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A 2022 report prepared by the **Alaska Longline Fishermen's Association (ALFA)** and the **Alaska Trollers Association (ATA)** responds to the campaign waged by the Wild Fish Conservancy, a Washington State corporation, to blame the Southern Resident orca's population decline on the Southeast Alaska troll fishery - a fleet of small hook and line fishing vessels operated by independent families 1000 miles away from the whales' habitat. The report reviews the substantial amount of research detailing the influence of habitat degradation and human pressure on orca population viability and the decades of data establishing that the marine fishery impacts on salmon stocks of importance to the Southern Resident orcas are low – and the impacts of Alaska's fisheries are minimal.

- **Pollution, industrial toxins, urbanization, habitat loss and human-caused disturbance are the primary factors limiting the recovery of the Southern Resident orcas:** Any one factor – acoustic disturbances from vessel traffic, the orca observing industry, chemical contaminants, or habitat harms specific to Chinook, chum and coho salmon – may be a significant cause of nutritional stress, higher death rates or failed pregnancies. Research documents that Southern Resident orcas are threatened primarily because of their prolonged residence each year in Puget Sound and inland Southern British Columbia waters, all areas that are heavily used and contaminated by a growing human population.
- **Vessel traffic may be a primary cause of Southern Resident orca population declines:** The Salish Sea has become one of the busiest areas of marine traffic in the world. Vessel strikes are a common cause of marine mammal injury or death. Noise pollution from vessel traffic is chronic in key foraging areas and makes it difficult for orcas to find and capture prey. The number of commercial orca observing vessels that concentrate around foraging orcas has more than quintupled since the 1980s and disrupts orca foraging success. Major increases in noise pollution and the increasing intensity of orca observation correlate strongly with Southern Resident population declines.
- **Southern Resident orcas are among the world's most contaminated marine mammals:** One of the main threats to Southern Resident orca survival - and salmon population recovery - is the high toxic contaminant burden borne by both species which forage in urban and industrial areas. Numerous toxic contaminants – even if banned years ago - persist at high levels today in the Salish Sea marine environment. Female orcas transfer contaminants to calves during pregnancy and while nursing. Calves and juvenile orcas are susceptible to severe health consequences that include shorter life expectancies and lower chances of reproductive success. The contaminants increase the number of failed pregnancies and the post-birth calf mortality rates. The contaminants have the same effects on salmon, particularly salmon species that spend the most time in the Salish Sea, including Chinook.
- **Chinook-eating orcas outside the Salish Sea are thriving:** Southern Resident orcas are the only orca population that preys on Chinook in the northeastern Pacific that is declining. Northern and Alaska Resident orca population levels have at least doubled since 1980. The Northern Resident population grew from 120 individual orcas in 1975 to over 300 orcas today, potentially consuming nearly a million more Chinook salmon each year than they did fifty years ago. Overall, the three resident populations consume between 1.6 and 2.3 million Chinook each year, exceeding harvest in all marine, terminal, and freshwater fisheries. There are healthy orcas within the Southern Resident population, and cases of nutritional stress in all northeastern Pacific orca populations that have access to abundant prey. Factors other than a lack of food, such as individual health issues or external disturbances from noise and vessels, are more likely causes of nutritional stress for some orcas.
- **Fishery managers have increased the amount of Chinook available to the Southern Resident orcas:** Ocean fisheries have borne substantial harvest reductions of healthy Chinook stocks for decades to enable higher escapements of infrequently caught weaker stocks. Despite the reductions, there has been no meaningful improvement in Southern Resident orca population productivity because of the failure to address other much more significant impacts. Chinook

terminal run sizes (numbers of fish returning to areas near their natal rivers) in the Salish Sea are over a third larger than they were during the 1990s. Multiple analyses conclude that additional reductions to already low ocean fishery exploitation rates would be unlikely to help recover the Southern Resident orca population.

- **Impacts to stocks of importance to the Southern Resident orcas are minimal in marine fisheries:** Southern Resident orcas mostly forage on Chinook stocks off the Washington Coast in winter and inland Salish Sea in summer. In general, ocean fisheries have very low impacts on these stocks and the distant Alaska troll fishery has the smallest impact. Many Puget Sound Chinook spend their entire lives in the Salish Sea and very few migrate as far north as Alaska. Sport fishermen in British Columbia and Puget Sound catch 70,000 Puget Sound Chinook in any given year – more than 100 times as many harvested in the Southeast Alaska troll fishery.
- **Columbia and Snake River summer and fall populations harvested in the Alaska troll fishery have been resilient:** In general returns over the past decade are much higher than they were from 1980s through the 2000s. During the 21st century, total annual runs have exceeded a million Chinook and long-term annual escapement rates have improved dramatically, vastly exceeding escapement goals. As with other stocks, Southeast Alaska harvests of Columbia River salmon are a small proportion of the harvest compared to other fisheries. Columbia River net and sport fisheries alone harvested nearly 220,000 Columbia River Chinook in 2021 – more than the troll fishery's total mixed stock harvest.
- **Puget Sound habitat degradation is preventing salmon and orca recovery:** Multiple scientific analyses, and government reports all point to other factors that harm Salish Sea salmon targeted by the orcas – in particular, deteriorating habitat conditions. Fishery managers recognize that continued destruction and degradation of habitat, not fisheries, is the primary problem limiting the viability of Puget Sound Chinook. Dams and barrier culverts found throughout Puget Sound watersheds block access to habitat and degrade downstream spawning and rearing habitat. Agricultural, industrial, and urban development have heavily altered or destroyed riparian habitats and estuaries that provide salmon habitat and maintain water quality for fish.
- **Conclusion – population, pollution and other disturbances are harming the orcas, not fisheries:** While Canadian fisheries and Washington and Oregon fisheries harvest far more Chinook than the Southeast troll fishery, the primary threats to Southern Resident orca are human-caused pollution and disturbance. Increases in pollution of various types from vessels, vehicles, industrialization and urbanization, residential and agricultural sources are limiting the recovery of the Southern Resident orcas and causing nutritional stress, higher death rates or failed pregnancies. The Wild Fish Conservancy's theory that fishing occurring hundreds of miles away in Alaska is causing orca mortality is not supported by data or research. Cuts to ocean fisheries have been the primary means of improving Chinook escapements over the past three decades and have increased the numbers of Chinook available to the orcas but the orca population has not recovered. As other habitat harms have continued and worsened, so too has the plight of Southern Resident orcas. Southern Resident orca face significant and worsening threats to their survival from population pressure in the Puget Sound area. The decline is disheartening but requires dedicated efforts to improve Salish Sea habitat conditions.
- **Troll fishery harvests are abundance-based and managed for sustainability:** The Pacific Salmon Treaty ensures the sustainability of marine fisheries by managing the fisheries based on the aggregate abundance of mixed, multiple Chinook stocks and enables the harvest of healthy stocks while protecting weaker stocks suffering from chronic habitat degradation.
- **Chinook harvested in Alaska are the highest quality seafood:** Chinook salmon provided by Southeast Alaska's troll fishery is the culinary world's salmon of choice, prized for their color, high oil content, firm texture, and succulent flesh. Trollers fish with hook and line gear on the open ocean and target individual adult salmon when they are "bright," or at their peak quality. Careful individual handling helps maintain this quality.
- **Seafood consumers, retailers and restaurants should feel confident that the Alaska troll fishery is not depleting the prey of Southern Resident orcas nor contributing to their ongoing decline.**