# 2016 Killer Whale Research and Conservation Program Grant Slate


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Killer whale

## OVERVIEW

The Killer Whale Research and Conservation Program seeks to advance the knowledge and conservation of killer whales with a primary focus on activities that aid in the recovery of the Southern Resident killer whale Distinct Population Segment (DPS). This year, the program continued to have an emphasis on filling research gaps in the primary threats that are thought to be preventing recovery: lack of prey availability, habitat stressors like ship traffic and sound and persistent organic pollutants, in addition to addressing these threats directly.

The following four (4) projects address critical gaps in knowledge around these primary threats, both in the impacts of each threat (i.e. poor nutrition and toxins) on the population and the relationship between these two threats to each other and one threat mitigation activity. For example, poor availability of prey may be leading to whales needing to use more of their fat reserves which may in turn release toxins from the environment into the bloodstream that are typically stored in the blubber. These grants represent a total award amount of $493,769 which will be further leveraged by $618,986 in grantee matching contributions for a total on-the-ground impact of $1,112,755.

*(continued)*




**NATIONAL HEADQUARTERS**
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## INCREASE PREY AVAILABILITY

The Southern Resident population diet relies heavily on Pacific salmon, with Chinook salmon representing the majority of their summer diet, and other species including coho, chum and steelhead being targeted in the spring and fall. The projects under this strategy will increase the health of the salmon runs that are important for killer whales.

**1) Increase Killer Whale Prey Base by Creating Rearing Habitat for Salmon in Upper Skagit River (WA)**
Grantee: Restore Americas Estuaries
NFWF Award Amount: . . . . . $140,149
Matching Funds: . . . . . $150,000
**Total Project: . . . . . $290,149**

Restore Americas Estuaries will increase prey availability for the Southern Resident killer whale population by creating juvenile rearing habitat for salmon in the Upper Skagit River. Project will enhance historic and existing side channel habitat in Pressentin Park to restore connectivity and floodplain function, thereby increasing the amount of spawning habitat and winter rearing habitat available to Chinook, steelhead, bull trout and other salmonids.

## STRENGTHEN MANAGEMENT THROUGH APPLIED RESEARCH

The program supports research projects that address information gaps and catalyze effective management actions in key areas, such as improving understanding on the impact of threats, developing new techniques to improve monitoring of demographics and distribution, improving the health assessments of whales, and assessing the effectiveness of management interventions.

**1) Understand the Effects of Reduced Prey and High Contaminant Levels on Killer Whales (WA, BC)**
Grantee: Vancouver Aquarium Marine Science Centre
NFWF Award Amount: . . . . . $92,659
Matching Funds: . . . . . $183,150
**Total Project: . . . . . $275,809**

Vancouver Aquarium Marine Science Centre will compare standard skin/blubber biopsy measures of health to photo-based measures of condition for Northern and Southern Resident killer whales in coastal British Columbia and Washington State. Project will inform recovery-based management actions in both Canada and the USA by using cutting-edge techniques to deliver insight into two of the three major threats to killer whales: prey availability and contaminants.

**2) Understand Nutrition and Toxin Impacts on Pregnancy Health in Southern Resident Killer Whales (WA)**
Grantee: University of Washington
NFWF Award Amount: . . . . . $146,105
Matching Funds: . . . . . $148,729
**Total Project: . . . . . $294,834**

University of Washington will analyze whale feces located by detection dogs to evaluate pregnancy and nutritional status as well as toxin loads in Southern Resident killer whales. Project will assess the occurrence and causes of miscarriage in the population to guide management actions.

**3) Assess Persistent Organic Pollutant Transfer from Female Killer Whales to their Calves (CA, TX, WA)**
Grantee: National Marine Fisheries Service: Northwest Fisheries Science Center
NFWF Award Amount: . . . . . $114,856
Matching Funds: . . . . . $137,107
**Total Project: . . . . . $251,963**

National Marine Fisheries Service: Northwest Fisheries Science Center will conduct research on killer whales in human care at SeaWorld San Diego and San Antonio to quantify the transfer of pollutants from female killer whales to their calves during gestation and lactation. Project will provide data on the percent reduction in female pollutant levels and percent increase in calf pollutant levels needed by managers to better predict contaminant levels in Southern Resident killer whales and assess potential risks associated with contaminant exposure.