Committee on Natural Resources
Subcommittee on Water, Oceans, and Wildlife
Oversight Hearing
1324 Longworth House Office Building
May 8, 2019
10:00 am

Legislative Hearing on
H.R. 417, H.R. 1023, H.R. 1218, H.R. 1240, H.R. 1314, H.R. 1979, H.R. 2189, H.R. 2405, and H.R. 2406

The Department recognizes that the responses to these QFRs are excessively overdue and apologizes for the delay in sending these to the Committee.

Questions from Rep. TJ Cox

1. *This question is about the introduction of alternative gear to drift gillnets. After testing since 2015, the Pacific Fisheries Management Council is set approve deep-set buoy gear for the fishery.* ***Can you commit that NOAA will expeditiously finalize the rule authorizing deep-set buoy gear if and when approved by Pacific Fisheries Management?***

Answer:

NMFS is committed to the Council's goals of promoting and supporting a wide range of harvest strategies for swordfish off the West Coast while minimizing protected species interactions and unmarketable finfish bycatch. Currently, NMFS is preparing an analysis of the Council's range of alternatives to support Council decisions regarding whether to authorize deep-set buoy gear (DSBG) under the Fishery Management Plan for U.S. West Coast Highly Migratory Species Fisheries. The Council selected their final preferred alternative in September 2019.

If and when the Council selects its final preferred alternative to authorize deep-set buoy gear, NMFS will support the Council's endeavors to prepare an amendment to the Fishery Management Plan and draft regulations in an expeditious manner. In the interim, NMFS will continue to review, approve, issue, and monitor exempted fishing permits to support the Council's goals.

2. *According to NOAA, data collected from observer financial data, Pacific Fisheries Management Council estimates, and scientific costs estimates from the National Marine Fisheries Service indicate that the cost of managing the fishery is more than double the value of the fish. Taxpayers pay for observers and regulators for fisheries to protect public marine resources.* ***Why does it make sense to continue allowing the use of drift***

gillnets, while burdening the taxpayer, when there are more sustainable and profitable alternatives?

Answer:

Currently, the only commercial gear types used to target swordfish in federal waters off the West Coast are harpoon and large-mesh drift gillnet (DGN) gear. The Council and NMFS have been working together to review, approve, and issue EFPs to collect data on the efficacy of other gear types to harvest swordfish and other marketable highly migratory species off the West Coast. However, it is currently unclear whether equally or more profitable alternatives exist.

There are several important factors to consider when assessing the profitability of gear types: timing and location of fishing, the extent of marketable species caught, and competition in the marketplace, including imports. Unlike fishing with large-mesh drift gillnet gear, deep-set buoy gear fishing is impracticable in rough conditions, including in waters north of Point Conception or late in the fishing season. Large-mesh drift gillnet gear is a higher-volume fishing method than deep-set buoy gear and catches other marketed species of fish besides swordfish. Consequently, deep-set buoy gear-caught swordfish must be sold at a higher price point than drift gillnet-caught swordfish for fishermen to cover their operating costs. Additionally, U.S. West Coast swordfish processors appear to purchase drift gillnet-caught swordfish if it is available; otherwise, they are likely to purchase imported swordfish. According to participants in the experimental deep-set buoy gear fishery, processors have thus far offered too low a price for deep-set buoy gear fishers to cover operating costs at points in the season when low-priced imports are available.

Presently, it is unclear how management costs for different gear types to commercially harvest swordfish off the West Coast may differ. No matter the gear type employed, NMFS expects ongoing management costs related to supporting the Council's interests and ensuring fishery compliance with federal laws.

Questions from Rep. Tom McClintock

H.R. 2406

For decades, NOAA Corps has continuously failed to heed recommendations to better manage their finances, expand their use of the private sector, and ensure safety for all their employees. In a 1996 program evaluation, the Department of Commerce Inspector General recommended that NOAA terminate its fleet modernization efforts, cease investing in its ships, and immediately begin to decommission, sell, or transfer them; and contract for the required ship services. In a 1997 testimony from NOAA's Director of Information Resources Management, the agency expressly stated that NOAA Corps does not meet criteria for receiving military compensation, converting officers to civilians would result in annual net savings, and that entitlement to military rank was an outgrowth of temporary assignments during the second world war, but defense officials envision no role for them in the future.[1] In 1998, the DOC Inspector General included NOAA's fleet as one of the top 10 most serious management challenges facing the Department of Commerce. In a 1999 Government Accountability Office (GAO) letter to Chairman Ken Calvert, Subcommittee on Energy and Environment, House Committee on Science, indicated that GAO has for years "urged NOAA to aggressively pursue more cost-effective alternatives for acquiring needed marine data."[2]

In 2017, GAO released a new report on NOAA Corps functions and again found that the Corps has not succeeded in expanding private sector involvement in data collection[3] – a recommendation made by GAO as early as their 1999 report and the IG's 1996 recommendations. The report also found NOAA was significantly understating agency costs to conduct data collection functions compared to the private sector. GAO's reviews of NOAA's cost comparison reports from '06-'16 found that NOAA had not reported significant costs such as acquisition of a $24 million new vessel, nor did NOAA factor in major vessel maintenance into their operational cost estimates. Ultimately, NOAA Corps simply used costs to measure a single square nautical mile surveyed to compare costs, ignoring those above and other significant operational costs. This review ultimately found that NOAA Corp did not develop a strategy for expanding private sector, cost effective, data collection as required by law. NOAA Corps also did not include administrative costs in their comparisons because they "do not have the software to track contract administration costs." Ultimately, NOAA determined that carrying out actions in regard to the recommendations of this report would be difficult because it would "[require] the coordination of multiple offices within NOAA…"

[1] https://www.gao.gov/assets/110/106779.pdf
[2] https://www.gao.gov/assets/90/88593.pdf
[3] https://www.gao.gov/assets/690/685298.pdf

1. *The financial mismanagement of NOAA Corps has yet to be addressed. What immediate steps can be taken to address the financial shortcomings of the organization?*

Answer:

To clarify, the June 2017 GAO report to Congress "*HYDROGRAPHIC SURVEYING: NOAA Needs Better Cost Data and a Strategy for Expanding Private Sector Involvement in Data Collection*" (https://www.gao.gov/products/GAO-17-510) was not a review of NOAA Corps functions, and did not develop findings aimed at the NOAA Corps. The report reviewed NOAA's efforts to collect hydrographic data including its use of the private sector. It examined (1) how NOAA determines its hydrographic survey priorities, (2) NOAA's efforts to compare the costs of collecting its own hydrographic survey data to the costs of procuring such data from the private sector, and (3) the extent to which NOAA has developed a strategy for private sector involvement in hydrographic data collection.

NOAA Corps officers are an integral part of NOAA. They operate NOAA's ships and aircraft, manage research projects, conduct diving operations, and serve in essential staff positions throughout NOAA.

NOAA has improved the methodology used to document hydrographic survey costs to account for the costs of ships in port for the entire year. NOAA is also currently in the process of updating its policy and procedures for capitalizing improvements to vessels to ensure that we can fully track asset and maintenance costs. The updated policy and procedures will recognize costs related to major maintenance projects that extend the life of the vessel or add functionality to the vessel over multiple fiscal years instead of entirely in the year that the costs were incurred. This change will eliminate a significant difference in the presentation of survey costs between agency assets and private industry.

2. *In 2016, NOAA Corps requested $178 million for marine operations and maintenance to support approximately 3,200 Days at Sea. In 2020, NOAA Corps requests $192 million to provide 2,300 Days at Sea – a decrease by almost a third. It seems that the price to taxpayers keeps increasing, while the NOAA Corps lowers its productivity. Can you explain why it costs more to provide less to the American taxpayers?*

Answer:

In FY 2020, NOAA requested $192 million for NOAA's marine operations and maintenance PPA. This budget line supports centralized management in the Office of Marine and Aviation Operations (OMAO) of NOAA's research and survey vessels and marine operations activities in OMAO's field and headquarters offices. These funds support multiple workforce components including civilians, mariners, and most of the officers of the NOAA Commissioned Officer Corps (NOAA Corps).

The average ship age of the NOAA fleet is 26 years, with three of our 15 active ships exceeding 50 years of age. Eight of NOAA's ships have exceeded their design service life and are projected to retire by 2028; the costs to maintain these vessels increases and reliability decreases. In 2016 with the $178.8 million in funds appropriated to OMAO for marine operations and maintenance, the NOAA Fleet accomplished 2,618 days at sea. In 2018, that number dropped to 2,529 days at sea accomplished. At that time, Congress identified an issue with the way OMAO was funded to address deferred maintenance and significantly increased the funding for ship deferred maintenance. Over the past two years at this increased funding level, OMAO has been able to change the maintenance model for the fleet. The new maintenance model, which is still in the process of being fully implemented, has already resulted in positive impacts and better reliability in the fleet. We now project that the fleet will complete 2,670 days at sea in FY 2020, the highest number of days at sea accomplished in the past 5 years.

Maintaining the fleet at the current funding level and support for NOAA's Ship Recapitalization plan are critical to meet the Nation's needs. The loss of NOAA ships without recapitalization would directly impact the nation's $4.6 trillion in economic activity generated in U.S. seaports, which relies on accurate nautical charts, as well as the $200 billion seafood industry. Moreover, the loss of data used to validate and calibrate satellites and feed weather forecasting models have associated negative economic impacts.

3. *NOAA has spent over $300 million so far on fleet recapitalization and requests $75 million each year for the foreseeable future. What exactly does NOAA have to show for the $300 million in funds already provided to the agency? When do you see a ship coming online and what is the cost estimate for building another vessel?*

Answer:

NOAA is currently executing the Fleet Recapitalization Plan and has been appropriated funding for the first two Class A vessels identified in the plan.

For the NOAA "Class A" vessel design (oceanographic monitoring, research, and modeling missions) or NOAA AGOR Variant, the Navy issued a request for proposals in April of 2018 for preliminary design/contract design and received multiple proposals. On January 22, 2019, Naval Sea Systems Command awarded three competitive firm-fixed-price contracts for procurement of the NOAA AGOR Variant: Dakota Creek Industries in Washington; Thoma-Sea Marine Construction, LLC in Louisiana; and VT Halter Marine, Inc. in Mississippi. These businesses have submitted proposals for detailed design and construction; a contract option award will be chosen in the fourth quarter of Fiscal Year 2020. Cost estimates for this vessel are procurement-sensitive and cannot be shared at this time.

For the NOAA "Class B" (charting and surveying mission) and "Class C" vessels (living marine resources mission), internal preliminary design analysis and capabilities requirements are currently in progress.

Funds to construct two new NOAA AGOR Variant vessels have been transferred to the Naval Sea Systems Command under an assisted-acquisition agreement and we expect them to award the construction contract. Construction of the first "Class A" vessel is expected to begin in the fourth quarter of Fiscal Year 2021 with completion expected 24 to 28 months following the commencement of construction. Construction of the second "Class A" vessel is expected to begin in Fiscal Year 2022 with completion expected 24 to 28 months following the commencement of construction.

4. *NOAA Corps has struggled with sexual harassment and hostile work environments in the past. What is being done to address current issues and prevent further problems on NOAA Corps vessels? How will NOAA monitor and evaluate work environments aboard NOAA vessels?*

Answer:

Like many agencies and society as a whole, NOAA also has sexual harassment and hostile work environment issues. NOAA leadership takes these issues extremely seriously. Preventing and responding to sexual assault and sexual harassment is a top priority for NOAA. Thus, NOAA has elevated the Workplace Violence Program to be under the Deputy Under Secretary for Operations.

NOAA will continue to focus on ensuring leaders understand the importance of committing proper time and funding to preventing and eliminating sexual assault and sexual harassment across the bureau. NOAA's highest priorities are completing the NOAA-wide workplace assessment and implementing bystander intervention training. A contractor will complete the initial assessment by July 2020, and NOAA deployed preventing discrimination and harassment training in February, 2020. NOAA will bring awareness and resources to leaders and employees by hosting a Sexual Assault and Sexual Harassment (SASH) Summit in September/October 2020 featuring experts in prevention and response to sexual assault, sexual harassment, workplace civility, and workplace health. NOAA also created a SASH Council consisting of representatives from line, staff, and program offices and stakeholders to implement the SASH strategic plan. This council first convened in September 2019 and meets monthly.

NOAA completed the following actions:

- NOAA partnered with the nation's largest anti-sexual violence organization, Rape, Abuse, & Incest National Network (RAINN), and, in December 2016, established a Sexual Assault and Sexual Harassment Helpline (SASH Helpline), which continues to provide crisis intervention, referrals, and emotional support to victims. These services are available to NOAA employees, including NOAA's commissioned officer corps, and individuals who work with or conduct business on behalf of NOAA.
- The NOAA Sexual Assault and Sexual Harassment Prevention and Response Policy was issued on February 26, 2018.

- NOAA transmitted the first Report to Congress on Sexual Assaults in NOAA last year and is in the final stages of reviewing the report for 2018.
- In August 2018, NOAA hired a Workplace Violence Prevention and Response Program Manager to develop an agency-wide program to prevent and respond to sexual assault and sexual harassment.

In addition, the NOAA Corps and the Office of Marine and Aviation Operations leadership have taken the following additional steps:

- OMAO partnered with the U.S. Coast Guard to train three victim advocates and one OMAO victim advocate liaison, who is located at MOC-P in Newport, Oregon.
- Designed OMAO specific training for our personnel using a case study-based approach. Real ship, aircraft and remote operational scenarios are used throughout the course. The scenarios discussed are realistic and applicable to our unique workforce and work environments. This training is conducted in-person with a highly experienced facilitator and is group training completed as a team in the field or in the office. *Please note: specific care was taken to ensure the case studies are anonymous and mixed enough to not be able to identify victims.*
- Commissioned a maritime training company to develop a new welcome aboard video specific to the topic of civility. The video includes recognizing and reacting to harassment of all types and was made in partnership with UNOLS. This video has been developed and made available to all field units.
- OMAO continues to have a dedicated investigative services contract in place to investigate expediently and thoroughly. The investigator is linked with employee labor relations specialists to ensure appropriate actions are taken in a timely manner when necessary.
- Ten OMAO personnel attended an Investigation Training Course to bolster the investigative skill set within OMAO to ensure trained personnel are available to assist and conduct proper investigations.
- In 2018 OMAO extended their annual safety survey from the aviation community to the maritime community. This survey, based on decades of Navy surveys and analysis, has helped to shape the leadership priorities and initiatives for OMAO's Aircraft Operations Center for multiple years and proven successful. A separate safety survey was facilitated within OMAO's marine community for the first time and has already shown similar success. The survey covers a variety of topics and provides leadership at the ship command, center command, marine operations and Director level a pulse on the climate and culture.
- Hired a Nurse Practitioner Board Certified in Women's Health.
- OMAO is actively pursuing an affiliate partnership with the National Institute for Occupational Safety and Health (NIOSH) for OMAO's Total Worker Health Program. The/ partnership represents OMAO's commitment to prioritizing an integrated approach to policies, programs, and practices that protect, promote, and advance employee safety, health, and well-being. By focusing on both organizational and environmental factors that

influence our employees' health and productivity, we are better able to understand and implement controls and strategies that more broadly advance worker well-being.

- Areas of initial interventional focus and action include:

    - Drug and ETOH Testing & Substance Abuse Education
    - Mental Health Screening and Support
    - Respectful Workplace Training and Victim Advocacy
    - Maintenance of Operational Platforms
    - Job Training
    - OMAO EEO position integrated in TWH Initiatives
    - Fatigue at Sea/ Crew rest analysis and strategic changes/ education
    - Family Life and Deployment Readiness
    - Healthy Diet and fitness in Operational Environments

H.R. 1979

5. *Mr. Shedd's written statement states: "According to a recent analysis by the Pacific Fishery Management Council's Highly Migratory Species Management Team, deep-set buoy gear has the potential to land far more swordfish than has recently been landed by drift gillnets." Can NOAA provide any existing analysis to verify whether this statement is true or false?*

Answer:

The Highly Migratory Species Management Team (HMSMT) provided an analysis of the Council's range of alternatives for authorizing deep-set buoy gear at the June 2018 Council meeting (Agenda Item G.5.a HMSMT Report 1). The analysis used data from approximately six vessels fishing from 2015 through 2017. Although the HMSMT's annual projected swordfish catch under some of the Council's alternatives could exceed DGN swordfish catch, the HMSMT noted certain assumptions used in its analysis and uncertainty regarding how the results would apply to a larger deep-set buoy gear fishery:

> "These calculations assume constant returns to scale as the number of DSBG permits increases and shows results as if catch per unit effort and vessel effort remain constant in the future at different fishery sizes rather than attempting to correct for potential future changes in catch per unit effort or fishing effort. The numbers presented here are most indicative of deep-set buoy gear effects for a small number of vessels, similar to EFP activity to date. There are factors that may affect catch per unit effort or total catch in the future, such as fisherman experience, swordfish availability, and changes in annual fishing effort."

NMFS prepared a preliminary Draft Environmental Impact Statement (PDEIS), including biological and socioeconomic analyses, and presented this document at the September 2019 Council meeting. The analyses in the PDEIS use deep-set buoy gear data from approximately 26

vessels fishing from 2015 through February 2019 to estimate a range of possible catch counts for swordfish and non-target species under the Council's various deep-set buoy gear authorization alternatives. The PDEIS also estimates average price and revenues to various regions under the Council's range of alternatives. The document discusses its underlying assumptions and the inherent uncertainty in projecting future catch, price, and revenues based on a limited amount of data. Once more data are available in the future, it is likely that the power of our analysis to accurately predict catch under a fully authorized deep-set buoy gear fishery will increase.

6. *Can NOAA evaluate whether any existing alternative fishing gear is an economically viable replacement for the harvest of swordfish?*

Answer:

Yes, NMFS is able to evaluate whether there is alternative gear (or a suite of gear types) likely to provide an economically viable replacement for commercial swordfish fishing with large-mesh drift gillnet gear. NMFS will do this by evaluating several key aspects of the alternative gear in comparison to large-mesh drift gillnet. Some examples include feasibility of gear to fish in certain fishing conditions, catch of swordfish and any other marketable species, and competition in the marketplace, including imports. Large-mesh drift gillnet gear can be used to fish in rough conditions, including in waters north of Point Conception late in the fishing season, which are considered productive fishing grounds for swordfish during that time of year. The timing of fishing impacts expectations for fishing effort, swordfish catchability, and competition with other seafood products. Large-mesh drift gillnet gear is a high-catch fishing method, which catches other marketed species of fish besides swordfish. Thus, NMFS would evaluate the likelihood of other gear types to catch swordfish, as well as other marketable species, and to garner profitable market prices for that catch (i.e., by taking into account operating costs of different gear). Whether market prices for catch will be profitable will depend in part on competition with other sources of swordfish supply or substitute products. Over 80 percent of swordfish consumed in the United States is provided by imports. Given this, U.S. West Coast swordfish processors are less likely to pay higher prices for U.S.-caught swordfish, and other marketable species, at points in the season when low-priced imports are available.

NMFS' ability to evaluate whether there are economically viable alternatives to large-mesh drift gillnet gear will depend on the level of data available for such analysis. Several alternative gears are currently being tested for commercial harvest of swordfish off the U.S. West Coast. To date, NMFS issued exempted fishing permits, which were recommended by the Pacific Fishery Management Council (Council), to fish with standard and linked deep-set buoy gear and shallow-set and deep-set longline gear inside the U.S. EEZ off the U.S. West Coast. NMFS is also considering the Council's recommendations to issue exempted fishing permits for deep-set short line gear and modified drift gillnet gear. Most of the data NMFS has collected from these trails so far pertains to standard deep-set buoy gear.

7. *Both witnesses testifying on H.R. 1979 commented on levels of finfish bycatch in the DGN fishery. Please provide statistical information from 2015 to 2018 for finfish bycatch in*

this fishery, including details on species that are authorized for retention and legal sale. Can you confirm the statement by Mr. Burke that 99% of mola caught in their nets are released alive?

Answer:

NMFS' most recent observer program summaries of DGN fish catch contain data through the 2017/2018 fishing season. During the four-year period from 2014 through 2017, NMFS observers reported that the DGN fishery kept 40 percent of its total fish catch (measured in numbers of individuals), discarded 47 percent of it alive, and discarded 13 percent of it dead. During this period, approximately 96 percent of the common molas that were observed caught were returned alive (1247 out of 1297 individuals).

Striped marlin (11 individuals) and blue marlin (one individual) are the only fish species observed caught during this period that are prohibited from retention and sale. Although all of the other fish species that were observed caught are authorized for retention and sale, some species are not retained due to their low or nonexistent market value. Refer to the June 2018 Council meeting Agenda Item G.7.a Supplemental NMFS Report 1, Appendix 2, [4] for a characterization of which fish species were mostly marketed, sometimes marketed, or always discarded in the DGN fishery during the 2013/2014 through 2017/2018 fishing seasons.

8. *Please provide the Committee with the number of marine mammal and turtle interactions in the DGN fishery from 2015 to 2018.*

Answer:

NMFS' most recent marine mammal and sea turtle bycatch estimates[5] contain data through calendar year 2017. Because observer coverage in the fishery is less than 100 percent, a regression tree bycatch model is used to derive bycatch estimates. This estimation approach outperforms a ratio-estimation approach (i.e., extrapolating bycatch observed in a given period according to the ratio of observed versus unobserved sets in the fishery), which systematically under- and overestimates when bycatch is a rare event, like is the case for sea turtles and certain marine mammal interactions with the drift gillnet fishery. The regression tree model is informed by all available data from the fishery and values are generated even in years without observed bycatch. Thus, the resulting bycatch estimates for a given time period are more stable and calculated with better precision, but often are expressed in fractions of animals. For example, during the five-year period from 2013 through 2017, NMFS estimates that the DGN fishery caught 270.2 marine mammals and 5.5 sea turtles.

[4] https://www.pcouncil.org/wp-content/uploads/2018/06/G7a_Supp_NMFS_Rpt1_SMMP_IncrMonitoring_JUN2018BB.pdf
[5] https://swfsc.noaa.gov/publications/TM/SWFSC/NOAA-TM-NMFS-SWFSC-619.pdf

The total number of marine mammals includes estimated catch of 1.4 minke whales, 3.8 gray whales, 109.9 short-beaked common dolphin, 11.6 long-beaked common dolphin, 11.6 Risso's dolphin, 7.3 short-finned pilot whales, 5.1 Pacific white-sided dolphin, 24.1 northern right whale dolphin, 2.0 Dall's porpoise, 2.9 sperm whales, 1.3 Cuvier's beaked whales, 68.3 California sea lions, and 19.1 Northern elephant seals.

Additionally, NMFS estimates that fewer than one of each of the following species were caught in total during the entire period from 2013 to 2017: fin whale, humpback whale, striped dolphin, bottlenose dolphin, Hubb's beaked whale, unidentified mesoplodont beaked whales, Steller's sea lion, unidentified pinnipeds, unidentified cetaceans, and unidentified whales.

The total number of sea turtles includes estimated catch of 3.2 loggerhead sea turtles and 1.1 leatherback sea turtles. Additionally, NMFS estimates that fewer than one of each of the following species were caught in total from 2013 to 2017: green sea turtles, olive ridley sea turtles, and unidentified sea turtles.

Currently, the total annual human-caused mortality and serious injury to marine mammals is below the potential biological removal (PBR) level under the Marine Mammal Protection Act (MMPA) for each stock of marine mammals off the U.S. West Coast. A secondary target of the MMPA is to reduce serious injury and mortality to insignificant levels approaching a zero rate. That insignificance threshold is defined by NMFS as less than 10 percent of PBR, or the zero mortality rate goal (ZMRG). Currently, annual mortality and serious injury is below ZMRG for most stocks of marine mammals incidentally caught in the DGN fishery. NMFS' 2018 U.S. Pacific Marine Mammal Stock Assessments indicate that total annual human-caused serious injury and mortality remains above ZMRG for minke whales, short-finned pilot whales, and sperm whales. Further, the total estimated catch of sea turtles and ESA-listed marine mammals in the drift gillnet fishery is below the level authorized in an Incidental Take Statement issued as part of the most recent ESA Biological Opinion (2013) on the fishery, which concluded that continued operation of the fishery is not likely to jeopardize the continued existence of any threatened or endangered species.

9. *How many drift gillnet fisheries are active in the U.S. in either state or federal waters?*

Answer:

The only U.S. Federal fishery that meets the drift gillnet definition in H.R. 1979 is the DGN fishery on the Pacific Coast. NMFS does not have information on all state fisheries, though we are unaware of any state fisheries that would meet the definition in H.R. 1979.

Questions from Rep. Russ Fulcher

1. *Please provide the total amount of federal NOAA-related funding from 2007 to the present to the Puget Sound Partnership and to implement the Puget Sound Salmon Recovery Plan, which was adopted by NOAA in 2007.*

Answer:

NOAA's Office of Habitat Conservation's Restoration Center provided $1.6 million to the Puget Sound Partnership in FY 2010 through a two-year cooperative agreement award to implement restoration projects in the deltas of the large Puget Sound river systems, identified as one of the top priorities in the Puget Sound Action Agenda supporting Puget Sound Recovery Plan goals. The Puget Sound Partnership matched the NOAA Restoration Center funding with $1.4 million in non-federal funding. In addition to the funding provided directly to the Puget Sound Partnership, NOAA has provided a total of $12.5 million in grants since 2007 to implement high priority habitat restoration projects across Puget Sound to support Puget Sound Chinook and Hood Canal summer chum salmon recovery.

Pacific Coastal Salmon Recovery Funds (PCSRF) also provide indirect funding for numerous recovery activities associated with the recovery of Puget Sound Chinook salmon and Hood Canal summer Chum salmon (e.g., habitat restoration, planning, outreach, RM&E, enhancement). These funds are awarded to the Northwest Indian Fisheries Commission and Washington State Recreation and Conservation Office. These grant recipients then select and allocate the awarded funds to eligible actions, many of which occur in the Puget Sound. Since FY 2007, an estimated $151.3 million in federal funding has been allocated or spent by the Northwest Indian Fisheries Commission and Washington State Recreation and Conservation Office on recovery activities in Puget Sound. These figures do not reflect the Recreation and Conservation Office's match funding, which ranges from 33% (required minimum) to 99.8% (FY2015). PCSRF funding awarded to benefit Puget Sound Chinook and Hood Canal summer chum salmon has been consistent with the two recovery plans, which also directly benefits endangered Southern Resident killer whales who prey on those species and threatened Puget Sound steelhead. The Puget Sound steelhead recovery plan was adopted on December 27, 2019.

NOAA does not directly give money to the Puget Sound Partnership. However, to our knowledge around $19 million in PCSRF funds have gone to projects that involved the Puget Sound Partnership.

NOAA Fisheries funding and state matching funds have helped improve fish passage, nursery rearing habitat, and access to historically available cool water and refugia from floods. From 1999 to 2017, 1,200 fish passage barriers were removed from Puget Sound streams, opening 894 miles of habitat for listed salmonids, and 3,700 acres of marine nursery areas were restored using NOAA funding. During that same time period, funding for Puget Sound salmon recovery was divided among habitat restoration actions (52%), acquisition of high value habitat (28%), and monitoring (10%).

2. *In NOAA's 2016 status reviews for Puget Sound salmon (https://www.westcoast.fisheries.noaa.gov/publications/status_reviews/salmon_steelhead/2016/2016_5-yr_ps.pdf), NOAA lists recovering Puget Sound Chinook salmon and Puget Sound steelhead as "low" priorities, yet notes that ESA-listed Puget Sound salmon populations, especially naturally-spawning populations, have declined in abundance over the past 7 to 10 years. In another recent NOAA scientific report, (see: https://www.westcoast.fisheries.noaa.gov/publications/protected_species/marine_mammals/killer_whales/recovery/srkw_priority_chinook_stocks_conceptual_model_report___list_22june2018.pdf), Puget Sound chinook are listed as among the most important food sources for ESA-listed Southern Resident Killer whales. Why isn't recovering Puget Sound Chinook a growing and more important priority for NOAA, given its acknowledgement that Puget Sound salmon are important for orcas, and the continuing declining trend of Puget Sound salmon stocks?*

Answer:

NOAA recognizes the importance of healthy Puget Sound salmon and steelhead populations and is allocating considerable resources to improve returns of these species. For instance, work to improve habitat for salmon species important to Southern Resident killer whales, one of NMFS' "Species in the Spotlight," was included as part of the application evaluation criteria in the Request for Proposals for the Pacific Coastal Salmon Recovery Fund program since 2019.

Recovery priorities were updated for listed species of salmon and steelhead using the recently finalized guidelines (84 FR 18243; April 30. 2019). The guidelines prioritize limited agency resources to advance the recovery of threatened and endangered species by focusing on the immediacy of the species' overall extinction risk; the extent of information regarding major threats; the extent to which major threats are primarily under U.S. authority, jurisdiction, or influence; and the certainty that management or protective actions can be implemented successfully. The updated recovery priority ratings are reflected in the Biennial Report to Congress for 2017-2018, which was published in October 2019.

3. *Please provide a detailed statement of the total amount of funding and staffing provided by NOAA as part of Washington State Governor's Killer Whale Task Force. Has or is NOAA contributing to the Washington study to breach Snake River dams, if so please provide the total amount of staffing and funding.*

Answer:

NMFS staff participated on the Killer Whale Task Force including six all-day in person meetings throughout Washington and additional calls and webinars. In addition, NMFS staff sat on each of the three technical working groups as part of the Task Force, attending regular meetings, reviewing recommendations, and participating in calls. The Task Force completed their work and released a Year 2 report on November 8, 2019. No specific funding was provided to the Task Force.

Regarding the study to breach the Snake River Dams, NMFS staff were interviewed by the Washington State Snake River Dam task force consultant, but we have not made any funding contributions to this effort.

4. *Please provide the actual and expected total amount of annual commercial ocean, in-river recreational, and tribal harvest allowed by NOAA for each ESA-listed Columbia and Snake River salmon and steelhead species from 2014 through the present.*

Answer:

For ESA-listed Columbia River and Snake River salmon and steelhead, ocean and in-river fisheries are managed by the state and tribal managers consistent with management plans that NMFS has determined meet the requirements of the ESA. Managers define the provisions of the management plans including allocations among the various sectors, and NMFS authorizes the resulting overall harvest impacts once it has determined that the plans are consistent with the ESA. These management plans collectively include harvest from the non-treaty commercial, recreational, and tribal fleets and consider fishery-related impacts in Canadian fisheries.

The following table summarizes the overall harvest impact limits authorized by NOAA compared with the observed level of harvest impact. It is important to note that the management frameworks in the plans themselves are much more detailed than represented in the table, addressing a variety of resource use, allocation, and legal obligation objectives aside from those related to the ESA.

		2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Listed Species	**Subcomponent limit if applicable**	**Total**	**Total**	**Total**	**Total**	**Total**	**Total**	**Total**	**Total**	**Total**	**Total**
Snake River spring/ summer Chinook		12.0%	13.0%	11.0%	11.0%	10.0%	12.4%	13.4%	11.3%	10.7%	11.2%
Upper Columbia River spring Chinook		12.0%	13.0%	11.0%	11.0%	10.0%	12.8%	13.4%	11.3%	11.0%	10.9%
Willamette River spring Chinook	Spring	15.0%	15.0%	15.0%	15.0%	15.0%	12.4%	13.4%	14.5%	12% 3	11.7% 3
Lower Columbia River Chinook	Spring [1]	[CwRH] = 1,337 [LwtH] = 1,380	[CwRH] = 1,337 [LwtH] = 1,380	[CwRH] = 1,337 [LwtH] = 1,380	[CwRH] = 1,337 [LwtH] = 1,380	[CwRH] = 1,337 [LwtH] = 1,380	[CwRH] = 4,600 [LwtH] = 1,000	[CwRH] = 17,600 [LwtH] = 900	[CwRH] = 15,000 [LwtH] = 500	[CwRH] = 8,900 [LwtH] = 2,400	[CwRH] = 2,700 [LwtH] = 3,000
	Fall tule	41.0%	41.0%	41.0%	41.0%	38.0%	44.9%	36.5%	37.6%	35.8% 3	34.5% 3
	Fall bright	5,700	5,700	5,700	5,700	5,700	20,809	23,614	8,957	7,788	5,203
Snake River Fall Chinook		45%/70%[2]	45%/70%[2]	45%/70%[2]	45%/70%[2]	45%/70%[2]	45%/97.8[2]	31.3%/45.6%[2]	45%/45.9%[2]	45%/44.9%[2]	45%/70%[2]
Lower Columbia River Coho		22.5%	23.0%	18.0%	18.0%	18.0%	18.6%	29.9%	15.0%	12.7%	14.6% 3
Columbia River Chum		5.0%	5.0%	5.0%	5.0%	5.0%	0.8%	1.4%	0.0%	0.0%	0.0%
Snake River Sockeye		8.0%	8.0%	8.0%	8.0%	8.0%	5.0%	6.2%	5.0%	4.9%	3.8%
Snake River Steelhead	A-Index	2.0%	2.0%	2.0%	2.0%	2.0%	0.7%	0.5%	0.5%	0.6%	0.4%
Snake River Steelhead	B-Index	2.0%	2.0%	2.0%	2.0%	2.0%	0.0%	0.0%	0.1%	0.2%	0.1%
Snake River Steelhead	A-Index	2.0%	2.0%	2.0%	2.0%	2.0%	1.3%	1.1%	1.4%	1.1%	1.4%
Snake River Steelhead	B-Index	20%[3]/2%	13%[3]/2%	16%[3]/2%	13%[3]/2%	13%[3]/2%	12.5%[3]/1.6%	12.1%[3]/2%	10%[3]/1%	8.7%[3]/2%	5.3%[3]/1%
Upper Columbia River steelhead		2.0%	2.0%	2.0%	2.0%	2.0%	0.8%	0.5%	1.5%	0.6%	0.4%
Upper Columbia River steelhead		2.0%	2.0%	2.0%	2.0%	2.0%	1.3%	1.1%	0.4%	1.1%	1.4%
Mid Columbia River Steelhead	Summer Component	2.0%	2.0%	2.0%	2.0%	2.0%	0.7%	0.5%	1.4%	0.6%	0.4%
Mid Columbia River Steelhead	Summer Component	2.0%	2.0%	2.0%	2.0%	2.0%	1.3%	1.1%	0.4%	1.1%	1.4%
Mid Columbia River Steelhead	Winter Component	2.0%	2.0%	2.0%	2.0%	2.0%	0.7%	0.6%	1.4%	0.3%	0.3%
Lower Columbia River Steelhead	Summer component	2.0%	2.0%	2.0%	2.0%	2.0%	0.7%	0.6%	0.6%	0.1%	0.7%
Lower Columbia River Steelhead	Summer Component	2.0%	2.0%	2.0%	2.0%	2.0%	0.0%	0.0%	0.2%	0.0%	0.0%
Lower Columbia River Steelhead	Winter Component	2.0%	2.0%	2.0%	2.0%	2.0%	0.6%	0.6%	0.0%	0.3%	0.3%
Upper Willamette River steelhead	Winter Component	2.0%	2.0%	2.0%	2.0%	2.0%	0.6%	0.6%	0.4%	0.3%	0.3%

1 Managed for hatchery escapement goals (goal inside parenthesis)
2 Separate limits apply for the river and the ocean. Ocean fisheries are managed to not exceed 70% of the impacts from the 1988-1993 base period (i.e., a 30% reduction from that period)
3 Separate limits apply to the tribal and non-tribal fleets. Applies to tribal catch of all steelhead DPS's

5. *How will the harvest of the ESA-listed stocks be described in the 2020 NEPA process and Biological Opinion for the Columbia Snake River Operations system?*

Answer:

The federal action agencies released the draft Columbia River System Operations (CRSO) environmental impact statement (EIS) on February 28, 2020. The draft EIS acknowledged: the importance of subsistence, recreational, and commercial fisheries, especially to affected tribes; how the historic construction of dams and reservoirs has affected fishing opportunities; and the role of hatcheries in providing harvest opportunities. The draft EIS also notes that adult survival estimates are affected by mainstem harvest and that increasing survival rates through the hydrosystem would increase the productivity of salmon and steelhead, which would, in turn, support increased harvest.

NMFS received a final biological assessment describing the proposed operation of the CRS from the action agencies on January 23, 2020, and clarifications to the proposed action, by letter, on April 1, 2020. Our draft biological opinion (released to the action agencies on May 1, 2020) focuses on the effects of the proposed action (CRS operations, mitigation measures, and research

and monitoring programs) on listed salmon and steelhead, as well as on eulachon, green sturgeon, and Southern Resident killer whales. It acknowledges ongoing harvest effects in the environmental baseline, that production and conservation hatcheries (funded by the Action Agencies) contribute substantially to Columbia Basin fisheries that harvest contributes to cumulative effects, and considers the effects of harvest in the overall jeopardy analysis. We intend to issue a final CRS biological opinion on June 30, 2020.

Questions from Rep. Jenniffer González-Colón

1. *Rear Admiral Gallaudet, in the past you've discussed the importance of prioritizing our blue or ocean economy. As Puerto Rico's sole representative in Congress, I am naturally very interested in this topic. For instance, according to a 2016 report commissioned by NOAA, the Island is more reliant on ocean-related activity than most U.S. states. The study found that ocean industries support about 7 percent of total employment in Puerto Rico, 3 times more than the average of 2 percent for ocean and Great Lakes states.*

   I hope you agree that Puerto Rico has a lot to offer in this area and should play a key role as we develop policies to grow the Nation's blue economy.

   What actions is NOAA currently taking to better understand, quantify, and develop the United States' blue economy?

Answer:

NOAA's Blue Economy Initiative focuses on: (1) continuing to maximize commercial and recreational fishing opportunities; (2) pursuing expanded involvement in international seafood marketing and trade; and (3) promoting and expanding marine aquaculture. Specific initiatives include expanding commercial port use, undertaking better mapping of the U.S. Exclusive Economic Zone (EEZ), streamlining regulations and administrative practices (including in the area of aquaculture) to promote economic growth, and working through regional fisheries management organizations and using domestic legal tools to combat IUU fishing around the world.

2. *In August 2016, NOAA released a study, titled "Describing the Ocean Economies of the U.S. Virgin Islands and Puerto Rico", to better understand the importance of the ocean to the economies of two U.S. territories in the Caribbean. At the time, NOAA indicated that report's findings would allow the agency to build a more comprehensive methodology for capturing ocean-dependent economic activity in the U.S. Virgin Islands and Puerto Rico.*

   What actions has NOAA taken to date to achieve this and better quantify and develop the blue economy in Puerto Rico and the U.S. Virgin Islands? Has the agency taken any steps to expand its economic models to include all five U.S. territories, including under the Economics: National Ocean Watch (ENOW) dataset, which currently only covers the 30 coastal states?

Answer:

The "Describing the Ocean Economies of the U.S. Virgin Islands (USVI) and Puerto Rico" report allowed NOAA to better understand the challenges associated with developing a more comprehensive methodology to capture essential ocean-dependent economic activity in the USVI and Puerto Rico. Some of the challenges identified include a lack of industry-level GDP for U.S. territories, lack of employment and wage data for many coastal industries due to the

small number of establishments in the territories, and the large number of self-employed individuals in some ENOW-defined ocean sectors, particularly in the tourism, recreation, and living resources sectors.

For the study, NOAA was able to draw upon a few data sources that agencies in the USVI and Puerto Rico published on an annual basis to develop a more comprehensive accounting of ocean-dependent activity. Several assumptions were made to incorporate these data sources with existing data from the Bureau of Labor Statistics. In addition, NOAA collected additional data to categorize the industries and employees.

While NOAA had intended to build off the 2016 study and develop a methodology and database similar to ENOW for the USVI and Puerto Rico, the hurricanes in 2017 resulted in major changes to businesses that were informing our categorization of industries. Such changes now require re-examination of the previous methodology as well as new data sources for certain industries. We hope to pursue a similar study in the coming years.

3. *Can you discuss what role the U.S. Integrated Ocean Observing System (IOOS) plays in supporting the blue economy? That is, how does this system work to sustain and support the economy of coastal communities across the country, including those in Puerto Rico?*

Answer:

U.S. IOOS provides regional data, predictions, and information services that underpin many businesses within the blue economy. IOOS also helps users better understand and apply this information, enabling the sharing of expertise among the eleven NOAA-certified IOOS Regional Associations. These products and services in turn empower our coastal, ocean, and Great Lakes communities and businesses to operate effectively and maximize their productivity along our Nation's coasts. The Ocean Enterprise Study, released by IOOS in 2016, estimated that the Ocean Enterprise generates an estimated $7B in annual contribution toward the Gross Domestic Product of the United States. The 'Ocean Enterprise' is defined as for-profit and not-for-profit businesses supporting ocean measurement, observation and forecasting.

In Puerto Rico, U.S. IOOS directly funds the Caribbean Regional Association for Coastal Ocean Observing (CARICOOS). CARICOOS operates observing systems, models, and provides information products and services to meet user needs. CARICOOS engages stakeholders from tourism and marine recreation, maritime transportation, security, and ecosystem health sectors to understand their needs for coastal seas and weather information and uses stakeholder input to generate tailored regional products that meet specific regional requirements. More information regarding specific products, services, data, and regional assets is available to the public on the CARICOOS website (https://www.caricoos.org/).

4. *How would reauthorizing the Integrated Coastal and Ocean Observation System Act of 2009 help NOAA's efforts to strengthen and develop the blue economy?*

Answer:

Reauthorization of the Integrated Coastal and Ocean Observing System (IOOS) Act of 2009 would reaffirm the importance of the federal and non-federal framework of IOOS. IOOS participants, which include private, academic, tribal, and non-profit organizations, work to meet the highest priority regional needs for ocean, coastal, and Great Lakes information. IOOS observation data, models, and decision support services also directly benefit the economy, the environment, and public safety. IOOS supports the economies of coastal communities across the Nation through the local and regional-scaled information and value-added expertise from the eleven NOAA-certified IOOS Regional Associations.

5. *The Integrated Ocean Observing System (IOOS) has been described as the weather service for the oceans and Great Lakes. In Puerto Rico, buoys, gliders, and other assets from the Caribbean Coastal Ocean Observing System (CARICOOS) provide vital data to understand the impact of hurricanes, such as Hurricanes Irma and Maria in 2017.*

   Can you discuss how IOOS data helps state and local governments prepare for and respond to storm damage? How does the system increase our Nation's preparedness for disasters?

Answer:

The U.S. IOOS is essential for providing real-time and historic physical oceanographic data to inform weather forecasts. As a national-regional partnership, U.S. IOOS works to provide new tools and forecasts to improve safety, enhance the economy, and protect our environment. Easier and better access to this information is improving our ability to understand and predict coastal events – such as storms, wave heights, and sea level change.

For example, Puerto Rico's Department of Natural Resources relies on IOOS-derived shoreline maps to plan for and better respond to storm surge events, flash floods, and sea level change. CARICOOS develops and maintains near real-time decision support tools for coastal and emergency managers (available on the web at https://www.caricoos.org/coastal-hazards), including several wave models, water quality data at specific beaches, storm surge maps, and site-specific real-time oceanographic data collected at 6 buoys in the Caribbean.

6. *How does IOOS data help promote coastal and maritime safety? Would you agree that the system is vital to our national security?*

Answer:

IOOS data helps promote coastal and maritime safety in a number of important ways. Data from underwater gliders better inform predictions of severe weather so that people can reach safety before disaster strikes. IOOS high frequency coastal radar provides near real-time information to search and rescue crews, and aids in the response to hazardous materials spills. Sensors in the

regional IOOS networks additionally provide local, continuous wind, wave, and water quality data to regional stakeholders and resource managers.

The data provided by IOOS is vital to our national security. IOOS data enhances maritime domain awareness in U.S. waters and, used in partnership with the Navy and other national security agencies, advances our national security interests abroad.

7. *The Committee is also considering H.R. 417, legislation introduced by Congressman Soto and that I have cosponsored. The bill would prohibit several species of lionfish from being imported or shipped into and within the United States.*

   Like Florida, in Puerto Rico we've seen the threats lionfish pose to our local marine ecosystem. They are known to greatly reduce fish populations in reefs where they become established and have very few known natural predators.

   The Government of Puerto Rico has prohibited the importation of this invasive species since 2004, and the territory's Department of Natural Resources has encouraged its capture, sale, and consumption to control the population.

   Can you briefly discuss how NOAA is working with other federal agencies and local governments and stakeholders to address the threats posed by lionfish in Florida, Puerto Rico, and other jurisdictions in the U.S.?

Answer:

NOAA recently integrated its permit review processes to expedite the approval of innovative experimental studies addressing the invasive lionfish in the United States. In April 2018, NMFS and the Office of National Marine Sanctuaries also completed a programmatic environmental assessment analyzing the potential effects of testing and permitting various trap types and methods to harvest lionfish in the Gulf of Mexico and South Atlantic, including within the Florida Keys National Marine Sanctuary. This programmatic assessment streamlined permitting processes to incentivize the study of new trap designs that could support the development of a new commercial fishery while safeguarding NOAA trust resources and keeping this invasive species in check. NOAA is also currently funding several research projects in South Florida and the Caribbean to help fishery managers prioritize lionfish removal techniques that are the most useful and economical for their specific locations. More information about the programmatic assessment can be found here: https://www.fisheries.noaa.gov/southeast/commercial-fishing/lionfish-traps-exempted-fishing-permit-applications. Additional information about the associated research projects can also be found here: https://www.flseagrant.org/news/2013/02/three-lionfish-research-projects/.