Killer Whale Research & Conservation 2018 Grant Slate

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ABOUT NFWF

The National Fish and Wildlife Foundation (NFWF) protects and restores our nation's fish and wildlife and their habitats. Created by Congress in 1984, NFWF directs public conservation dollars to the most pressing environmental needs and matches those investments with private funds. Learn more at **www.nfwf.org**

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Southern Resident killer whale

OVERVIEW

The National Fish and Wildlife Foundation (NFWF), SeaWorld Entertainment, Shell Oil Company, U.S. Fish and Wildlife Service and the National Oceanic Atmospheric Administration announced a 2018 year-round of funding for Killer Whale Research and Conservation projects. Six new grants totaling $742,035 were awarded, leveraging $1.04 million in grantee matching contributions and generating a total conservation impact of $1.78 million.

NFWF and its partners supported a Manager's Roundtable in June, 2018 to synthesize the known science around drivers of prey availability for killer whales. Chinook salmon are the preferred prey for Southern Resident killer whales and the populations of Chinook have not only decreased in number, but have also decreased in size and have experienced temporal and spatial changes over 'natural' migrations due to hatchery management. The roundtable met to prioritize which Chinook runs were most important for killer whales and to identify short term actions to increase survivorship, size and temporal and spatial overlap of the salmon and the whales. Results of this meeting directly informed the new Governor's Southern Resident Orca Task Force on prey availability and this year's project selection.

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Southern Resident killer whale | Credit: NOAA

The following six projects address prey availability and nutritional health of killer whales in three primary ways. First, two projects work directly with the hatcheries that source stocks identified as critical to the killer whale diet to significantly increase their output. These hatcheries were chosen both for their overlap with killer whales, but also for their low potential impact to native salmon populations. These projects also contain coordinated research across all Washington hatcheries to explore new release strategies that will increase size and survivorship. As small fry increase, so does the need for juvenile habitat, which is the focus of the third project – a priority habitat restoration in the recovery plan for this Chinook population.

Due to the decrease in prey size, killer whale hunting techniques are less efficient and can be disrupted by vessel traffic and sound. The next two projects work with boaters in critical foraging habitat to reduce killer whale disturbance and increase compliance with regulations. Finally, the last project seeks to fill gaps in knowledge around key components of killer whale nutrition to go beyond what makes up their current diet, to what is needed in nutrition for a healthy population. To do this, research will focus on comparing the depressed Southern Resident population with the more robust northern population that are also salmon foragers but have a more stable prey base.

Use Genetic Prey Identification to Understand Critical Salmon Stocks for Killer Whale Diet (AK, WA)
Grantee: NMFS Northwest Fisheries Science Center
Grant Award:. $113,269
Matching Funds: $58,417
Total Amount:. **$171,686**
Characterize the diet of Southern Resident killer whales through genetic prey identification from fecal samples and prey remains and compare these samples to the diet of Alaska resident killer whales. Project will provide data to target specific salmon stocks and understand nutritional and foraging needs of the endangered whale population.

Increasing the Size and Survival of Returning Adult Chinook Salmon in North Puget Sound (WA)
Grantee: Long Live the Kings
Grant Award:. $147,001
Matching Funds: $151,500
Total Amount:. **$298,501**
Increase the number of hatchery fall Chinook salmon released from Glenwood Springs Hatchery in North Puget Sound and study the feasibility of increasing the survival and size of returning adult Chinook. Project will develop a transferable rearing template for increasing the size and survival of hatchery Chinook to benefit Southern Resident killer whales.

Protect Priority Southern Resident Killer Whale Foraging Habitat in the San Juan Islands (WA)
Grantee: San Juan County WA Public Works
Grant Award:. $95,000
Matching Funds: $100,000
Total Amount:. **$195,000**
Incorporate broad stakeholder input into establishing a management approach to reducing vessel disturbance to Southern Resident killer whales in critical habitat off the San Juan Islands. Project will integrate acoustics and whale behavior research with local stakeholder input to reach recommended options for management.

Increase Southern Resident Killer Whales Prey Base by Increasing Chinook Salmon Stocks (WA)
Grantee: The Tulalip Tribes of Washington
Grant Award:. $176,959
Matching Funds: $163,158
Total Amount:. **$340,117**
Increase Snohomish River Basin hatchery production and

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Fertilized Chinook salmon eggs | Credit: Steve Martarano, USFWS

evaluate salmon survivorship based on release strategies. Project will manage hatchery interventions for increased survivorship and size of Chinook salmon in areas important to Southern Resident killer whales, and monitoring for any genetic and ecological impacts to wild juvenile and adult salmonid stocks.

Restore Chinook Salmon Rearing Habitat and Passage within Ovenell Slough (WA)
Grantee: Skagit County Public Works
Grant Award:. $144,225
Matching Funds: $569,392
Total Amount:. **$713,617**
Replace a failing culvert under Cedar Grove Avenue with a 120-foot pedestrian bridge to restore fish passage within Ovenell Slough. Project will restore access to more than 1.5 acres of Chinook salmon rearing habitat to increase survivorship of outgoing smolts.

Increase Capacity for Vessel Research and Boater Education to Benefit Killer Whales (WA)
Grantee: The Whale Museum
Grant Award:. $65,581
Matching Funds: $0
Total Amount:. **$65,581**
Provide increased capacity for collection of vessel density and disturbance data for the Southern Resident killer whale population in the Salish Sea. Project will educate boaters and increase compliance with current regulations and guidelines to reduce vessel disturbance.