the second directed trawling effort.

Years 4 and 5: Ideally, if future funding allows, these study plots will be resurveyed with the ROV annually for at least two more years to assess longer-term recovery patterns.

**PROJECT GRANTEE:**

TNC is a leading conservation organization working around the world to protect ecologically important lands and waters for nature and people. Its mission is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. TNC’s California Coastal and Marine team brings substantial expertise in policy, transactions, and habitat conservation planning in California, as well as ownership of all federal trawl permits in the study area. TNC began work with central coast fishing communities in 2004 when it began its cooperative work with local trawlers to protect sensitive offshore habitats. Through this project, TNC is building on this record of success and these early partnerships by continuing to work with fishermen, community leaders, and government officials to develop this vision for a sustainable future for Central Coast fisheries.

**PROJECT HISTORY:**

The OPC initially funded TNC in 2009 with a grant of \$1,006,500 to implement the entire CCGP (which relies on use of an OPC-funded ROV). As mentioned above, the CCGP includes three projects; creation of a community based fishing organization and developing the exempted fishing permit, developing conservation fishing agreements, in addition to the trawl impact and recovery study. This project helps preserve California’s working waterfronts by supporting a change in the fishery practices of fishing for high volume/low value fisheries to a low volume/high value fishery.

**PROJECT FINANCING**

**Ocean Protection Council**

CCGP/trawl study portion (Sep 10-11, 2008 authorization)	\$96,000
CCGP/trawl study year 2 field work (delegated authority)	72,050
CCGP/trawl study years 2-3 (this authorization)	455,356
Private donation (Year Two)	<u>\$100,000</u>
<b>Total Project Costs</b>	<b>\$723,406</b>

The anticipated source of funds will be the fiscal year 2008-2009 appropriation from the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84). Proposition 84 authorizes the use of these funds for purposes consistent with Section 35650 of the Public Resources Code, establishing the California Ocean Protection Trust Fund (Pub. Res. Code § 75060(g)). Under Section 35650(b), Ocean Protection Trust Fund monies may be expended for projects authorized by the OPC that are identified as appropriate Trust Fund purposes. The project is consistent with the Trust Fund purposes as discussed in the following section.

The proposed project is appropriate for prioritization under the selection criteria set forth in Section 75060(g), which provides that the Council will give priority to projects which develop scientific data needed to adaptively manage the state’s marine resources and reserves and projects that foster sustainable fisheries.

Furthermore, funds will be leveraged in two ways: with in-kind contributions from project partners and with privately-raised funds. The principal source of in-kind contribution is the Monterey Bay National Marine Sanctuary which will provide 10 days of research cruise time per year aboard the R/V Fulmar (estimated at \$30,000). To date, TNC has received a \$100,000 private gift toward the second year of the trawl impact and recovery study, which will be used for some contract, travel, and equipment expenses. TNC also utilized a private gift of \$100,000 in Year 1 of the study.

**CONSISTENCY WITH CALIFORNIA OCEAN PROTECTION ACT:**

This project is consistent with the Ocean Protection Act, Division 26.5 of the Public Resources Code because it is consistent with trust fund-allowable projects as identified in PRC Section 35650 (b)(2). Specifically, this project will:

(B) Foster sustainable fisheries, including development of more selective fishing gear, collaborative research and demonstration projects between persons who fish commercially and scientists, promotion of value-added wild fisheries to offset economic losses attributable to reduced fishing opportunities.

(F) Provide monitoring and scientific data to improve state efforts to protect and conserve ocean resources.

The proposed project is consistent with the trust fund allowable projects listed above in that TNC will undertake a sustainable fishery demonstration project, including collaborative research, which will hopefully result in more selective gear and value added wild fisheries. The project will foster collaborative partnerships in central coast communities and help promote local marine resource stewardship and pride. Further, the data and information generated by this project will inform central coast regional management decisions and potentially state and federal efforts as well.

**CONSISTENCY WITH THE OPC'S STRATEGIC PLAN:**

**Goal A (Governance) Objective 4b:** “Support the development of ecosystem-based management pilot programs in several regions throughout California.” The CCGP is working to revamp historic issues plaguing the groundfish fishing effort by developing a robust scientific study detailing the recovery of seafloor communities after these habitats have been trawled. The results of this study will help inform management decisions by answering where it is appropriate to trawl in a groundfish fishery.

**Goal E (Ocean and Coastal Ecosystems) Objective 4b:** “Investigate the feasibility of various sustainable fishery management approaches, such as vessel buy-backs, different quota systems, and limited entry programs. Encourage the development of sustainable fishing gear.” The CCGP is unique in that TNC has already participated in vessel buyouts and the PFMC is considering implementing a quota system. The proposed project will allow the OPC, in coordination with TNC and the local fishermen, to assess what these actions mean for the fishery and how communities can adapt to changing regulatory climates. These lessons could inform future actions by the OPC related to this strategic goal. The project will help to promote new selective trawl gear that will result in fewer impacts to ocean benthic communities.

**Goal E (Ocean and Coastal Ecosystems) Objective 5a:** “Encourage and support new and innovative economic activities that can be conducted in a sustainable manner along or off the California coast.” This project uses many innovative mechanisms (i.e., the Conservation Fishing Agreement and the Community-based Fishing Association) to create a fishery that is both economically advantageous for fishermen but is also environmentally sustainable.

**CONSISTENCY WITH THE OPC'S GRANT PROGRAM FUNDING GUIDELINES:**

The proposed project is consistent with the OPC's Grant Program Funding Guidelines adopted November 20 2008, in the following respects:

**Required Criteria**

1. **Directly relate to the ocean and coast:** This project will take place in waters and affect coastal resources off the Central California coast.
2. **Support of the Public:** This project has received a great deal support from the local and regional community including Natural Resources Defense Council, Ocean Conservancy, Congresswoman, Lois Capps, Monterey National Marine Sanctuary, Marine Interests Group San Luis Obispo County, and others. See exhibit 4.
3. **Greater-than-local interest:** This project is regional in scope and if this model proves to be successful, it could potentially be applied in other regions or in other fisheries.

**Additional Criteria**

4. **Innovation:** This project involves a pioneering approach to implementing sustainable fishery practices and creating a community-based fisheries organization that can organize fishing effort, data collection, and management reforms in the area. In addition, the results of the study will illustrate where trawling should occur along the Central Coast.
5. **Improvements to management approaches or techniques:** This project creates a community fishing association that shares catch data and is making use of a new type of trawling gear that does not have the by-catch associated with older forms of bottom trawling gear.
6. **Resolution of more than one issue:** This approach not only allows the state to collect the data it needs to manage, but it also promotes working relationships among state and federal agencies, the NGO community, and the fishermen, which are extremely beneficial as the data are applied in a management context.
7. **Leverage:** See the "Project Financing" section above.
8. **Timeliness or Urgency:** The funding is needed to fulfill a critical gap in years 2 and 3 of the trawl study.
9. **Coordination:** This project involves a wide range of partnerships among community-based organizations, fishermen, NGOs, and the state and federal government.

**CONSISTENCY WITH THE OPC'S PROGRAM PRIORITIES FOR 2009 THROUGH 2010:**

**Management-Driven Research**

The study will answer questions about the appropriate role of bottom trawling in a sustainable fishery. These results will provide the basis for scientifically sound policies that broaden the range of fishing opportunities while protecting key species and habitats, as well as enable fishermen to better adapt to evolving regulatory measures, variable stock status, and changing market conditions.



**Sustainable Fisheries Management – Maintaining California’s Fishing Heritage**

Support of this project both aids in preserving the groundfish fishery in Central California and the coastal community in Morro Bay by working to change the dynamic of fishermen fishing for relatively low value/ high volume fishery to a low volume fishery with fishermen catching a higher premium fishery to be sold at a premium price. This change in fishing effort results in the fishery stock rebounding, habitat protection and is economically advantageous for the fishermen participating in the project.

**COMPLIANCE WITH CEQA:**

The proposed project is categorically exempt from review under the California Environmental Quality Act (“CEQA”) pursuant to 14 Cal. Code of Regulations Section 15306 because the project involves only data collection, research and resource evaluation activities that will not result in a serious or major disturbance to an environmental resource. Staff will file a Notice of Exemption upon approval by the council.