



Staff Recommendation
June 19, 2020

Item 7

Consideration of Authorization to Disburse Funds to Reduce the Risk of Whale and Sea Turtle Entanglement in Fishing Gear

Paige Berube, Program Manager

RECOMMENDED ACTION: Authorization to disburse a total of \$2,900,000 to reduce the risk of whale and sea turtle entanglement in fishing gear as follows:

- Up to \$2,000,000 to Pacific States Marine Fisheries Commission to fund and administer projects identified through a competitive process that directly support OPC's strategy for *Reducing the Risk of Entanglement in California Fishing Gear*;
- Up to \$500,000 to the National Marine Sanctuary Foundation to support gear innovations testing within the Dungeness crab fishery;
- Up to \$300,000 to Cascadia Research Collective to conduct vessel surveys to provide immediate short-term information on whale distribution, abundance and feeding choices, which could inform the 2020-2021 Dungeness crab fishery Risk Assessment and Mitigation Program as well as to provide longer-term whale abundance information; and
- Up to \$100,000 to Point Blue Conservation Science to analyze California whale abundance datasets to assess the spatial and temporal correlations among them.

LOCATION: Statewide

STRATEGIC PLAN OBJECTIVES: Goal 3: Enhance Coastal and Marine Biodiversity; Target 3.3.5 and associated actions

EXHIBITS:

Exhibit A: Letter(s) of Support

FINDINGS AND RESOLUTION:

Staff recommends that the Ocean Protection Council (OPC) adopt the following findings: "Based on the accompanying staff report and attached exhibit, OPC hereby finds that:

- 1) The proposed projects are consistent with the purposes of Division 26.5 of the Public Resources Code, the Ocean Protection Act;

- 2) The proposed projects are consistent with the Budget Act of 2018, which included a \$7.5 million General Fund appropriation to address whale and sea turtle entanglement; and
- 3) The proposed projects are not ‘legal projects’ that trigger the California Environmental Quality Act (CEQA) pursuant to Public Resources Code section, section 15378.”

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

“OPC hereby approves the disbursement of up to \$2,900,000 to reduce the risk of whale and sea turtle entanglement in fishing gear as follows: to disburse up to \$2,000,000 to Pacific States Marine Fisheries Commission to fund and administer projects identified through a competitive process that directly support OPC’s strategy for *Reducing the Risk of Entanglement in California Fishing Gear*; to disburse up to \$500,000 to the National Marine Sanctuary Foundation to support gear innovations testing within the Dungeness crab fishery; to disburse up to \$300,000 to Cascadia Research Collective to conduct vessel surveys to provide immediate short-term information on whale distribution, abundance and feeding choices, which could inform the 2020-2021 Dungeness crab fishery Risk Assessment and Mitigation Program as well as to provide longer-term whale abundance information; and to disburse up to \$100,000 to Point Blue Conservation Science to analyze California whale abundance datasets to assess the spatial and temporal correlations among them.

This authorization is subject to the condition that prior to disbursement of funds, Pacific States Marine Fisheries Commission, National Marine Sanctuary Foundation, Cascadia Research Collective, and Point Blue Conservation Science, each shall submit for the review and approval of the Executive Director of the OPC detailed work plans, schedules, staff requirements, budgets, and the names of any contractors intended to be used to complete the projects, as well as discrete deliverables that can be produced in intervals to ensure the projects are on target for successful completion. All projects will be developed under a shared understanding of process, management and delivery.”

PROJECT SUMMARY:

California’s coastal waters include some of the most productive and diverse ecosystems in the world. To conserve this biodiversity and the coastal economies and communities that rely on a healthy ocean, OPC is committed to protecting endangered and threatened whale and sea turtle species as well as supporting thriving commercial and recreational state-managed fisheries. The *Strategy for Protecting Whales and Sea Turtles & Ensuring Thriving Fisheries: Reducing the Risk of Entanglement in California Fishing Gear*¹ (Strategy), approved by the OPC at its November 2019 meeting, outlines investment priorities to reduce the risk of entanglement in California fishing gear and is one component of a more

¹ [Strategy for Protecting Whales and Sea Turtles & Ensuring Thriving Fisheries: Reducing the Risk of Entanglement in California Fishing Gear](#)

comprehensive effort to protect whales and sea turtles in California. This is consistent with Target 3.3.5 of OPC’s *Strategic Priorities to Protect California’s Coast and Ocean for 2020-2025*:²

“3.3.5: Develop a statewide whale and sea turtle protection plan by 2022 with a target of zero mortality (Vision Zero). As a component of this overall plan, develop and initiate a funding strategy to reduce the risk of entanglement in California fishing gear by 2020.

Two relevant actions of Target 3.3.5 state that OPC will, “collaborate with the California Dungeness Crab Fishing Gear Working Group to reduce the risk of whale entanglement in California fishing gear; fund priority projects recommended by the Working Group to address data gaps and enhance results,” and “support the testing of fishing gear innovations, such as “pop-up” fishing technologies, in 2021.”

The four projects within this staff recommendation are consistent with the Strategy’s comprehensive approach to reduce the risk of entanglement in California fishing gear through advancing collaborative partnerships, best available science, gear innovation, and disentanglement response and outreach. These projects will result in improved science informing management, strengthened partnerships, and scientifically testing gear innovations that aim to protect California’s marine ecosystem and ensure thriving commercial and recreational fisheries.

7a. \$2,000,000 to Pacific States Marine Fisheries Commission to Fund and Administer Projects Identified through a Competitive Process in alignment with OPC’s Strategy to Reduce the Risk of Entanglement in Fishing Gear

This project will provide up to \$2 million to the Pacific States Marine Fisheries Commission to fund and administer projects identified through a competitive process that directly support OPC’s Strategy for reducing the risk of entanglement in California fishing gear.

The overarching goal of this proposed project is to initiate a competitive grant process, administered by Pacific States Marine Fisheries Commission in close partnership with OPC, to implement scientific research projects and collaborative partnerships that directly support OPC’s Strategy for reducing the risk of entanglement.

Developing improved data streams and collaborative research will provide comprehensive information on key factors of entanglement risk to inform adaptive risk mitigation. Advancing collaborative processes will support identifying and developing solutions to reduce the risk of entanglement in fishing gear. Priority areas of the competitive process may include but are not limited to the following critical data and collaborative partnership needs identified in OPC’s Strategy:

- Support coordination to align and improve data streams as well as to increase accessibility and transparency of best available science.

² [Strategic Priorities to Protect California’s Coast and Ocean \(2020-2025\)](#)

- Systematic monitoring, analysis and enhanced predictive modeling of forage and oceanographic patterns to inform whale and sea turtle movement, population densities, and spatial distributions.
- Develop an improved understanding of the abundance and dynamics of different prey species throughout the year, or fishing seasons, combined with improved understanding of whale and sea turtle distribution and behavior in relation to the prey availability, to better inform adaptive management approaches.
- Combine data from observations with expansion and validation of ecosystem predictive modeling regarding prey distribution to improve assessments of entanglement risk assessment.
- Leverage innovative tools and technology that have the potential to provide more information on finer-scale gear locations and movement patterns over a broader spatial scale, while considering lessons learned from collaborative research pilot projects to refine understanding of whether a fleet-wide or representative subset of a fleet's fishing effort distribution and density is needed for risk assessment and mitigation.
- Systematic monitoring and analysis, as well as improved prediction of whale and sea turtle population densities, spatial distribution and behavior, to enhance accuracy of entanglement risk assessment and mitigation.
- Improved understanding of whale and sea turtle movement and migration in relation to other risk factors; as well as whale behavior studies in the presence of fishing gear.
- Improved fine-scale information on whale and sea turtle population densities and distribution to inform spatial and temporal scales of potential entanglement mitigation measures.
- Inform or support incorporation of best available science into a newly developed and/or existing centralized online platform to help support transparent information sharing and decision-support processes; as well as to allow for streamlined, and continually updated data streams to informing fisheries managers, fishermen and others of the level of entanglement risk.

Proposal Review Process and Grant Administration Process

Proposals will undergo a structured review process led by the Pacific States Marine Fisheries Commission, in close partnership with OPC. OPC staff will be involved in all stages of the review process, including the technical review and final decision-making. At its discretion, OPC staff may request additional review by likely user groups of the research findings or suggest coordination of complementary proposals. Projects selected through this review process will be brought back to the Council for final consideration and approval of grant awards. Pacific States Marine Fisheries Commission will provide all post-award grant administration, including reporting and financial accounting on the grants selected for funding. Pacific States Marine Fisheries Commission has a history of supporting competitive grant processes in support of West Coast fisheries and marine wildlife priorities.

If approved, this project would aim to initiate the competitive process in fall 2020 and aim to support individual projects after selection in spring 2021. Individual projects could be supported until around January 2024 (allowing for projects of up to ~2.5 years), with the OPC and Pacific States Marine Fisheries project concluding around March 2024.

7b. \$500,000 to the National Marine Sanctuary Foundation for Gear Innovations Testing

This project will provide up to \$500,000 to the National Marine Sanctuary Foundation to support gear innovations testing within the Dungeness crab fishery.

An associated action of Target 3.3.5 in OPC's *Strategic Priorities to Protect California's Coast and Ocean for 2020-2025* is to "support the testing of fishing gear innovations, such as "pop-up" fishing technologies, in 2021." OPC's Strategy for reducing the risk of whale and sea turtle entanglement in California fishing gear includes gear innovations as one of its four core components. Specifically, the Strategy supports, "innovative research and development of fishing gear modifications that would reduce entanglement risk while allowing for safe, efficient, enforceable and cost-effective harvesting operations with minimal adverse impacts to marine life." The California Dungeness Crab Fishing Gear Working Group (Working Group) recommended that "OPC allocate a portion of the General Funds to support shovel-ready gear innovations projects to test...based on established criteria...developed by the Working Group and/or California Department of Fish and Wildlife (CDFW);"³ and further, "to support the state's efforts to reduce the risk of whale entanglements in the Dungeness crab fishery, the Working Group recommends continued dialogue on exploring new gear innovations for the 2019-20 season and beyond."⁴

It is critical that gear innovation testing or pilot projects abide by guiding criteria to ensure the safety of testing participants, and to reduce adverse impact to marine ecosystems. The Working Group developed Guidelines for Research and Development Projects, with a focus on "pop-up" fishing gear, which include the following criteria: enforceable, economical, fishable, reliable, safe, and minimizes adverse impacts on marine life.⁵ CDFW's additional guidance for testing trap gear modifications prioritizes enforceability and minimizing impacts to marine life. This guidance states that, "prior to widespread adoption, or mandatory use, of any fishing gear modifications, additional testing and refinement must be conducted."⁶

The objective of this project is to have a coordinated group of California commercial Dungeness crab fishermen systematically test gear innovation systems based on a robust scientific project design in realistic commercial fishing conditions over an extended period. This project will allow for comparison of multiple pop-up systems based on identified criteria, with a focus on reliability of the retrieval mechanism. The project will

³ [Dungeness Crab Fishing Gear Working Group Recommendations Memo \(October 2018\)](#)

⁴ [Dungeness Crab Fishing Gear Working Group Recommendations Memo \(November 2019\)](#)

⁵ [Dungeness Crab Fishing Gear Working Group: Guidelines for Research & Development Projects \(February 2019\)](#)

⁶ [CDFW Guidance for Testing Trap Gear Modifications \(June 2019\)](#)

also support non-pop-up gear innovations to be tested based on identified criteria. The project will test gear innovations during the open commercial Dungeness crab season, or during other open commercial fisheries, and there will be mandatory use of a “tag line” (a backup fishing line on any pop-up fishing system to facilitate enforceability, detection and ability to identify the gear when submerged so as to minimize unintended impacts when testing). It is not anticipated that CDFW or NOAA Office of National Marine Sanctuaries permits will be required; however, the project would involve close coordination and confirmation regarding permits prior to any testing. Additionally, the National Marine Sanctuary Foundation will be able to provide non-OPC funded compensation for fishermen supporting the scientific testing of gear innovations for contributing to this proposed collaborative research project. Guiding questions for testing within this project may include: (1) Can fishermen deploy and retrieve gear using their existing set up or with only minor modifications?; and (2) Is the retrieval mechanism reliable in a variety of sea conditions and depths?

Gear types included in the testing and scientific project design will be based on the Working Group’s Recommendation Memo from November 2019 (referenced above), with a focus on pop-up gear, as well as including non-pop-up gear innovations. Long-lining gear is not proposed within this project scope. If approved, one of the project’s first tasks would be to collaborate with the Dungeness Crab Fishing Gear Working Group and its Gear Innovations Project Team in order to solicit feedback on the proposed scientific project design, and in particular to solicit fishermen’s perspectives on the proposed project design.

The project will aim to conduct gear innovation testing during the 2020-2021 commercial Dungeness crab fishing season, and to refine the scientific project design over the summer in advance of the start of the season (i.e. November 2020).

The three main components of this project include project management, scientific project design development and confirmation as well as gear acquisition, and cooperative research and testing with commercial fishermen. The National Marine Sanctuary Foundation will coordinate closely with OPC, CDFW, NOAA as well as the Dungeness Crab Fishing Gear Working Group as appropriate, and other interested fishermen, throughout the course of the project. CDFW will collaborate on developing the scientific project design, data collection and reporting, as well as training and post-testing discussions with participants. CDFW may join participants to conduct on-board documentation of testing operations. This would be separate from enforcement actions by CDFW Law Enforcement Division personnel. The National Marine Sanctuary Foundation will be the main coordinator among state and federal resource managers, gear innovators/manufacturers, commercial fishermen partners and other external partners.

It is likely that gear innovation will need to be fishery-specific; however, there may be opportunities to leverage applicable lessons learned across fisheries, as well as from other U.S. states and regions around the world addressing similar entanglement issues. This

project will conclude with a final summary report, including a data summary based on the testing criteria, that will be publicly available on OPC’s website.

7c. \$300,000 to Cascadia Research Collective to Conduct Vessel Surveys

This project will provide up to \$300,000 to Cascadia Research Collective to conduct vessel surveys to provide immediate short-term information on whale distribution, abundance and feeding choices, which could inform the 2020-2021 Dungeness crab fishery Risk Assessment and Mitigation Program; provide longer-term whale abundance, trends and population structure information; as well as conduct entanglement response including disentanglement efforts if an entangled whale is encountered.

The Working Group has identified improving the whale population densities and spatial and temporal distributions factor as a priority for assessing and mitigating risk. Within the “best available science” component of OPC’s Strategy to reduce the risk of entanglement in fishing gear, the following critical data needs are included within the whale and sea turtle population densities and distributions section: “systematic monitoring and analysis, as well as improved prediction of whale and sea turtle population densities, spatial distribution and behavior, to enhance accuracy of entanglement risk assessment and mitigation.” OPC’s Strategy also states the, “importance of developing whale distributions information on an annual or species-specific perspective to inform fisheries other than Dungeness crab.”

The core project objectives are to provide near-term information for Dungeness crab fisheries management; to conduct research to support longer-term studies on humpback and blue whale abundance, trends and population structure; and to conduct successful disentanglement efforts if an entangled whale is encountered and improve the quantity and quality of information collected during entanglement responses.

The project will provide information on whale habitat, distribution, migratory timing, and relative density at key locations in spring, summer and fall. The project will also determine whether humpback whales are feeding on krill versus fish at different locations and seasons. This information, likely in the form of a map depicting the vessel survey data on whales and forage, may inform Dungeness crab fisheries management risk assessments in fall and spring.

This project will also support longer-term studies of humpback and blue whale abundance, trends, and population structure. Identification of individual whales through the photo identification catalogue provides information on humpback whale distinct population segments (DPS) – one of which is classified as threatened and one as endangered under the Endangered Species Act. In addition to providing critical data for California, the project can provide data that will inform federal management of endangered and threatened whales. Project outputs will include additional entries into the West Coast photo identification catalog and information summarized in a publicly available annual report.

Vessel surveys would aim to be conducted in four regions along the California coast. These four regions encompass commercial Dungeness crab fishing grounds as well as whale habitat:

- South-central California: Santa Barbara Channel to Morro Bay⁷
- Central California: Monterey Bay to Half Moon Bay
- North-central California: Pt. Reyes to Bodega Bay
- Northern California: Eureka to Crescent City

The project will conduct at least one 3-day survey, in each of four regions, during three times of the year (fall, spring and summer). Vessel surveys would be conducted during these three times to inform key decision points during the Dungeness Crab Fishing Gear Working Group's Risk Assessment and Mitigation Program (RAMP).

- Pre to early Dungeness crab fishing season (~October-December)
- Mid Dungeness crab fishing season (~March-April)
- Peak whale period in summer to provide year specific whale abundance estimates

Vessel surveys would be coordinated with the timing of any planned CDFW aerial surveys to help identify key areas to target and gather additional data during vessel surveys, and could also be adapted in timing and location as needed to better inform the RAMP.

Survey design includes conducting systematic lines parallel to shore at both the shelf edge (200 meter depth contour where highest whale concentration during krill-feeding years is anticipated) and intermediate depth contour closer to shore (around 100-120 meter depth contour representing areas humpback whales typically feed on small schooling fish). This design will allow a determination of the proportion of whale population using offshore versus inshore waters. This information, combined with fishing dynamics information such as Dungeness crab fishing areas during that time period, will inform risk assessments within the Dungeness Crab Fishing Gear Working Group's RAMP.

When humpback whale concentrations are encountered, the project research team will have several means to identify prey of humpback whales (fish vs krill) including: hydroacoustics; documenting associated species and prey types; deployments of short or medium duration tags on whales in selected areas to document movements and feeding behavior; and collecting skin samples for stable isotope analysis to determine the whale's trophic feeding level (i.e. fish vs krill). Improved understanding of whale foraging behavior and patterns can inform whale distribution along the coast to inform risk assessments when compared with fishing dynamics information.

Photographic identification would be conducted of individual humpback, blue, and gray whales encountered to answer key questions about whale abundance, Endangered

⁷ Cascadia Research Collective will be conducting vessel surveys between the Santa Barbara Channel and San Diego as part of other research projects noted below in the "Leverage of OPC Funds" section. These projects will contribute photographic identification data to the West Coast database to inform understanding of humpback and blue whale abundance and trends along the California coast.

Species Act (ESA) status, and population structure. Cascadia Research Collective has the primary West Coast photo-identification catalogs of all three aforementioned species. As a part of the proposed work with a focus on humpback whales, the project will obtain and match photographic identifications to: determine whether early and late season whales are part of feeding group; determine proportion of animals known to belong to known distinct population structure (DPS) and their Endangered Species Act (ESA) status; and continue to examine whale abundance and trends.

Researchers conducting the vessel surveys are also authorized to be able to conduct a disentangling if an entangled whale is encountered, as the research team includes experienced entanglement response personnel and the necessary equipment. In the event an entanglement is observed during survey transects, the team would attempt disentangling, document gear type and nature of entanglement, attach a telemetry buoy to allow for tracking and follow-up disentangling efforts if needed, and attempt to collect documentation to identify whales as individuals to help understand what population the whale comes from and its ultimate survival of the entanglement.

Project outcomes include additional information on whale distributions in southern, central, and northern California to inform fisheries management and additional information on prey selection and habitat of humpback whales in 2020-2021; improved understanding of longer-term humpback and blue whale abundance, trends and population structure; and improved reporting and documentation of entanglements in the case of an entanglement response to inform entanglement prevention.

7d. \$100,000 to Point Blue Conservation Science for Whale Abundance Data Assessment

This project will provide up to \$100,000 to Point Blue Conservation Science to analyze California whale abundance datasets to assess the spatial and temporal correlations among them.

This project aligns with the Strategy's Best Available Science priority to develop improved data streams to provide comprehensive information on key factors of entanglement risk across state-managed fisheries in order to inform adaptive risk mitigation.

This Strategy states that, the "Working Group identified improving the whale and sea turtle population densities and spatial and temporal distributions factor as a priority for assessing and mitigating risk," and that the "Working Group recommended synthesis of available whale watch data and comparison of this information with other whale sighting datasets to evaluate the utility of whale watch data in informing risk assessment and mitigation." This is supported by a Working Group Recommendations Memo from October 2018 (referenced above) which includes a recommendation to, "synthesize available whale watch data (e.g., Monterey Bay Whale Watch) and compare this information with other whale sightings datasets (e.g., systematic vessel and aerial surveys) to evaluate the utility of whale watch data (local and regional) in informing the [risk assessment and mitigation program] RAMP."

This project will involve collaboration with other data stream leads to compile available, historical, and ongoing humpback and blue whale abundance datasets from California to assess temporal and spatial correlations among them. Point Blue will compile whale abundance datasets and work with the lead researcher to develop a concise description of the data collection methods, assumptions, limitations, and temporal and spatial trends to date. Point Blue will use these data to identify lags and leads in timing of humpback and blue whale migration, abundance patterns, and environmental drivers that may increase or shorten migration times. The project will investigate correlation of whale counts between locations where continuous surveys are available at either an annual, seasonal, monthly and/or daily basis.

The goal of this project is to provide a scientifically based assessment of whether one region's whale data may inform whale migration and abundance in other regions of California, and if there are certain environmental drivers that limit or strengthen these correlations. For example, Point Blue's Farallon Island dataset shows that humpback and blue whale counts have increased over time (1993 to 2016); northward migration (arrival time) of humpback and blue whales is earlier, whereas southward migration (departure time) has not changed. Timing of migration to feeding areas is influenced by local (upwelling, temperature) and basin-scale climate (El Niño). As a continuation of this example, if humpback whales arrive to the Channel Islands as reflected in the Channel Islands data, this project will assess if there are correlations between these data and whale migration and/or abundance at the Farallon Islands based on the Farallon Islands data, as well as across other datasets.

The whale abundance data assessment will include the below datasets. The general time frames may be refined as appropriate to include earlier or later years to ensure a scientifically robust comparison:

- Data collected on the Farallon Islands by Point Blue (focused on daily humpback and blue whale counts, 1993 to 2019, north-central California)
- Data collected in Monterey Bay by Monterey Bay Whale Watch (focused on daily humpback and blue whale counts, 1999 to 2019, central California)
- Data collected on the Channel Islands by the Naturalist Corps which is jointly led by the Channel Islands National Marine Sanctuary and the National Park Service (weekly humpback and blue whale counts, 1999 to 2019, south-central California)
- Data collected during Applied California Current Ecosystems Studies (ACCESS) vessel and aerial surveys by Point Blue (seasonal, 2004 to 2019, north-central CA)
- Data collected during NOAA rockfish vessel cruises (spring, 1990 to 2019, California)
- Data collected during NOAA and/or CDFW aerial surveys as available.

Point Blue will explore the spatial extent at which whale abundance patterns in the local datasets may represent abundance patterns in the region at multiple spatial scales. Additionally, the project seeks to identify if environmental drivers increase or shorten whale migration times. These environmental variables may include but are not limited to,

front prevalence, chlorophyll concentrations, sea surface temperature and climate indices such as El Niño, Pacific Decadal Oscillation (PDO) and the North Pacific Gyre Oscillation. The project plans to include the habitat compression index (a sea surface temperature-based indicator of marine habitat conditions), as well as forage condition indices shown to affect whale abundance and distribution.

This project will result in a data catalogue with agreed descriptions of advantages and limitations of existing whale datasets and improved understanding about connections and distinctions among them. The project will develop a final summary report and presentation that will be publicly available.

Point Blue will coordinate with OPC, CDFW, and NOAA on project development to achieve project goals and timely deliverables. Point Blue will also work with these agencies to engage with the Dungeness Crab Fishing Gear Working Group as appropriate to share project goals, data streams, analytical approach and interpretation of results on an ongoing basis. The project intends to inform the Risk Assessment and Mitigation Program (RAMP) and will aim for preliminary results to be available during the 2020-2021 Dungeness crab fishing season.

About the Grantees

The Pacific States Marine Fisheries Commission (PSMFC) is an interstate compact agency that partners with resource agencies and the fishing industry to support sustainable management of Pacific Ocean resources. PSMFC supports California, Oregon, Washington, Idaho and Alaska, and has no regulatory or management authority. PSMFC's expertise includes coordinating research activities, monitoring fishing activities, and collecting data and maintaining fisheries databases. PSMFC has a history of partnering with resource agencies to co-develop requests for proposals and to administer grant awards when upon selection. PSMFC will work closely with OPC throughout the course of the project.

The National Marine Sanctuary Foundation (Foundation), established in 2000, is the official non-profit partner of the National Marine Sanctuary System. The Foundation directly supports the United States' national marine sanctuaries through their mission to protect species, conserve ecosystems and preserve maritime heritage. The Foundation accomplishes its mission through advancing community stewardship and engagement programs, on-the-water conservation projects, public education and outreach programs, and scientific research and exploration. The Foundation fosters innovative projects that are solution-oriented, scalable and transferable, and develops strategic partnerships that promote the conservation and recovery of species and their habitats.

Cascadia Research Collective (CRC), a non-profit organization based in Olympia, Washington, has led long-term research efforts on humpback and blue whales along the US West Coast, including a whale photo identification catalogue that began in 1986. CRC would be the overall project lead and would partner with Sealife Response, Rehab, and

Research (SR3) and The Marine Mammal Center (TMMC) as project partners in conducting the field effort and response. Efforts would be coordinated with CDFW and NOAA as appropriate. Survey personnel from Cascadia, SR3, and TMMC would include Level 3 and 4 NOAA certified entanglement responders and would be able to transition into entanglement response including disentanglement efforts if an entangled whale is encountered.

Point Blue Conservation Science (Point Blue) is a non-profit organization based in central California whose mission is to conserve birds, other wildlife and ecosystems through science, partnerships, and outreach. Point Blue stewards the Applied California Current Ecosystems Studies (ACCESS) dataset, in partnership with the Greater Farallones and Cordell Bank National Marine Sanctuaries, which consists of vessel cruise data on sea life and oceanographic variables since 2004. Point Blue also supports field biologists on the Farallon Islands who have contributed to a long-term daily whale count dataset. Point Blue supports numerous other research initiatives across oceans, shorelines, working landscapes and restoration.

Project Timelines

Pacific States Marine Fisheries Commission, *Fund and Administer Projects Identified through a Competitive Process that Directly Support OPC's Strategy to Reduce the Risk of Entanglement in California Fishing Gear* – July 2020 – March 2024

National Marine Sanctuary Foundation, *Gear Innovations Testing* – July 2020 – August 2021

Cascadia Research Collective, *Vessel Surveys* – July 2020 – July 2021

Point Blue Conservation Science, *Whale Abundance Data Assessment* – July 2020 – January 2022

PROJECT FINANCING:

Staff recommends that the Ocean Protection Council (OPC) authorize encumbrance of up to \$2,900,000 to reduce the risk of whale and sea turtle entanglement in fishing gear as follows: to disburse up to \$2,000,000 to Pacific States Marine Fisheries Commission to fund and administer projects identified through a competitive process that directly support OPC's strategy for *Reducing the Risk of Entanglement in California Fishing Gear*; to disburse up to \$500,000 to the National Marine Sanctuary Foundation to support gear innovations testing within the Dungeness crab fishery; to disburse up to \$300,000 to Cascadia Research Collective to conduct vessel surveys to provide immediate short-term information on whale distribution, abundance and feeding choices, which could inform the 2020-2021 Dungeness crab fishery Risk Assessment and Mitigation Program as well as to provide longer-term whale abundance information; and to disburse up to \$100,000 to Point Blue Conservation Science to analyze California whale abundance datasets to assess the spatial and temporal correlations among them.

Entity - Project Title	Project Amount
Ocean Protection Council – Fund and Administer Projects that Directly Support OPC’s Strategy	\$2,000,000
Ocean Protection Council – Gear Innovations Testing	\$500,000
<i>National Marine Sanctuary Foundation – Gear Innovations Testing</i>	<i>\$43,815</i>
<i>California Department of Fish & Wildlife – Gear Innovations Testing</i>	<i>Staff time support</i>
Ocean Protection Council – Vessel Surveys	\$300,000
<i>Cascadia Research Collective – Vessel Surveys</i>	<i>\$100,000</i>
Ocean Protection Council – Whale Abundance Data Assessment	\$100,000
OCEAN PROTECTION COUNCIL TOTAL	\$2,900,000

The anticipated source of funds will be from the Ocean Protection Council’s General Fund appropriation from the 2018 Budget Act, which included \$7.5 million for whale and sea turtle entanglement.⁸ Of the \$7.5 million appropriated to OPC, \$1 million was directed toward supporting sea lion and seal stranding rescue and rehabilitation activities. In addition, Public Resources Code (PRC) Section 35651,⁹ as amended through Senate Bill 1017 (Allen, 2018), directed \$1 million to fund the drift gillnet transition program established by the California Department of Fish and Wildlife pursuant to Fish and Game Code Section 8583. OPC approved an investment strategy in November 2019 to guide a comprehensive approach to reducing the risk of entanglement in California fishing gear.

This staff recommendation includes \$2,900,000 of proposed project funding, of which up to \$2,000,000 would support a competitive request for proposals process in alignment with OPC’s Strategy to *Reduce the Risk of Entanglement in California Fishing Gear*. OPC has approved \$2,605,815 supporting active projects, including the sea lion and seal rescue and rehabilitation as well as the drift gillnet transition program projects. If OPC approves this staff recommendation, there would be \$1,994,185 amount of General Fund for whale and sea turtle entanglement remaining. Within this funding source, projects must be encumbered by June 30, 2022 and spent by June 30, 2024.

Leverage of OPC funds

National Marine Sanctuary Foundation will leverage \$43,815 in support of this project which includes both compensating participating fishermen who conduct collaborative research in testing gear innovations, as well as providing in-kind staff time support for the project.

Cascadia Research Collective will leverage \$100,000 to support the total cost of the survey effort and data analysis. Leveraged funds will be contributed from a NOAA Section 6 grant

⁸ [2018-2019 Governor’s Budget](#)

⁹ [Public Resources Code \(PRC\) Section 35651](#)

to Washington Department of Fish and Wildlife that supports some of Cascadia Research Collective’s photo identification effort along the US West Coast, as well as from a NOAA Prescott Marine Mammal Rescue Assistance grant to project partner, SR3, to conduct entanglement responses along the US West Coast including off California.

CONSISTENCY WITH CALIFORNIA OCEAN PROTECTION ACT:

The proposed projects are consistent with the California Ocean Protection Act, Division 26.5 of the Public Resources Code as they will improve the management of fisheries and foster sustainable fisheries. The proposed projects will provide monitoring and scientific data to improve state efforts to protect and conserve ocean resources, as well as improve management, conservation, and protection of coastal waters and ocean ecosystems.

CONSISTENCY WITH THE OPC'S STRATEGIC PLAN:

These projects are consistent with Target 3.3.5 of OPC’s *Strategic Priorities to Protect California’s Coast and Ocean for 2020-2025*.

COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA):

The proposed projects are categorically exempt from review under the California Environmental Quality Act (“CEQA”) pursuant to 14 Cal. Code of Regulations Section 15306 because the projects will not result in a serious or major disturbance to an environmental resource. Staff will file Notice of Exemptions upon approval by the OPC. Please note that in the case of an entanglement response, the response is conducted under a permit held by National Oceanic and Atmospheric Administration (NOAA) Fisheries’ Marine Mammal Health and Stranding Response Program (MMHSRP).