



WASHINGTON STATE
RECREATION AND CONSERVATION OFFICE

Governor's Salmon
Recovery Office

Progress in 2020-2021

Governor Jay Inslee's
Southern Resident
Killer Whale Task Force
Recommendations

Prey

1

Recommendation: Significantly increase investment in restoration and acquisition of habitat in areas where Chinook stocks most benefit Southern Resident orca.

- A permit streamlining bill was passed (HB 1382) to streamline the environmental permitting process for certain salmon recovery projects. The bill creates a habitat Recovery Pilot Program for habitat restoration projects that meet specific criteria, creating a consultation and review process for pilot projects. Qualifying projects may be exempt from some permitting processes.
- Funding was appropriated to provide additional staffing to process an increased workload of clean water act certification and fish passage project permits, which will aid in the timely completion of restoration projects.
- The Salmon Recovery Funding Board adopted a policy enabling it to target restoration and acquisition investments in addition to the normal grants. The board chose to invest in Southern Resident killer whales this biennium, which will make up to \$3.7 million available for projects that advance recovery of priority Chinook stock. The task force recommended developing a list of the most important Chinook populations to Southern Residents, which the National Oceanic and Atmospheric Administration (NOAA) and the Washington Department of Fish and Wildlife did. That list will be used to select projects for the board's targeted investments.
- The Legislature gave the Washington Department of Fish and Wildlife funding for Payments In Lieu of Taxes (PILT), which compensate counties for the loss of local property taxes on lands the department bought to protect critical wildlife habitat and outdoor recreation opportunities. The payments are critical to local governments and junior taxing districts, especially in rural areas with large acreages of state ownership. The payments were an obligation made by the Legislature to counties to counter negative tax impacts of state land acquisitions.
- Increased funding for salmon habitat restoration. However, it is important to note, that only 20 percent of salmon recovery is being funded and the State is not keeping pace with the need.

Progress in 2020-2021

Salmon Recovery (RCO budget)	2017-19 Budget	2019-21 Budget	2021-23 Budget
Salmon Recovery (Salmon Recovery Funding Board-State)	\$19,711,000	\$25,000,000	\$30,000,000
Puget Sound Acquisition and Restoration	\$40,000,000	\$49,507,000	\$52,807,000
Estuary and Salmon Restoration Program	\$8,000,000	\$10,000,000	\$15,708,000
Family Forest and Fish Passage Program	\$5,000,000	\$5,000,000	\$5,957,000
Brian Abbott Fish Barrier Removal Board Grants	\$19,747,000	\$26,491,000	\$26,795,000
Washington Coastal Restoration and Resiliency Initiative	\$12,500,000	\$12,086,000	\$10,313,000
Upper Quinault River program (from Washington Coastal Restoration and Resiliency Initiative list)		\$2,000,000	1,000,000
Ecology's Floodplain by Designs	\$35,400,000	\$50,400,000	\$50,908,000
TOTAL	\$140,358,000	\$178,484,000	\$192,488,000

RCO's analysis of 10 years of project data show that more than 80 percent of projects funded in the Puget Sound Acquisition and Restoration, Salmon Recovery, and Estuary and Salmon Restoration Program benefit Chinook salmon, the most important prey for Southern Residents.

- The Washington Department of Fish and Wildlife received funding to complete an analysis of fish barriers in rivers supporting priority Chinook stocks identified by NOAA and the department. The report identifies barriers, including data analysis and maps to identify streams that may have the greatest potential to benefit Chinook eaten by Southern Residents, listed salmon populations, and fisheries.
- The Department of Ecology was authorized to pass through \$8 million (\$4.8 to Puget Sound) in Coastal Wetland Funds (through U.S. Fish and Wildlife Service) to enhance coastal habitat, with benefits to salmon.
- The Department of Ecology received \$40 million in 2019 and again in 2021 to distribute to sponsors in watershed planning areas to restore and enhance stream flows to support healthy and sustainable salmon populations.
- The Department of Natural Resources received \$800,000 to enhance the Snohomish River watershed by planting trees, planting riparian buffers, and removing creosote pilings. This is a high priority Chinook watershed.
- The Legislature approved \$3.6 million to design near-term solutions to prevent steelhead mortality at the Hood Canal Bridge. This will result in physical design modifications at the bridge to improve fish survival.
- The Department of Natural Resources with the Department of Fish and Wildlife is working to restore the shorelines of McNeil Island. Bulkheads, creosote-treated pilings, and large debris have been removed. Future work includes estuary restorations.
- The State Conservation Commission and conservation districts led by the Pierce Conservation District declared October 16 Orca Recovery Day, hosting annual volunteer restoration events regionwide.

- The Washington State Department of Transportation is on track to deliver 24 fish barrier projects with a legislative investment of \$275 million. The department maintained project delivery despite COVID impacts. This funding level represents more than a 150 percent increase from the prior biennium.

2

Recommendation: Immediately fund acquisition and restoration of near-shore habitat to increase the abundance of forage fish for salmon sustenance.

- \$52.8 million for Puget Sound Acquisition and Restoration Program (2021 capital budget)
- \$15.7 million for Puget Sound Estuary and Salmon Restoration Program (2021 capital budget)
- \$25 million in state funding and up to \$37 million in federal funding for Salmon Recovery Funding Board (2021 capital budget)
- \$3 million for the state share of design and acquisition to restore the Duckabush estuary, a cost-share partnership with the U.S. Army Corps of Engineers as part of the Puget Sound Nearshore Ecosystem Restoration Project. (2019 capital budget)

3

Recommendation: Apply and enforce laws that protect habitat.

- State law (Senate Bill 5273) passed to require homeowners to consider methods that cause the least damage to fish when replacing marine shoreline armoring.
- The Washington Department of Ecology was awarded \$4.5 million to increase technical assistance and enforcement of state water quality, water quantity, and habitat protection laws. The department hired three water quality specialists, but was delayed in hiring eight inspectors and water masters.
- The Washington Department of Fish and Wildlife is creating rules to implement the Fishway, Flow, and Screening statute, making improvements to fish passage laws.
- The Legislature appropriated funding to the Department of Fish and Wildlife to help landowners comply with the Hydraulic Project Approval permit requirements with the intent to lead to greater fish protection and stronger fish populations.

4

Recommendation: Immediately strengthen protection of Chinook and forage fish habitat through legislation that amends existing statutes, agency rulemaking and/or agency policy.

- Implemented task force recommendations Force related to increasing Chinook abundance by strengthening the Department of Fish and Wildlife's Hydraulic Project Approval authority. The permit is required to work in or near state waters. Strengthened authority can ensure better

salmon habitat protection. The Fish and Wildlife Commission approved the rules on April 24, 2020. The rules do the following:

- o Remove the requirement that the department issue permits with or without conditions for single-family residential bulkheads and rock walls.
- o Changes the civil penalty for violations of the hydraulic code from \$100 a day per violation to \$10,000 per violation if a section authorizing three demonstration projects to test the effectiveness and costs of river management is enacted by June 30, 2019.
- o Updates the department's jurisdiction related to hydraulic project approvals.
- o Creates a hydraulic project pre-application process for project applicants to determine if a permit is required.
- o Authorizes the department to serve stop work orders for violations of hydraulic project approvals that may cause significant harm to fish.
- o Authorizes a recreational fishing license for smelt (food for salmon) in saltwater (license requirement exempt in freshwater) and requires the Washington Fish and Wildlife Commission to liberalize catch limits for bass, walleye, and channel catfish (predators of juvenile salmon. Anglers on 77 lakes, rivers, streams, and beaver ponds across Washington are allowed to keep more bass, walleye, and channel catfish as part of their daily limits under rules approved by the Fish and Wildlife Commission in 2019.
- o The Department of Fish and Wildlife received \$1.2 million to create a statewide permittee assistance program for hydraulic projects. Staff collaborate with permittees during construction to help resolve permit non-compliance.

5

Recommendation: Develop incentives to encourage voluntary actions to protect habitat.

- \$4 million (\$1.4 million estimated to Puget Sound) for the Conservation Reserve Enhancement Program's Riparian Funding. This program provides funding to landowners to plant riparian buffers to improved stream conditions and habitat. (2021 capital budget)
- \$6 million (\$1.3 million estimated to Puget Sound) to the Department of Natural Resources for the Forestry Riparian Easement Program, which provides funding to landowners to plant riparian buffers on private forestland to improve stream conditions and habitat.
- \$1.4 million (\$585,000 to Puget Sound) for the Rivers and Habitat Open Space Program, which provides funding to buy conservation easements on private land to protect river floodplains and habitat. (2021 capital budget)
- \$8.4 million (\$1.1 million to Puget Sound) for expanding the Voluntary Stewardship Program to engage landowners to protect critical areas. (2021)
- \$2 million (\$1 million to Puget Sound) for expanding conservation technical assistance to help engage landowners in conservation efforts. (2021 budget)

- The Department of Fish and Wildlife's Estuary and Salmon Restoration Program adopted the Shore Friendly Program that educates and provides incentives to shoreline homeowners. (2020 budget)
- \$7 million (\$1.75 million to Puget Sound) in state match to the Regional Conservation Partnership Program, which funds watershed-scale projects to address priority natural resource concerns. (2021 budget)
- \$4 million (\$1.1 million to Puget Sound) for the Natural Resource Investment program to construct conservation projects on private land. (2021 budget)

6

Recommendation: Significantly increase hatchery production and programs to benefit Southern Resident orcas consistent with sustainable fisheries and stock management, available habitat, recovery plans, and the Endangered Species Act. Hatchery increases need to be done in concert with significantly increased habitat protection and restoration measures.

- Washington State, tribes, and public utility districts received \$13.54 million in the state operating budget in 2019 to increase hatchery production consistent with sustainable fisheries and stock management, available habitat, recovery plans, and the Endangered Species Act. Increases in production will occur in state, tribal, and public utility district facilities, resulting in 26.15 million additional smolts annually. The Legislature also provided nearly \$40 million (a 20 percent increase) to improve hatchery facilities, and in the supplemental budget in 2020, provided \$500,000 for a hatchery master plan.
- In 2021 budget, the Department of Fish and Wildlife received \$4.5 million to increase hatchery production on prey identified as high priority for Southern Residents and \$1 million for hatchery maintenance.

7

Recommendation: Prepare an implementation strategy to reestablish salmon runs above existing dams, increasing prey availability for Southern Resident orcas.

- The Department of Fish and Wildlife received \$524,000 for enhanced engagement on this issue. The department used this funding to help efforts by the Upper Columbia United Tribes to complete the first phase of the Northwest Power and Conservation Council's process to reintroduce salmon above the Chief Joseph and Grand Coulee dams in the upper Columbia River, including disease screening for cultural releases of Chinook above the two dams. The department also began to identify new sources of funding to support the phased reintroduction process above the two dams.
- In 2021, \$250,000 was provided for a pilot study of salmon migratory behavior and survival upstream of the Chief Joseph and Grand Coulee dams. The Upper Columbia United Tribes, in cooperation with Department of Fish and Wildlife and others, are completing an implementation for the second of the three-phase reintroduction effort. Phase 2 is focused on experimental adult

and juvenile releases and an assessment of the best technologies and location for juvenile fish passage collection facilities.

8

Recommendation: Increase spill to benefit Chinook for Southern Residents by adjusting Total Dissolved Gas allowances at the Snake and Columbia Rivers dams.

- On March 29, 2019, the Department of Ecology issued a short-term modification for total dissolved gas criteria for areas on the lower Snake and lower Columbia Rivers so that the Washington's allowable 120 percent total dissolved gas standard aligned with Oregon's during the 2019 juvenile salmon migration "spill" season. In December 2019, Ecology adopted rules to update Washington's total dissolved gas criteria for these rivers, allowing spill up to 125 percent total dissolved gas. The rule was approved by the U.S. Environmental Protection Agency, and has allowed flexible spill up to 125 percent Total Dissolved Gas during the 2020 and 2021 spring spill season. A recent agreement between the parties to litigation over the federal Columbia River System biological opinion will lead to additional spill to 125 percent total dissolved gas in 2022.

9

Recommendation: Establish a stakeholder process to discuss potential breaching or removal of the lower Snake River dams for the benefit of Southern Resident orcas.

- The Office of Financial Management oversaw a \$750,000 contract to engage stakeholders to determine the economic, social, and environmental impacts of breaching or removing the lower Snake River dams. A final report was released in March 2020.
- In July 2020, the U.S. Army Corps of Engineers released the Final Environmental Impact Statement for the Columbia and Snake River dams. This document does not recommend removal of the dams. The final impact statement and an associated biological opinion were immediately challenged by environmental, fishing, tribal, and Oregon plaintiffs, and the litigation parties are discussing the possibility of a settlement that may revisit and revise the conclusions of the Corps' Environmental Impact Statement.
- Meanwhile, Governor Jay Inslee and Senator Patty Murray released a statement in October 2021 on establishing a joint federal-state process on Snake River salmon recovery to determine whether reasonable means exist to replace the benefits provided by the dams. Senator Murray will work to ensure key elements of a salmon recovery strategy are included in any U.S. Army Corps of Engineers strategy in the Fiscal Year 2022 Water Resources Development Act, including possible additional engineering and analysis of breaching the dams as part of a comprehensive solution for Columbia and Snake River salmon.

10

Recommendation: Support full implementation and funding of the 2019-28 Pacific Salmon Treaty.

- Thanks to broad support from many communities, organizations, and individuals, and a strong push from the Congressional delegations of Washington and Alaska, Congress appropriated more than \$25 million of new funding in Fiscal Year 2020 for implementation of the updated Pacific Salmon Treaty, biological opinion, and associated domestic programs. The single largest funding component targets habitat restoration for Puget Sound Chinook. The non-federal treaty U.S. Section commissioners requested implementation funds from Congress for the new United States/Canada agreements, and in particular, the funding for implementation of the Chinook Agreement.
- The Washington State Recreation and Conservation Office is administering \$26.1 million of Pacific Salmon Treaty funding: \$19.9 million for habitat projects identified using the list of priority stocks for Southern Residents, \$6.2 million for hatcheries, and \$480,000 for improving salmon stock assessments, modelling, and analysis.

11

Recommendation: Reduce Chinook bycatch in West Coast commercial fisheries.

- Recommendation 11 requested that the Department of Fish and Wildlife continue to work with regional councils and stakeholders to further reduce bycatch in West Coast fisheries. Changes to timing, gear and harvest areas have contributed to bycatch reductions to date, and the department is committed to continue its work within the councils to seek further reductions where possible as new technology and research become available.
- NOAA issued a final rule on March 25, 2021 to establish additional management tools to minimize incidental Chinook and coho salmon bycatch to keep fishery sectors within guidelines, establish rules to access Chinook salmon bycatch reserve, and create Chinook salmon bycatch closure thresholds for the trawl fishery.

12

Recommendation: Direct the appropriate agencies to work with tribes and NOAA to determine if pinniped (harbor seal and sea lion) predation is a limiting factor for Chinook in Puget Sound and along Washington's outer coast, and evaluate potential management actions.

- The Department of Fish and Wildlife co-hosted two transboundary workshops to discuss the state of the science and is working to publish a manuscript on predation data (to include Chinook and coho data for 2017 and 2018). Additionally, with funding from several tribes, the department coordinated with partners in British Columbia to complete a harbor seal 2019 population estimate for the Salish Sea.
- The Legislature appropriated \$140,000 to the Department of Fish and Wildlife to hire the Washington Academy of Sciences to provide policy makers with a report on current evidence of

pinniped predation on salmon, with an emphasis on Washington's portion of the Salish Sea and Washington's outer coast. The study must review the existing science regarding pinniped predation of salmonids and determine what level of certainty is known, where the knowledge gaps are, where additional research is needed; how the science may inform decision makers, and assess the scientific and technical aspects of potential management actions. (2021 budget)

- The Legislature appropriated \$470,000 to the Department of Fish and Wildlife to expand efforts to survey the diets of seals and sea lions in Puget Sound, conduct population counts, and identify non-lethal management actions to deter them from preying on salmon and steelhead. (2021 budget)

13

Recommendation: Support authorization and other actions to more effectively manage pinniped predation of salmon in the Columbia River.

- The Legislature appropriated \$462,000 in the 2020 session to the Department of Fish and Wildlife to expand management of pinniped populations in the lower Columbia River and its tributaries with the goal of increasing the amount of Chinook salmon available for orcas to eat. The department received permits from the National Marine Fisheries Service in the fall of 2020. In 2021, the department was appropriated funding to continue to implement the permit to remove predatory sea lions in the lower Columbia River and to conduct population counts of sea lions in the lower river.

14

Recommendation: Reduce populations of nonnative, predatory fish species that prey upon or compete with Chinook.

- In 2019, the Legislature passed Second Substitute House Bill 1579, which directed the Department of Fish and Wildlife to adopt rules to liberalize bag limits for bass, walleye, and channel catfish in all anadromous waters of the state in order to reduce predation risk to salmon smolts. The Fish and Wildlife Commission adopted rule changes, which went into effect in February 2020. Following 2 years of development and community engagement, the department is expected to establish a non-native game fish and fisheries policy that will guide the agency's management of non-native gamefish statewide in December 2021.
- In the 2020 supplemental budget, the Legislature appropriated \$357,000 for suppression, eradication, and monitoring of northern pike in the Columbia River.
- The Washington Invasive Species Council was reauthorized to continue, and it is supporting statewide invasive species identification and eradication work around the state. NOAA is presenting to the council in November 2021 on the importance of this work to Southern Resident recovery.
- The Legislature appropriated \$6 million statewide (\$3.6 million to Puget Sound) to manage and prevent aquatic invasive species, with a focus on green crab and northern pike, both critical to manage to prevent harm to salmon recovery efforts. Specifically, in 2021 the Department of Fish and Wildlife received \$200,000 for northern pike suppression efforts at Lake Roosevelt to prevent the fish from moving further downstream into the Columbia River.

- In 2021, the Department of Fish and Wildlife received \$200,000 to evaluate predation at the McNary Dam.

15

Recommendation: Monitor forage fish populations to inform decisions on harvest and management actions that provide for sufficient feedstocks to support increased abundance of Chinook.

- The Department of Fish and Wildlife received \$743,000 in the 2019 biennial budget to support this recommendation. Herring egg deposition surveys were curtailed during the 2020 spawning season but resumed in 2021. A study of commercial and recreational surf smelt harvest in Puget Sound had just begun in 2020 when it was cancelled due to the pandemic and was not able to be rescheduled within the biennium. The study of summer herring distribution and abundance planned for 2020 also was cancelled but was reorganized to assess herring biomass in pre-spawn holding areas during the 2021 and 2022 spawning season. The department has continued to work with a Washington Conservation Corps crew funded by to conduct smelt and sand lance habitat surveys and mapping, assist Marine Resource Committees with sample analysis, and assist with herring and anchovy surveys. Because the the Department of Natural Resources can no longer fund the crew, the Department of Fish and Wildlife is seeking ongoing funding to support the crew. Herring egg deposition and pre-spawn holding area surveys are expected to resume in January 2022. Habitat surveys continue to provide updates of spawning distribution and timing for surf smelt, sand lance, and herring, and spawning biomass estimates for herring. The Department of Fish and Wildlife also has begun sampling for anchovy spawning in response to an apparent increase in anchovy abundance in Puget Sound, and recent interest from commercial fisheries in targeting this fish locally.

16

Recommendation: Support the Puget Sound zooplankton sampling program as a Chinook and forage fish management tool.

- The Department of Natural Resources received funding in the 2019-21 biennial budget for monitoring and \$500,000 was given to the Department of Fish and Wildlife for zooplankton monitoring.
- The Legislature appropriated \$2.5 million statewide (\$1.5 million to Puget Sound) for the Coastal and Freshwater Monitoring program, which will include monitoring of zooplankton in Puget Sound and in Puget Sound freshwater areas. (2021 budget)
- In 2021, the Department of Fish and Wildlife received \$280,000 for ecosystem monitoring and \$553,000 from a National Estuary Program grant to support the Puget Sound-Wide Zooplankton Monitoring Program. The department will seek ongoing funding for the continuation of the zooplankton monitoring program. Some of the funding will be used to monitor ocean acidification. This program is essential for fisheries agencies and tribal partners to better manage Chinook and forage fish populations and helps us determine the role of our collective actions in the greater Puget Sound area versus marine drivers of productivity. The data also will aid in the forecasting of Chinook and forage fish abundance to inform continuous management decisions for fisheries and critical food for orcas.

Vessel Noise

17

Recommendation: Establish a statewide, “go-slow” bubble for small vessels and commercial whale watching vessels within half a nautical mile of Southern Resident orcas.

- A law passed (Substitute Senate Bill 5577, now C 291, L 19) to increase the protection of Southern Resident orcas from disturbance by vessels. The law prohibits a vessel to exceed a speed of seven knots at any point within a half-nautical mile of a Southern Resident orca.
- The Washington State Parks and Recreation Commission received \$150,000 in one-time funding to include protection of orcas in boater education curriculum. Almost all recreational boaters must take a test to receive a boater safety card. The new law is included in State Parks’ training materials and the test and the agency has increased efforts to train its staff and local governments to enforce the new law.

18

Recommendation: Establish a limited-entry, whale watching permit system for commercial whale watching vessels and commercial kayak groups in the inland waters of Washington State to increase acoustic and physical refuge opportunities for orcas.

- A new law passed (Substitute Senate Bill 5577, now C 291, L 19) to protect Southern Resident orcas from disturbance by vessels. The law established commercial whale watching licenses, sets fees for the licenses, and directed the Department of Fish and Wildlife to adopt rules for license holders for viewing of Southern Residents. The department completed the rulemaking in 2020, and the licensing program and rules for commercial viewing of Southern Residents went into effect in early 2021. In spring of 2021, the Legislature modified the law to restructure the license and waive commercial whale watching license fees for 2021 and 2022. With state and grant funding, the department is funding several monitoring efforts in order to report to the Legislature on the effectiveness of the commercial licensing program and associated rules, as well as any recommendations to all vessel approach distance regulations in fall of 2022, 2024, and 2026.

19

Recommendation: Create an annual orca protection endorsement for all recreational boaters to ensure that all boaters are educated on how to limit boating impacts to orcas.

- Senate Bill 5918 (now C 293, L 19) amended Revised Code of Washington 79A.60.630 to require the boating safety education program to include educational materials about whale watching guidelines, regulatory measures, and boating restrictions around Southern Residents. The state, through a multi-agency public engagement campaign, developed signs, ads in online boating-related publications and media outlets, videos, and organic and targeted social media advertising to educate boaters to “Be Whale Wise” and promote compliance with regulations. Paid social media advertising to boating enthusiasts in the greater Puget Sound area reached more than 450,000 people. Google search ads targeting similar audiences gathered more than 950,000 impressions, helping to support a significant boost in Web traffic to online information about Be Whale Wise regulations. Educational videos on Be Whale Wise regulations garnered more than 29,000 views during the campaign with additional placement in Bremerton, King County, Longview, Richland, Seattle, Tacoma, and Vancouver public access television stations. There currently is not an endorsement on the boater card, though curriculum and testing include the new regulations.

20

Recommendation: Increase enforcement capacity and fully enforce regulations on small vessels to provide protection to Southern Residents.

- The Department of Fish and Wildlife will use a portion of the funding identified in Recommendation 16 for increased officer presence and the number of patrols on the water. Ongoing funding of \$1,160,000 will support the new commercial whale watching operator license program and increase enforcement into the future. Additional funding was provided for an orca patrol vessel (\$139,000 in 2020 and again in 2021). In 2021, the department received \$542,000 to increase patrols to monitor and enforce vessel traffic and to educate boaters on Be Whale Wise.

21

Recommendation: Discourage the use of echo sounders and underwater transducers within 1 kilometer of orcas.

- In both Puget Sound and Canadian waters, maritime groups established safe, voluntary standards to reduce the potential interference of depth finders with Southern Residents' echolocation. Be Whale Wise will continue to work with the boating community to raise awareness on this issue.

22

Recommendation: Implement shipping noise-reduction initiatives and monitoring programs, coordinating with Canadian and U.S. authorities.

- In 2020, a Planning Committee consisting of members from the Ports of Seattle and Tacoma, as well as the Northwest Seaport Alliance, Puget Sound Partnership, Washington State Ferries, NOAA, Maritime Blue, Marine Exchange, Pacific Merchants Shipping Association, and Makah Tribe met regularly to draft a recommendation for the structure and leadership of a Quiet Sound effort. The goal of Quiet Sound is to better understand and reduce the cumulative effects of acoustic and physical disturbance from large commercial vessels on Southern Residents throughout their range in Washington State. A new director has been hired to lead Quiet Sound and more information is online at [Quiet Sound- Washington Maritime Blue](#).
- During the past few years, outbound ships from Washington ports have shown a very high degree of compliance with the ECHO program's voluntary slow-downs and other measures in the Strait of Juan de Fuca and Haro Strait/Boundary Pass. Similarly, the U.S. Coast Guard's Vessel Traffic Service actively has encouraged compliance by outbound U.S. and Canadian ships with Canada's interim sanctuary zone at Swiftsure Bank. By minimizing potential encroachment and transits across the sanctuary, the maritime community seeks to minimize underwater noise and disturbance near a set of key Southern Resident foraging hotspots.
- The Coast Guard is conducting a [Port Access Route Study](#) to evaluate safe access routes for vessel traffic to or from ports or places along the western seaboard of the United States and to determine whether a Shipping Safety Fairway and/or routing measures should be established, adjusted, or modified off the Pacific Coast between Washington and California. The Coast Guard is seeking input on whether there are environmental, cultural, tribal, marine mammal, or other impacts that should be considered during the study. Comments and related material are due by January 25, 2022.

23

Recommendation: Reduce noise from the Washington State ferries by accelerating the transition to quieter and more fuel-efficient vessels and implementing other strategies to reduce ferry noise when Southern Residents are present.

- The Legislature appropriated \$140 million to buy a hybrid electric ferry and to convert up to two ferries to hybrid electric.
- Following completion of baseline noise analysis, Washington State Ferries will identify and implement mitigation measures, both operational and engineered, to address on-vessel sources of frequencies of concern. State Ferries is developing an Underwater Radiated Noise Mitigation Plan that will be completed in 2020. This plan will address operational measures to reduce noise from ferries when near cetaceans, including Southern Residents. State Ferries also is incentivizing use of quiet vessel notations in new builds.

- The Legislature appropriated \$160,000 for a state ferry noise baseline study. Consultants collected field data on all ferry classes by placing hydrophones on three routes in October 2019. A final report covering nine vessels and all seven classes of ferries was delivered in March 2020. The report details a noise baseline, its potential effects on marine life, and potential mitigation measures.
- Washington State Ferries, in collaboration with the U.S. Navy and the University of Washington, has funded the development of an Underwater Sound Level Meter that provides real-time data on in-water noise. With grants from the Department of Transportation and the Federal Highway Administration, the University of Washington updated the meter with a new tablet, hydrophone, and software that reflects NOAA's newest marine mammal thresholds.
- Washington State Ferries and other maritime operators are using the Whale Report Alert System developed in Canada to alert commercial mariners in Puget Sound of the presence of whales, increase awareness, and increase voluntary speed reduction to reduce whale strikes.
- By January 2019, Washington State Ferries will begin a program to minimize trim on all vessels through enhanced loading procedures, primarily related to reducing fuel use in response to the Governor's Executive Order 18-01. The changes could reduce noise generated by pressure differential and cavitation. State Ferries has collected data and is working on policy that will address the issue of trim across the fleet.
- Washington State Ferries has integrated NOAA's "Be Whale Wise" guidelines into its Safety Management System as operating procedure for all vessels. Unless safety dictates otherwise, vessels avoid getting closer than 200 yards from orcas, do not position vessel within 400 yards of oncoming whales, and reduce speed to less than seven knots and avoid course changes within 400 yards of whales. State Ferries has revised its management system to reflect the new state laws about vessel behavior near Southern Residents. The new more stringent Washington State standards for Southern Residents have been applied to all whales. State Ferries also is promoting Be Whale Wise guidelines with education materials and naturalist presentations on ferries.
- [Washington State Ferries Sustainability Action Plan: 2021-2023](#) highlights the measures State Ferries is taking to benefit Southern Residents.

24

Recommendation: Reduce the threat of oil spills in Puget Sound to the survival of Southern Residents.

- In 2021, \$170 thousand from the oil spill prevention account went to Department of Ecology to hire the University of Washington's Sea Grant program to continue an oil spill response education program.
- The Department of Ecology is requesting more than \$300,000 annually to support the additional staff needed to develop state emergency response plans for Sector Columbia River (most of the Washington outer coast to Oregon) and Sector Puget Sound, and integrate them with those being used by federal partners, as well as to update them annually per requirements in Revised Code of Washington 90.56.060.

- In accordance with the longstanding Northwest Area Plan, the Department of Fish and Wildlife has broadened the availability of personnel and vessels that are pre-authorized to conduct hazing activities to deter orcas from entering the vicinity of an oil spill.
- A law passed ([Engrossed Substitute House Bill 1578](#)) which reduces threats to Southern Resident orcas by improving the safety of oil transportation. The Department of Ecology was given \$1,374,000 to implement the law and asked to develop and maintain a model to quantitatively assess current and potential risks of oil spills from covered vessels in Washington waters, as it conducts ongoing oil spill risk assessments. The law also does the following:
 - Specifies tug escort requirements for large oil tankers operating in Puget Sound.
 - Specifies tug escort requirements for smaller oil tankers and other vessels designed to transport crude oil or petroleum products operating in Rosario Strait and connected waterways, beginning September 1, 2020.
 - Requires the Board of Pilotage Commissioners to adopt rules for tug escorts in Puget Sound, by December 31, 2025.

25

Recommendation: Coordinate with the Navy in 2019 to discuss reduction of noise and disturbance affecting Southern Resident orcas from military exercises and Navy aircraft.

- The U.S. Navy joined the vessels working group in 2019 and at least five experts participated. The Navy also participated in the ECHO South meeting in September 2019 (Recommendation 22). Various units in the northwest (Keyport, Bangor, etc.) are using the Whale Report Alert System in Puget Sound and nearby areas to decide whether to reschedule certain pre-planned activities. The National Marine Fisheries Service and Navy agreed to continue to explore opportunities to improve real-time notifications via the Whale Report Alert System and other systems in their responses to public comments on the NWTT. Many organizations from the task force submitted public comment on the Navy's Draft Supplemental Environmental Impact Statement/OEIS in June 2019. In July 2020, task force members submitted additional comments to NOAA on the incidental take associated with the Navy's testing and training activities. In August 2020, the Department of Ecology issued a Conditional Concurrence under the Ocean Resources Management Act for the Navy's military exercises outlined in the SEIS. The conditions are consistent with comments from the Governor's Office, Attorney General's Office, Department of Fish and Wildlife, Puget Sound Partnership, Department of Natural Resources, and Governor's Salmon Recovery Office to the National Marine Fisheries Service in July 2020 addressing concerns around the short-term and cumulative effects of missiles and active sonar. In November 2021, the Navy announced its decision to proceed with activities as described in the SEIS and National Marine Fisheries Services' letter of authorization.

26

Recommendation: Revise chapter 77.15.740 Revised Code of Washington to increase the buffer to 400 yards behind the orcas.

- A new law passed (Substitute Senate Bill 5577, now C 291, L 19) to protect the Southern Resident orcas from disturbance by vessels. The law prohibits positioning a vessel behind a Southern Resident orca at any point within 400 yards and increases the distance to 300 yards for viewing from the side of a Southern Resident.

27

Recommendation: Determine how permit applications in Washington State that could increase traffic and vessel impacts could be required to explicitly address potential impacts to orcas.

- Members of the Vessels Working Group developed a clearer statement of the key two problems this recommendation sought to address. Accordingly, potential next steps are: (1) for the next phase of the Vessels Working Group or a similarly representative group of experts to develop additional technical resources that can be used by coastal planners and environmental staff to identify and suggest mitigation options for potential impacts of increased vessel traffic and associated with facilities; and (2) for the Department of Ecology to update the State Environmental Protection Act checklist and/or supplementary materials to include a vessel traffic question and specifically require that potential impacts to Southern Residents be addressed. Ecology has identified analogous supplemental guidance material that could provide a template for updating State Environmental Protection Act guidance on assessing and mitigating underwater noise and ship strikes. Staff is needed to develop and vet the supplementary material and/or update the checklist.

28

Recommendation: Suspend viewing of Southern Resident orcas.

Not enacted.

46

Recommendation: Expand the Governor's Maritime Blue scope of work and provide funding to implement recommendations and pursue shipping and other maritime innovations that benefit Southern Residents.

- Building on the Quiet Sound proposal in Recommendation 22, the Maritime Blue and the Marine Exchange of Puget Sound proposed a Joint Innovation Project to expedite immediate and successful implementation of shipping mitigation measures by supporting and scaling the Whale Report Alert System, which now has become one of Quiet Sound's key initial and ongoing efforts. In 2021, the Puget Sound Partnership received \$500,000 to implement shipping noise reduction initiatives and monitoring programs in Puget Sound, in coordination with Canadian and United States authorities. The Partnership hired Maritime Blue to establish and administer the Quiet Sound program to better understand and reduce the cumulative impacts of acoustic and

physical disturbance from large commercial vessels on Southern Residents throughout their range in Washington. Washington Maritime Blue will support a Quiet Sound advisory committee that should include relevant federal and state agencies, ports, industry, research institutions, and nongovernmental organizations and consult early and often with relevant federally recognized tribes. Efforts are underway.

49

Recommendation: Conduct comprehensive environmental review and take action to prevent whale strike risk and underwater noise posed by fast ferries and water taxis in critical habitat.

- Related to this recommendation, the Legislature enacted HB 2641, authorizing cities to provide passenger-only ferry service. The law does the following:
 - o Allows cities bordering Puget Sound and Lake Washington to establish, finance, and provide passenger-only ferry service if certain criteria are met.
 - o Requires that a passenger-only ferry investment plan: (1) Include consultation with treaty tribes to ensure impacts to tribal fishing are minimized; (2) show design and funding considerations for propulsion types and technologies that meet low, ultra-low, and zero emission targets; and (3) show best management practices and technologies available and considered to reduce impacts to water quality, prevention of whale strikes, and underwater noise that impact the Southern Residents, other marine mammals, and aquatic life.

Contaminants

29

Recommendation: Accelerate the implementation of the ban on polychlorinated biphenyls in state-purchased products and make information available online for other purchasers.

- The Department of Enterprise Services published the Purchasing Preference Policy, produced a polychlorinated biphenyls (PCB) documentary video that includes information on bioaccumulation in the food web, and provided a training for agency contracting staff. The department is adding new wording to master contracts as they expire. The department also has completed guidance for state agencies.

30

Recommendation: Identify, prioritize, and take action on chemicals that impact orcas and their prey.

- Working with the Puget Sound Partnership's Puget Sound Ecosystem Monitoring program, the University of Washington's Puget Sound Institute has developed a framework for prioritizing Chemicals of Emerging Concern to inform statewide Chemical Action Planning prioritization.
- The Department of Ecology and Department of Fish and Wildlife conducted field studies in multiple Puget Sound rivers to identify where along the migratory pathway juvenile salmon are exposed to toxic chemicals so that these contaminant sources may be addressed.
- The Legislature authorized \$4.7 million and \$3.7 million in the operating and capital budgets, respectively, for implementation of Chemical Action Plans to prevent toxics from entering the environment.
- The Products Replacement Program was funded at \$6.5 million (\$5.1 million to Puget Sound) for collaborating with local governments and partners to provide incentives to Washington businesses to remove or replace the worst chemicals through technology and infrastructure upgrades, best management practices, disposal programs, and the use of safer chemicals. (2021 budget)
- The Legislature appropriated \$351,000 to the Department of Ecology to review data on antifouling paint use in the aquatic environment, prepare a report to the Legislature, and implement a ban on paints containing the highly toxic chemical Cybutyne in an effort to reduce persistent, bioaccumulative, toxic chemicals in the environment. (2021 budget)
- The Department of Ecology received \$523,000 to work with the Department of Transportation, University of Washington and Washington State University to identify priority areas affected by GPPD or related chemicals from roads and transportation infrastructure that are toxic to aquatic

- life and identify best management practices to reduce the toxicity. This includes developing a standard method for the laboratory measurement of the chemicals. The department will submit a report in 2021. The Department of Ecology received \$195,000 to assess potential hazards of 6PPD (CAS 793-24-8) and other chemicals or chemical classes and breakdown products used as anti-oxidants and/or antiozonants in tires and submit a technical memo to the Legislature by December 1, 2021.
- The Department of Fish and Wildlife provided key science support for the Washington State Attorney General's Office to settle its \$90 million lawsuit against Monsanto Corporation, the company held responsible for the production and release of toxic PCBs, the chemicals of primary concern for orca, Chinook, and herring health. The Attorney General's Office recommended the settlement be used for remediation.
 - A law, the Pollution Prevention for Healthy People and Puget Sound Act of 2019 ([Substitute Senate Bill 5135](#)), passed to protect people and the environment from harmful toxic chemicals in consumer products that affects public health or the environment. The law does the following:
 - Directs the Department of Ecology to identify priority consumer products that are a significant source of, or use, priority chemicals as defined in statute, by June 1, 2020.
 - Directs the Department of Ecology to, every 5 years, identify five additional priority chemicals and priority consumer products that are a significant source of, or contain those priority chemicals, with the first process beginning June 1, 2024.
 - Directs the Department of Ecology to take regulatory actions with respect to priority consumer products containing priority chemicals, including restricting or prohibiting the manufacture, sale, or use of a priority chemical in a priority consumer product, or requiring a manufacturer to disclose certain information about the use of a priority chemical in a priority consumer product. Provides for public notice and comment and legislative review of new regulations before they take effect.
 - Authorizes the Department of Ecology to require manufacturers to provide certain information about their use of a chemical to support the identification of priority consumer products containing priority chemicals.
 - Provides for civil penalties for manufacturer violations of newly established rules.
 - The Legislature appropriated \$808,000 in the 2019 budget and \$1.5 million in 2021 (\$1.2 million estimate as impact in Puget Sound) to the Department of Ecology for ongoing implementation of the law.

31

Recommendation: Reduce stormwater threats and accelerate clean-up of toxics that are harmful to orcas.

- The Department of Ecology received \$75 million for Stormwater Financial Assistance Program, which included \$45 million to Puget Sound, an increase from the \$44 million received in 2019. (2021 capital budget)
- The Department of Ecology received \$315 million (\$189 million to Puget Sound), an increase from \$204 million in 2019 for Water Pollution Control Revolving Program. (2021 capital budget)
- The Department of Natural Resources received \$3 million to removal derelict and abandoned vessels from waters. When a vessel sinks or breaks up, fuel, oil, and other hazardous substances can spill into the water. Derelict vessels endanger salmon habitat and pose navigation risks. (2021 budget)
- The Department of Ecology received \$40 million (\$24 million to Puget Sound) for the Centennial Clean Water Fund. (2021 budget)
- The Department of Ecology received \$5.8 million (\$4.6 million to Puget Sound) to Clean Up Toxic sites. (2021 budget)
- The Department of Ecology received \$71.1 million (\$49 million to Puget Sound) for the Remedial Action Grant Program. (2021 budget)
- Washington State settled a lawsuit with Monsanto for \$95 million for harm to state resources caused by polychlorinated biphenyls (PCB) contamination.
- The Department of Ecology received a combined \$13.8 million to clean up smelter plumes in Everett and Tacoma.
- The Department of Ecology received \$11.1 million (\$8.2 million to Puget Sound) to provide the state share on clean Superfund ups. This will prevent toxics from entering waterways.
- The Department of Transportation will contribute more than \$1 million to creosote removal in Bainbridge and Eagle Harbor and \$7.5 million for stormwater retrofits in Puget Sound. (2021 budget)

32

Recommendation: Improve effectiveness, implementation, and enforcement of National Pollutant Discharge Elimination System permits to address direct threats to Southern Residents and their prey.

- The Legislature provided funding (identified above) for water quality enforcement staff at the Department of Ecology (these staff also support, and are reported under, Recommendation 31). Ecology is exploring nutrient reduction methods that may reduce toxic pollution as well. Newly

issued municipal stormwater permits now require smaller jurisdictions to implement local source control.

33

Recommendation: Increase monitoring of toxic substances in marine waters and create and deploy adaptive management strategies to reduce threats to orcas and their prey.

- The Department of Ecology received \$2.8 million to create a monitoring program, database, and laboratory assessment method regarding polychlorinated biphenyls (PCB). The funding includes \$440,000 to enhance the environmental information management database; \$1.2 million to create a long-term, statewide monitoring program for PCBs; and \$540,000 to develop a PCB-specific laboratory method for conducting analysis.
- The [Toxics in Fish Implementation Strategy](#) was finalized in June 2021 and provides a path to reduce toxics in Puget Sound and to guide funding activities to reduce the impacts of contaminants on marine fish and orcas that eat them.
- Some additional funding for PSEMP in 2019 was granted to the Puget Sound Institute to work with the PSEMP toxics workgroup to develop a framework for monitoring and prioritizing chemicals of emerging concern. However, the available funds won't be adequate to fully realize this work to inform adaptive management or Recommendation 29. Additional resources will be necessary.
- The Department of Ecology was given \$682,000 ongoing funding for the Puget Sound Observation Network.

38

Recommendation: Explore minimum standards for local stormwater funding.

- No action at the state level. The Puget Sound Institute is working with graduate programs at the University of Washington to explore this issue with graduate students and help provide information useful to decision makers. This continues to be an area of focus for Puget Sound recovery with the Stormwater Strategic Initiative working with the Ecosystem Coordination Board to identify a strategy for ensuring that jurisdictions have the resources they need to adequately manage local stormwater programs.

39

Recommendation: Develop a National Pollution Discharge Elimination permit framework for advanced wastewater treatment in Puget Sound to reduce nutrients in wastewater discharges to Puget Sound by 2022.

- The Department of Ecology was given \$535,000 to develop a Puget Sound Nutrients General Permit for wastewater treatment plants to reduce nutrient pollution. In January 2020, the department announced the decision to move forward with developing a draft Nutrients General

Permit in Puget Sound. The proposed permit would apply to nearly 70 domestic waste water treatment plants discharging to marine and estuarine waters of Puget Sound. Public comments were received in August 2021, and Ecology is proceeding.

40

Recommendation: Better align existing nonpoint programs with nutrient reduction activities and explore new ways to achieve the necessary nonpoint source nutrient reductions.

- The Department of Ecology has outlined a plan for reducing nutrients in Puget Sound and continues to work with stakeholders and experts to explore broad-based strategies for nutrient reduction, including nutrient reduction from non-point pollution.
- The Washington State Parks and Recreation Commission received \$2.6 million (\$1.3 million for Puget Sound) for Clean Vessel Pump Out grants to minimize sewage.

41

Recommendation: Collect high-quality nutrient data in watersheds to fill key knowledge gaps of baseline conditions.

- The Department of Ecology received \$748,000 in the 2020 supplemental operating budget for Puget Sound Freshwater Monitoring. A combination of one-time and ongoing funding is provided to add capacity for continuous freshwater nutrient monitoring for dissolved oxygen, pH, nitrates, turbidity, temperature, and conductivity, and targeted storm event sampling at the mouth of the seven largest rivers discharging into Puget Sound. The data collected will support a nutrient reduction strategy for Puget Sound and help inform decisions regarding the need for future infrastructure investments across the region.

Monitoring and Accountability

34

Recommendation: Provide sustainable funding for implementation of all recommendations.

The need to pursue additional fund sources to implement salmon recovery and watershed plans has been identified in the 2016 Governor's Salmon Recovery Office and Salmon Recovery Funding Board's Fundraising Plan. Funding for the natural environment and keeping pace with climate change impacts and rapid growth continue to be an issue for recovery of salmon and orca.

- The Legislature passed a law (ESSB 5993, now C 442, L 19) reforming the financial structure of the Model Toxics Control Act program. The law makes the following changes:
 - The Hazardous Substance Tax is changed from a value-based tax on petroleum products to a volumetric tax with a rate of \$1.09 per 42-gallon barrel. The tax rate for non-petroleum products is not changed.
 - Existing Model Toxics Control Act accounts are repealed and replaced with an Operating Account that will receive 60 percent of the revenue, a Capital Account that will receive 25 percent of the revenue, and a Stormwater Account that will receive 15 percent of the revenue. Use of the funds is restricted to specified Model Toxics Control Act -related purposes.
 - \$50 million per biennium is deposited in the Motor Vehicle Fund to be used exclusively for transportation stormwater programs until transportation revenue increases by \$2 billion attributable to an additive transportation funding act.
 - The Department of Revenue must compile a list of petroleum products that are not easily measured on a per barrel basis. Petroleum products on this list are subject to the 0.7 percent tax on the wholesale value.
 - Beginning July 1, 2020, and each July 1st thereafter, the volumetric portion of the Hazardous Substance Tax will be adjusted by the implicit price deflator for nonresidential construction.

Recommendation: Conduct research, science, and monitoring to inform decision making, adaptive management, and implementation of actions to recover Southern Residents.

For the successor to the task force (see Recommendation 42), agencies agree that any future governing body should recognize that developing a monitoring and adaptive management framework with clear objectives is a necessary next step.

- The Puget Sound Partnership has an extensive recovery system and can provide support to science, monitoring, and adaptive management. The Partnership is updating its Action Agenda for 2022-2026. The agenda includes vital signs, strategies, and progress measures, and the task force recommendations have been adopted into the strategies. In addition, Southern Residents are a Puget Sound vital sign in the Action agenda. Based on the target set by the task force, the goal is an increase in the population to 86 whales (representing a 1.25 percent growth rate since 2018) by 2030, and to 110 individuals by 2050.
- The Puget Sound Partnership produces the [State of the Sound](#) every 2 years, which is intended to help partners and decision makers better understand the recovery effort, ecosystem health, progress toward recovery goals, and the roles partners play in achieving Puget Sound recovery. The report addresses many areas of recovery important to the task force recommendations and is a good resource to understand actions important to recover the Sound and what the trends are in recovery.
- The Puget Sound Partnership's new data portal, [Puget Sound Info](#), provides information about the status of Puget Sound recovery, including data about Southern Residents and Chinook salmon.
- The Governor's Salmon Recovery Office produces the [State of Salmon in Watersheds](#) report every biennium that includes water quality data from the Department of Ecology, funding data from the Recreation and Conservation Office, and salmon population data from the Department of Fish and Wildlife. This report provides an assessment on stocks that are important food for Southern Residents.
- The Puget Sound Partnership received \$1 million in ongoing funding for the Monitoring to Accelerate Recovery program. (2019)
- The Puget Sound Partnership received \$2.2 million in ongoing for Puget Sound scientific research. (2019)
- The Puget Sound Partnership received \$200,000 to set up a monitoring strategy for kelp conservation and recovery. (2021 budget)
- The Department of Ecology received \$497,000 for grants for coordination, monitoring, and research related to Puget Sound kelp conservation and recovery.
- The Washington Department of Fish and Wildlife received \$1.6 million for coastal and freshwater monitoring of fisheries to ensure Endangered Species Act compliance.

Recommendation: Monitor progress of implementation and identify needed enhancements.

- The task force monitored progress at its March and June 2019 task force, and in its Year Two report (November 8, 2019).
- In 2020, the Legislature funded a position in the Governor's Salmon Recovery Office to monitor progress of the task force recommendations and coordinate implementation. The position was left vacant due to COVID and potential budget reductions, but was filled in July 2021.
- A policy position was funded in the Washington Department of Fish and Wildlife to work on new vessel rule development and implementation and on orca recovery in the agency and with partners.
- Executive staff at the Puget Sound Partnership continue to actively lead and harmonize implementation of outstanding vessel recommendations and promote coordination with Canada.

37

The Puget Sound Partnership's Leadership Council will review the status and implementation of Puget Sound-related recommendations in December 2021. This could become an annual or biannual exercise as the council fulfills its mandate to conduct accountability forums. Recommendation: Protect against regulatory rollbacks at the state and federal level.

- Ongoing, with more success at the state level than at the federal level.
- Department of Ecology received \$642,000 in 2021 for Federal Waters of the U.S. Rollback. The Recreation and Conservation Office and Governor's Salmon Recovery Office wrote letters to support rescinding the rollback on the Endangered Species Act and National Environmental Policy Act process.

42

Recommendation: Create one or more entities with authority and funding to recover and advocate for Southern Residents by implementing task force recommendations as needed and report to public, Governor, and comanagers on status.

- The Recreation and Conservation Office received ongoing funding in the 2020 supplemental operating budget to hire an orca recovery coordinator to coordinate work to recover Southern Residents and monitor progress implementing the task force recommendations. The position was filled in July 2021.
- The Department of Fish and Wildlife received funding for a killer whale policy lead.

Climate Change

43

Recommendation: Take aggressive, comprehensive, and sustained action to reduce human-caused greenhouse gas emissions with goal of achieving net zero emissions by 2050.

- The Legislature passed the Climate Commitment Act ([Senate Bill 5126](#)) to establish a comprehensive program to reduce carbon pollution and achieve greenhouse gas limits set in state law. The Legislature set aside \$18 million to implement the bill. (2021 budget)
- The Department of Commerce received \$3.2 million to reduce greenhouse gases through guidance in comprehensive plans. The department will publish the guidelines and guidance. The model element must recognize and promote as many benefits of climate resilience as possible, such as salmon recovery, ecosystem services, and supporting treaty rights.
- The Legislature enacted House Bill 1091 to establish Clean Fuels Standard.
- The Legislature enacted passed a law (E2SHB 2311, now C 79, L 20) amending state greenhouse gas emission limits for consistency with the most recent assessment of climate change science. The law does the following:
 - Modifies state anthropogenic emissions reduction limits and state agency greenhouse gas emissions reduction targets.
 - Requires the State and state government as a whole to achieve net zero greenhouse gas emissions by 2050.
 - Requires state agencies to report biannually on short-term and long-term strategies for meeting emissions reduction targets.
 - Requires all state agencies to seek all practicable opportunities to cost effectively maximize carbon sequestration and carbon storage in their nonland management agency operations, contracting, and grant-making activities.
- The Department of Ecology received \$15 million (\$9 million estimated to Puget Sound) to reduce diesel and toxics emissions through a grant program that will electrify school buses and other diesel vehicles, support the installation of idel reduction technology, and replace diesel engines, Transportation is the largest source of climate pollution in Washington, accounting for nearly half of all greenhouse gases. (2021 budget)

44

Recommendation: Increase Washington's ability to understand, reduce, remediate, and adapt to the consequences of ocean acidification.

- The Legislature appropriated \$204,000 from the Model Toxics Control Operating Account to implement [Executive Order 12-07](#), Washington's response to [ocean acidification](#). The Department of Ecology is investing in science and working in partnership with scientists, policymakers, and industry experts to prepare Washington for ocean acidification and other adverse effects from a changing climate. It also is involved in a modeling study to understand more about the various processes and relative influences of acidification locally. These modeling tools will help guide management actions into the future.

45

Recommendation: Mitigate the impacts of a changing climate by accelerating and increasing action to increase the resiliency and vitality of salmon populations and the ecosystems on which they depend.

This recommendation doubles down on the salmon habitat restoration activities from Recommendation 1 and reinforces hatchery and harvest practices that the Department of Fish and Wildlife takes to minimize impacts on genetic diversity.

- The Department of Fish and Wildlife is developing guidance (e.g. Priority Habitat and Species Riparian Guidance, Integrating Climate Change into Culvert Design) supporting resilient habitats and infrastructure.
- The Department of Fish and Wildlife is working to implement a flexible spill agreement projected to increase smolt to adult returns about 50 percent for Snake River spring Chinook, which are one of the most important stocks for Southern Residents. The flexible spill operation in 2019 and was ramped up to include higher spill levels (to 125 percent total dissolved gas, up from 120 percent). The idea is to spill to high levels for two-thirds of the day to benefit salmon and to lower levels for one-third of the day to reduce impact on power revenue and to help integrate renewables, especially solar.
- The Salmon Recovery Funding Board formed a climate change subcommittee to develop recommendations to address climate change risks to salmon recovery. The board will make decisions on the recommendations in December 2021.

47

Recommendation: Identify and mitigate increased threats from contaminants due to climate change and ocean acidification. Prioritize actions that reduce exposure where impacts expected to be most severe.

Climate change and ocean acidification continue to be important considerations in mitigating threats to Southern Residents. Some of this work is identified under Recommendations 30-33, 39, 40, and 44.

Future Growth

48

Recommendation: Adopt and implement policies, incentives, and regulations for future growth and development to prevent further degradation of critical habitat and sensitive ecosystems; enable growth in ways that result in net ecological gain; evaluate and report outcomes.

- The Office of Financial Management was given \$256,000 to develop a report to the Legislature that assesses how to incorporate a net ecological gain standard into state land use, development and environmental laws and rules to achieve a goal of better statewide performance on endangered species recovery and ecological health. The report must address each environmental, development, or land-use law or rule where the existing standard is less protective of ecological integrity than the 35 standard of net ecological gain, including the Shoreline Management Act (chapter 90.58 Revised Code of Washington), the Growth Management Act (chapter 36.70A 37 Revised Code of Washington), construction projects in state waters (chapter 77.55 Revised Code of Washington), and the Model Toxics Control Act. The Department of Fish and Wildlife is overseeing the contract for the study.

