

# **DRAFT** SRKW Task Force Recommendations

**(Longer version with implementation details)**

October 16, 2018 – DRAFT FOR TASK FORCE DISCUSSION

## **Introduction**

This a DRAFT document of recommendations that are in process. The Task Force may add new recommendations and may revise or delete those listed here.

The Steering Committee (comprised of co-chairs, Governor's office, agency leads and consulting team) prepared this package of recommendations for Task Force consideration.

This package is based on:

- Looking at the most-supported recommendations from Task Force members' input on the draft.
- Earlier Working Group recommendations and effectiveness ratings, and technical input from Working Group leads on the best available science.
- Initial public comment results.
- Feedback from Task Force members during phone calls over the past week. Requested substantive changes that require broader Task Force discussion have not been made, pending discussions at the Oct 17-18 meeting.

These recommendations have also been reframed to focus on the desired outcomes. The implementation details (formerly included as text of the recommendations) are still included, but are no longer part of the headline recommendation language. We have also included an appendix that allows you to quickly determine where the recommendations from the Sept. 24 draft report can be found in this new version.

This is a Steering Committee proposal just to get the conversation started. **Everything is still fully open for Task Force discussion and decisions.**

This document is organized as follows, with **specific recommendations and implementation details under each bullet**. The appendix enables cross-referencing between action numbers in the draft report and action numbers in this document.

## 1. RECOMMENDATIONS WITH EMERGING CONSENSUS

### Goal 1: Increase Chinook abundance

- Habitat restoration and acquisition: Enhance Chinook abundance by restoring and acquiring salmon habitat and food sources
- Habitat protection and enforcement: Protect habitat through improved enforcement of existing laws, strengthening laws, and ensuring compliance
- Habitat protection: Increase incentive programs to encourage salmon habitat conservation
- Hatcheries: Provide additional Chinook through increased hatchery production
- Hydropower operations: Improve survival and distribution of Chinook populations
- Harvest: Increase adult Chinook abundance through reduced catch and bycatch
- Predation of Chinook: Decrease the number of adult and juvenile Chinook lost to predation by species other than Southern Residents
- Forage fish: Increase the food available for Chinook

### Goal 2: Decrease disturbance of orcas from vessels and noise and increase orcas' access to prey

- Reduce noise from small vessels operating near Southern Resident orcas
- Reduce noise from the use of echo sounders near orcas
- Reduce noise from ships and ferries near Southern Resident orcas
- Increase protection of Southern Residents from the risk of a catastrophic oil spill

### Goal 3: Reduce Southern Resident orcas' exposure to contaminants

- Pollution prevention
- Removal and clean-up
- Pollution permitting and management

### Additional recommendations related to:

- Sustainable funding
- Research, science and monitoring
- Year 2 accountability and additional actions

## 2. RECOMMENDATIONS WITH LIMITED AGREEMENT

### Actions advanced for further discussion and decision making by the Task Force:

- Hydropower (including Hydro 5A and 5B from the draft report).
- Restricting boat access when Southern Residents are in important foraging areas (including Harvest 4, and Vessels 7A, 7B, and 7C from the draft report).

## APPENDIX: Crosswalk between draft report and draft new package

# RECOMMENDATIONS WITH EMERGING CONSENSUS

The following 30 recommendations appear to have broad support from Task Force members and the public.

## **Goal 1: Increase Chinook abundance**

Habitat restoration and acquisition: Enhance Chinook abundance by restoring and acquiring salmon habitat and food sources

*(rationale to be added here in final report)*

### ***Recommendation 1: Significantly increase investment in restoration and acquisition of habitat in areas where Chinook stocks most benefit SRKW.***

- Provide capital budget funding to support the existing list of projects intended to improve Chinook and forage fish habitat.
- Accelerate implementation of currently funded Chinook restoration projects known to provide survival benefits to Southern Resident orcas
- Increase funding for high priority actions or projects targeted to benefit Chinook stocks for a minimum of 10 years
- Emphasize large-scale estuary restoration programs focused on the Nooksack, Skagit, Stillaguamish, Possession Sound, Green-Duwamish, Puyallup, the mouth of the Columbia, and Chehalis rivers. Prioritize grant making on restoration that increases chinook recovery in the short run.
- Remove barriers that are a high benefit to Chinook. Provide funding for currently listed barrier removal projects, such as the Middle Fork Nooksack and Pilchuck dams. Compile and prioritize a list of additional barriers (i.e. both non-hydropower and hydropower dams that are not on the mainstem of the Columbia or Snake Rivers) where removal would similarly benefit Chinook. Provide funding via the 2020 supplemental capital budget for removal in the near term. At the direction of the Governor, this work is to be undertaken by WDFW working in conjunction with regional salmon recovery organizations.
- Create a new funding mechanism to support the significant increases in investments in the habitat protection and restoration programs. This should be done in conjunction with recommendation 29.

### **Implementation details:**

- In 2019, the governor and legislature fully fund the Recreation and Conservation Office's budget requests for existing capital budget salmon recovery accounts (Salmon Recovery Funding Board, Puget Sound Acquisition and Restoration Program, Estuary and Salmon Restoration Program, the Fish Passage Barrier Removal Board, and the

Washington Coast Restoration and Resilience Initiative) with no changes to existing ranked lists.

In 2019, the governor and legislature should also support programs administered by Department of Ecology that directly support Chinook salmon, including Floodplains by Design, the Office of the Chehalis Basin Strategy and the Yakima Basin Integrated Plan.

Regions should work within their existing priorities that are consistent with high priority Chinook stocks to accelerate the pace of restoration throughout the Puget Sound, Washington coast, and Columbia Basin. Regions — including state natural resource agencies — should fully exercise their technical and policy capacity to accelerate full implementation of habitat restoration projects that are currently under consideration, that have an established funding source, and that have feasibility studies indicating that the project would provide survival benefits to Chinook stocks important to the Southern Resident orcas. Additional state funding should be provided to focus specifically on high priority actions for the Chinook stocks that most benefit Southern Residents for at least 10 years (5 biennia). These programs have traditionally allocated approximately 80 percent of their funding towards projects that provide benefits to Chinook. *(Formerly Potential habitat recommendation 1)*

- In early 2019, the governor should direct WDFW, in conjunction with regional salmon recovery organizations, to compile and prioritize a list of barriers where removal would yield high benefit to Chinook and provide this list to the task force by June 2019. The legislature via the various salmon recovery accounts should ensure funding for removal of the high priority barriers in its 2020 supplemental capital budget. *(Formerly Potential hydropower recommendation 2)*
- Restoration of critically important but costly estuary restoration should be evaluated and prioritized where juvenile Chinook production could be increased in the very near term. Any estuary selected for restoration should be a high-priority Chinook salmon estuary and identified as being important for the Southern Resident orcas. Possible estuaries to focus on are the Nooksack, Skagit, Stillaguamish, Elwha, Dungeness, Snohomish, Green-Duwamish, Puyallup, Nisqually, Skokomish, the mouth of the Columbia, and Chehalis, all benefitting high-priority Chinook for Southern Residents. *(Formerly potential habitat recommendation 2)*

***Recommendation 2: Immediately fund acquisition and restoration of nearshore habitat to increase the abundance of forage fish for salmon sustenance.***

- Provide funding, estimated at \$60 million for the next biennium, for immediate implementation of restoration projects that address nearshore habitat.

### **Implementation details:**

- The governor and legislature should fully fund the projects approved during the 2018 grant round by the Puget Sound Acquisition and Restoration, Washington Coast Restoration Initiative, Salmon Recovery Funding Board and Estuary and Salmon Restoration Programs that address nearshore habitat. The cost of implementing the projects focused on forage fish habitat (that is, nearshore) is estimated at \$60 million. This is a subset of the overall prioritized salmon recovery programs in potential habitat recommendation 1. *(Formerly Potential forage fish recommendation 1)*

### **Habitat protection and enforcement: Protect habitat through improved enforcement of existing laws, strengthening laws, and ensuring compliance** *(rationale to be added here in final report)*

#### **Recommendation 3: Enforce laws that protect habitat.**

- WDFW and DOE must strongly enforce existing habitat protection and water quality regulations. Provide WDFW and DOE with the capacity for this enforcement.
- Direct the DOE to identify and report to the Task Force in 2019 on approaches using existing habitat, instream flow, and water quality regulations to improve prey availability
- Coordinate state and local enforcement efforts.
- Develop and adopt rules to implement and enforce the Fishway, Flow, and Screening statute.
- Enhance the Washington Department of Fish and Wildlife's enforcement of the state Hydraulic Code and fish passage regulations.
- Increase prosecution of violations of state and local habitat protection and water quality regulations.

### **Implementation details:**

- As soon as possible, the governor should direct Washington Department of Fish and Wildlife (WDFW) staff to develop rules to fully implement and enforce the Fishway, Flow and Screening statute (Chapter 77.57 RCW). *(Formerly part of potential habitat recommendation 3)*
- The Washington Department of Fish and Wildlife and Washington Department of Ecology should work with the Attorney General's Office and local prosecutors to increase *compliance with habitat protection and water quality regulations*. The number of Department of Fish and Wildlife and Washington Department of Ecology staff should be increased to improve compliance and civil enforcement. The legislature should amend WDFW's civil penalty statute (RCW 77.55.291) to provide the department with administrative enforcement tools equivalent to those of local governments, Ecology and DNR. *(Formerly potential habitat recommendation 4)*

- The governor and legislature must support and provide clear direction to Department of Ecology to facilitate improvements in implementation and increasing compliance to improve Southern Resident prey availability through existing habitat and water quality regulations and report to the task force by June 2019. At the state level, the governor and legislator must provide clear direction and support to facilitate change from the status quo (due to variable implementation). *(Formerly part of potential habitat recommendation 8)*

***Recommendation 4: The legislature should immediately amend existing statutes to provide stronger protection of chinook and forage fish habitat.***

- Limit or prohibit single family exemptions for docks, shoreline armoring, bulkheads and rock walls to prevent the destruction of juvenile salmonid migratory corridors and nearshore forage fish spawning habitat.
- Amend existing authority to allow WDFW to require mitigation for cumulative impacts over time.
- Provide agencies with clear authority to prohibit or mitigate certain actions.

**Implementation details:**

- The legislature should revise the statutes granting single-family exemptions and exceptions for docks and shoreline armoring in shoreline master plans (WAC 173 26241) and for bulkheads and rock walls in WDFW's Hydraulic Project Approval authority (RCW 77.55.141). These exemptions and exceptions can lead to the destruction of juvenile salmonid migratory corridors and nearshore forage fish spawning habitat. *(Formerly potential habitat recommendation 5)*
- Ask the legislature to rescind or amend appropriate portions of WDFW's Hydraulic Project Approval authority (RCW 77.55.231(1)) to enable WDFW to require mitigation for cumulative impacts over time and to implement a precautionary approach. This should be coupled with increased enforcement and possibly changes in the regulatory reform package. *(Formerly part of potential habitat recommendation 3)*

**Habitat protection: Increase incentive programs to encourage salmon habitat conservation**

*(rationale to be added here in final report)*

***Recommendation 5: State agencies should develop incentives to encourage voluntary actions to protect habitat.***

- Identify and implement incentives for voluntary compliance with existing rules and regulations that protect shorelines and habitats by landowners
- Enhance financial assistance for cooperative conservation programs.

### Implementation details:

- The legislature and federal agencies (such as the Natural Resource Conservation Service) should create additional mechanisms and increase financial assistance for cooperative conservation programs (e.g., fish screens, riparian areas, commodity funding for voluntary riparian implementation to Sight Potential Tree Height, private fish passage upgrades, enhanced wildlife forage budget for DFW Wildlife Areas with estuary restoration potential) implemented by conservation districts, lead entities, or individual landowners. Relevant existing programs include Floodplains by Design, the Conservation Reserve and Enhancement Program, and others. Task Force, salmon recovery regions, and state and federal agencies should develop a 10-year funding proposal for incentives by June 2019 to complement habitat recommendation 1. (Pilot 19-21 biennium funding of \$2 million for implementation in select watershed in Puget Sound, Washington Coast, and Columbia Basin). (*Formerly potential habitat recommendation 7*)

### Hatcheries: Provide additional Chinook through increased hatchery production

*(rationale to be added here in final report)*

### **Recommendation 6: Increase hatchery production and programs to benefit Southern Resident Orcas consistent with wild fish conservation, available habitat, recovery plans, and the Endangered Species Act.**

- Authorize/provide funding for WDFW to coordinate with co-managers and partners to increase hatchery production at facilities in Puget Sound, on the Washington Coast, and in the Columbia River basin in a manner consistent with wild fish conservation and the ESA. Decisions on hatchery production implementation are made by WDFW and tribal co-managers, with Endangered Species Act consultation from NOAA and U.S. Fish and Wildlife Service where appropriate.
- In 2019, undertake hatchery pilots to test and refine methods and practices (location, timing of release, age, size) that maximize production of Chinook for the benefit of Southern Residents while minimizing competition with wild stocks.
- Manage the increase in hatchery production consistent with available and improved habitat to enable survival of both hatchery and wild fish stocks.
- Provide increased funding to cover the operational, infrastructure, management, and monitoring costs associated with increased hatchery production.
- Conduct ongoing adaptive management, five-year comprehensive reviews, and the science needed to support a sustained increase in hatchery production.

### Implementation details:

- Beginning in fiscal year 2020, fund WDFW to coordinate with co-managers and other partners to increase hatchery production for the benefit of Southern Resident orcas at facilities in Puget Sound, on the Washington Coast, and in the Columbia River basin, in

a manner consistent with wild fish conservation, state and federally adopted recovery plans, and the Endangered Species Act. The governor should also ask that other funders – such as the National Oceanic and Atmospheric Administration, U.S. Fish and Wildlife Service, Bonneville Power Administration, and Oregon Department of Fish and Wildlife – of hatchery programs for Chinook stocks that are a priority for Southern Resident orcas maintain or increase production levels for those stocks, so that additional hatchery investments result in an overall increase in prey abundance.

Increasing hatchery production will require funding for the following activities:

- **Adaptive management and five-year comprehensive reviews.** To continue ongoing hatchery production with funding at the increased levels, WDFW must conduct annual adaptive management and five-year comprehensive reviews and adjust production and practices accordingly to limit impacts on natural salmon stocks if the reviews provide evidence of significant risk to the recovery of natural salmon stocks. These reviews should consider stray rates, productivity, juvenile rearing carrying capacity, smolt-to-adult ratios, genetic fitness, and other appropriate metrics to determine if action is needed to ensure the health or recovery of natural stocks. Accomplishing this review will require additional state funding to WDFW and partners in future years (such as in years when hatchery-produced fish return to Washington waters).
  - **Production at the 2019 level.** Although the legislature provided funding in fiscal year 2019 to increase hatchery production with existing infrastructure, continued funding is needed to continue these production increases.
  - **Additional science and infrastructure to support increased production for orcas.** Additional funding is needed to expand production beyond the 2019 level driven by the Southern Residents' needs. Expanding production will require additional hatchery facility capacity upgrades and should use the best available science around hatchery production to adaptively manage the program to consider the factors listed above.
  - **Collaboration** among WDFW, co-managers, and salmon recovery regions on hatchery production decisions.  
*(Formerly potential hatchery combination recommendation 1C (which is a combination of options 1A and 1B) which includes hatchery production increases, pilot hatchery projects, and habitat investments)*
- The governor and legislature should also provide funding to WDFW to coordinate with partners and begin testing pilot actions in hatcheries in 2019. These pilots should aim to a) increase marine survival of Chinook, b) adjust return timing and locations to align with orcas' needs, c) assess the feasibility and develop a plan to potentially increase size and age of returns, and d) reduce potential competition with wild fish. This work should build from and test findings of the Salish Sea Marine Survival Project, NOAA's salmon ocean program, and other relevant efforts working that are working to determine what is driving the survival of Chinook as they migrate downstream and through the marine environment. Hatchery pilots may require additional production to ensure that existing production levels are not affected by these trials, which have uncertain

outcomes in terms of fish survival. Pilot hatchery actions should be used to gather science to adaptively manage hatchery production levels and practices, including guiding the continued increases of hatchery production over time to provide more adult Chinook for Southern Residents, while ensuring that increases are done in a manner that is under ESA guidelines and done in a manner that does not impact Chinook recovery. WDFW should be funded to work with co-managers and other partners with ongoing funding of approximately \$4.5 million per biennium to implement these programs and monitor their effectiveness.

## Hydropower operations: Improve survival and distribution of Chinook populations

*(rationale to be added here in final report)*

### **Recommendation 7: Prepare an implementation strategy to re-establish salmon runs above existing dams, increasing prey availability over time for Southern Residents**

- Provide funding to WDFW and regional salmon organizations to coordinate with partners to determine how to re-establish sustainable salmon runs above dams including but not limited to, the Chief Joseph and Grand Coulee Dams on the Columbia River and the Tacoma Diversion, Howard Hanson and Mud Mountain dams in the Puget Sound. Provide policy support for actions needed. Prioritize projects that produce downstream adult Chinook.

#### **Implementation details:**

- In 2019, the governor and legislature should provide funding through WDFW and regional salmon recovery organizations to coordinate with tribes, local governments, NOAA and other key partners to assess and prioritize appropriate locations, costs, management, operations and other key information necessary to implement re-establishment of salmon runs as soon as possible above the dams and in the watersheds agreed to by the parties. Provide policy support for Chinook reintroduction upstream of dams such as Chief Joseph and Grand Coulee Dams for both the near-term trap-and-haul efforts (cultural releases implemented by the Upper Columbia tribes) as well as the long-term phased approach in the Northwest Power and Conservation Council's Fish and Wildlife Program and the Columbia River Treaty. Priority will be given to those projects that can produce downstream adult Chinook. *(Formerly potential hydropower recommendation 1)*

**Recommendation 8: To increase Chinook for Southern Residents, adjust Total Dissolved Gas allowances at Snake and Columbia River dams.**

- Direct the Department of Ecology to increase the standard for dissolved gas allowances from 115 percent to up to 125 percent, thereby increasing spill over these dams to benefit Chinook and other salmonids.
- Coordinate with the Oregon Department of Environmental Quality to align standards across the two states.

**Implementation details:**

- The Department of Ecology should move to immediately eliminate the current 115 percent standard for the forebay of the eight dams on the lower Snake and lower Columbia rivers and adjust total dissolved gas allowances up to 125 percent, as measured at tail races, to create flexibility to adjust spill regimes to benefit Chinook salmon and other salmonids. The Department of Ecology should work as expeditiously as possible with the Oregon Department of Environmental Quality to align at this level. When testing the flexible spill regimes, considerations need to be given to resident as well as anadromous species. (*Formerly potential hydropower recommendation 4*)

**Harvest: Increase adult Chinook abundance through reduced catch and bycatch**

*(rationale to be added here in final report)*

**Recommendation 9: Support full implementation and funding of the 2019-2028 Pacific Salmon Treaty**

- Washington's congressional delegation should prioritize securing appropriations to implement this treaty. Delegation members, the Governor, Task Force members, and others should advocate for these appropriations.
- The Treaty and its appropriations will result in harvest reductions, reduced bycatch, increased hatchery production and investments in habitat restoration, which are crucial to reducing harvest as the treaty is implemented thereby increasing Chinook for the benefit of Southern Resident orcas.

**Implementation details:**

- Support the full implementation of the 2019-2028 Pacific Salmon Treaty, together with the funding components that benefit Southern Resident orcas. Elements of the renegotiations included reductions in impacts on Chinook, which combined with other actions will make more prey available to Southern Residents. Related funding elements should include investments in habitat and hatcheries to increase Chinook

abundance. The governor should express the need for approval of the appropriations requests to the Washington federal delegation. Task force members should also reach out to the delegation for their support of the funding components. (*Formerly potential harvest recommendation 3*)

**Recommendation 10: Reduce Chinook bycatch in west coast commercial fisheries**

- WDFW should work with regional councils and stakeholders to implement practices and regulations in west coast fisheries that further reduce bycatch of Chinook (e.g., hake) – allowing more of these Chinook to reach Southern Residents.

**Implementation details:**

- The governor should direct WDFW representatives on the Pacific Fishery Management Council and North Pacific Fishery Management Council to work with regional stakeholders and manager starting in 2019 to avoid bycatch and further reduce the allowable bycatch of Chinook in Alaskan fisheries to ensure that more Chinook reach Southern Residents. (*Formerly potential harvest recommendation 2*)

**Predation of Chinook: Decrease the number of adult and juvenile Chinook lost to predation by species other than Southern Residents**

(*rationale to be added here in final report*)

**Recommendation 11: The Governor should direct the appropriate agencies to work with Tribes and NOAA to determine if pinniped predation is a limiting factor for Chinook in Puget Sound/Outer Coast and evaluate potential management actions**

- Conduct a pilot project for the removal or alteration of artificial haul out sites where sites are associated with significant outmigration and predation of Chinook smolts. Fund a study to determine if pilot removal accomplishes the goal of significantly reducing Chinook smolt predation.
- Compile and conduct science/research to determine the extent of Pinniped predation in Puget Sound and the outer coast and pursue management options, where appropriate.
- Engage NOAA to determine the optimal sustainable populations of harbor seal stocks in Puget Sound.
- Convene a management panel of state, tribal, and federal agencies to determine appropriate management actions. If Pinniped removal is justified, secure authorization through the Marine Mammal Protection Act.
- Provide funding for the science, research, coordination, decision making, and, if deemed necessary, removal.

### Implementation details:

- Starting immediately, the governor, legislature and NOAA should support and fund the continued development of science to better understand the extent of pinniped predation in Puget Sound and the outer coast to determine and apply appropriate management actions. Analyses should help determine the extent to which pinniped predation is a limiting factor for Chinook survival in each area, where and what types of management actions are best suited to the situation, and, if needed, provide any information necessary to secure authorization to perform needed management actions. A quantitative and spatial assessment of the consumption of harbor seals by transient killer whales in Puget Sound and the effect of potential removals on transient populations should also be conducted. Both the science and assessment of the management actions should account for factors that may exacerbate or ameliorate predation, including infrastructure haul outs, hatchery strategies, and the presence/absence of forage fish or other fish that are staple food for pinnipeds. As soon as possible, WDFW and the Puget Sound Partnership – or an appropriate board or partner designated by them – should convene a science panel to coordinate on ongoing science and deliver potential management options. Funding required to coordinate the science panel and implement the studies is estimated at \$550,000 one-time funding for this biennium and \$225,000 per biennium for ongoing coordination and monitoring activities.

At the same time, the governor should ask NOAA to expediently complete an assessment to determine the optimal sustainable populations of the harbor seal stocks of Puget Sound and then convene the Pacific Scientific Review Group to review the assessment.

The governor should also request that WDFW immediately develop a management panel of state, tribal and federal agency decision-makers to convene periodically to be updated on the state of the science on Puget Sound and outer coast predation and to discuss and coordinate potential management options. In the event that the science justifies it, and the management panel recommends a request for authorization for pinniped management through the Marine Mammal Protection Act, WDFW should receive state funding for coordination of this process (estimated at \$80,000 one-time funding), and the governor should request that the Washington federal delegation support funding capacity for NOAA to review the application expediently. Once authorization is received for any management actions, those actions should be funded through state and federal funds.

*(Formerly potential predation combination recommendation 1B (combination option of Puget Sound/outer coast pinniped predation actions, which is similar to potential predation combination recommendation 1A, but includes the immediate implementation of a haul-out removal pilot project))*

## ***Recommendation 12: Support authorization to more effectively manage pinniped predation of salmon in the Columbia River***

- Support efforts to enact a Columbia River-specific amendment to the Marine Mammal Protection Act (MMPA) enabling more effective management of pinnipeds predation of salmonids. The Governor and Task Force members should advocate for this amendment.
- Support MMPA authorization to add Stellar sea lions to the list of pinnipeds managed in the lower Columbia River. Also support increasing removal levels and altering removal requirements.
- Monitor Chinook survival and pinniped distribution in the Columbia River estuary to guide current and future management actions.

### **Implementation details:**

- Task Force members and the governor should support efforts to amend the Marine Mammal Protection Act, or MMPA, to more effectively manage pinniped predation of salmonids in the Columbia River through non-lethal and lethal methods. The task force should join the governor in expressing public support for a Columbia River-specific amendment to the MMPA, which is currently under consideration in Congress.

Alternatively, or in the meantime, the governor and task force should support an application for MMPA authorization to increase effectiveness of the management program by allowing the management of Steller sea lions, increasing removal levels and altering removal requirements. In the case of an application for MMPA authorization, the governor should request that the Washington federal delegation support funding capacity for NOAA to review the application expediently. To implement increased management through either a MMPA amendment or additional MMPA authorization, the legislature should provide additional funding to WDFW to work with partners to carry out the program (estimated at an additional \$600,000 per biennium).

To monitor the effectiveness of the management program, the governor should request that NOAA provide federal funding to monitor Chinook salmon survival from the Columbia River estuary to Bonneville Dam. The governor and legislature should provide complimentary state funding for WDFW to perform pinniped distribution surveys for this same area (estimated at \$40,000 per biennium). In combination, these two analyses will greatly help to guide current and future management actions. *(Formerly potential predation combination recommendation 2A)*

***Recommendation 13: Reduce populations of non-native predatory fish species that prey upon or compete with Chinook***

- Adjust game fish regulations and remove catch and size limits on non-native predatory fish including, but not limited to, walleye, bass, and channel catfish to encourage removal of these predatory fish, where appropriate.
- Evaluate predatory fish reduction options in McNary reservoir as the basis for further action to protect juvenile salmon.

**Implementation details:**

- The governor should request that WDFW remove catch and size limits on non-native predatory fish including, but not limited to, walleye, bass, and channel catfish to encourage removal of these predatory fish, where appropriate, to protect salmon or other ESA listed species. In addition, WDFW should adapt regulations to allow the disposal of these fish species because it is currently illegal to "waste" sport fish. Any increase in fishing for these species should be managed to minimize additional mortality or bycatch of salmonids. *(Formerly potential predation recommendation 3)*
- The governor's budget should include \$200,000 per year for next three years as partial funding to support the proposed study to evaluate predatory fish population reductions through McNary Dam reservoir elevation management. The study would evaluate reservoir pool elevation levels that affect non-native predatory fish spawning. *(Formerly potential hydropower recommendation 3)*

**Forage fish: Increase the food available for Chinook**

*(rationale to be added here in final report)*

***Recommendation 14: Monitor forage fish populations to inform decisions on harvest and management actions that provide for sufficient feedstocks to support increased abundance of Chinook.***

- Complete Puget Sound-wide surveys of herring, smelt, and sand lance to map spawning habitat and determine abundance of these food sources for Chinook.
- Surveys should be conducted in conjunction with restoration and protection of forage fish spawning habitat.
- Inventory existing and planned forage fish harvest levels to determine potential impact of forage fish harvest on Chinook.
- Provide funding to conduct these surveys and inventories.

**Implementation details:**

- The governor and legislature should continue to provide funding for forage fish surveys to identify and map the expansion or contraction of critical habitat used by three species of forage fish in Puget Sound: herring, surf smelt and sand lance. These surveys provide

the only index of abundance currently available for any species of Puget Sound forage fish by estimating the spawning biomass of over 20 Puget Sound herring stocks. Access to quality spawning habitat is critical to the health and persistence of forage fish stocks, so the results of forage fish surveys are updated annually and made available online to inform shoreline development, protection, and restoration decisions that affect these species. The studies should be conducted in coordination with existing and ongoing efforts such as the Ocean Ecosystem Indicators work by NOAA's Northwest Fisheries Science Center and other regional ecosystem and forage fish efforts. Ongoing funding should be provided to DNR's Puget Sound Corps program (\$748,000 per biennium) and to WDFW (\$296,000 per biennium) to implement the surveys. (*Formerly potential forage fish recommendation 2*)

- The governor should provide ongoing funding for WDFW to inventory existing and future planned forage fish harvest levels in Puget Sound, and to assess impacts to Puget Sound forage fish populations important to chinook that would result from varying levels of harvest. Funding should be provided to WDFW in the biennium in the amount of one-time funding of \$537,000 for 2019-2021 and then approximately \$300,000 per biennium on an ongoing basis. (*Formerly potential forage fish recommendation 4*)

### ***Recommendation 15: The Legislature should fund the Puget Sound zooplankton sampling program***

- Provide funding to DNR (\$720,000 per biennium) to undertake this critical sampling program, leveraging the work of and funding from 12 federal, state, tribal, and academic partners.

Clarification in response to TF question: Zooplankton comprise the vast majority of juvenile Chinook salmon and herring diets. Zooplankton work in Puget Sound suggests that there are direct correlations between zooplankton and early marine survival of some Chinook populations. This relationship can improve the ability to forecast salmon returns, critical to managing a highly variable fishery to ensure enough salmon for whales. This critical link between zooplankton and salmon also provides an opportunity to understand and separate the role of local environmental impacts inside Puget Sound, like nutrients, from broader scale factors impacting salmon abundance, including ocean variability and climate change. Finally, it helps determine whether local habitat restoration or marine conditions are responsible for annual changes in salmon abundance. The zooplankton monitoring program is the only source for reliable information for this cornerstone of the food web.

#### **Implementation details:**

- The governor should fund the Puget Sound zooplankton sampling program, which leverages the work of 12 tribal, county, state, federal, academic and non-academic entities to sample the zooplankton community every two weeks at 16 sites. These

data help determine the role of our restoration actions vs marine drivers of productivity and aid in the forecasting of Chinook and forage fish abundance to help make continuous management decisions for whales and fisheries. Funding should be provided through the Department of Natural Resources in the amount of \$720,000 per biennium, which will be leveraged with non-state partner funds to enable the continuation of the program. (*Formerly potential forage fish recommendation 3*)

## **Goal 2: Decrease disturbance of orcas from vessels and noise and increase orcas' access to prey**

Reduce noise from small vessels operating near Southern Resident orcas  
(*rationale to be added here in final report*)

### ***Recommendation 16: Establish a statewide “Go-slow” bubble for small vessels and commercial whale watching vessels within half a nautical mile of orcas.***

- Enact legislation in 2019 creating the ½ mile “go-slow” zone, defined as speeds of 7 knots over ground or less.
- Provide for discretion in enforcement and public outreach and education as needed.

#### **Implementation details:**

- In the 2019 legislative session, the state legislature and governor should update RCW 77.15.740\* to establish a statewide “go slow” bubble for vessels operating within ½ nautical mile of orcas. “Go slow” is defined as 7kt speed over ground (GPS calculation). It is intended that fish and wildlife officers and other law enforcement officers will use discretion when enforcing this section and provide public outreach and education when they determine that it is appropriate. (*Formerly potential vessel recommendation 1*)  
*\*Exemptions for safe operation, shipping, tribal and commercial fishing and other activities are well-described in Section 2 of 77.15.740.*

### ***Recommendation 17: Establish a limited-entry whale-watching permit system for commercial whale-watching vessels and commercial kayak groups.***

- Create a permit system to manage commercial whale watching to reduce daily and cumulative impacts on Southern Residents.
- Implement a buy-back program to facilitate implementation.
- Require the use of Automatic Identification System to enable effective monitoring and compliance.
- Coordinate with Canadian authorities to develop and implement the permit system across boundaries.

### **Implementation details:**

- By May 2019, the legislature and governor should establish a commercial Salish Sea whale-watching license to be managed by WDFW. The fee for such license should be placed in a WDFW dedicated account that could be used for the management and enforcement of whale-watching activities. WDFW should also develop, assess, and consider alternatives that restrict the number of Salish Sea whale-watching licenses for implementation by May 2020. WDFW should also explore and work with the appropriate entities to develop and consider the appropriate mechanism to potentially limit the whale-watching activities by U.S. and Canadian vessels in each nation's waters. Ongoing funding needs are estimated at \$500,000 per biennium for managing the whale-watching license-related activities, including developing and coordinating the regulatory process, issuing the license, collecting the license fees, coordinating with Canada and appropriate entities, and enforcing applicable whale-watching regulations. *(Formerly potential vessel recommendation 4)*

### **Recommendation 18: Increase and improve education to boaters on how to limit boating impacts to orcas.**

- Working with trade associations and through existing government programs and channels, provide education to commercial and recreational boaters on *Be Whale Wise* guidelines, voluntary and regulatory measures, and other information that helps to minimize the impact of boating on Southern Residents. Establish a goal that every boater receives this basic information.
- Establish a mandatory \$10 marine endorsement fee on boater registration to fund education and enforcement activities.

### **Implementation details:**

- The governor should request that the Washington State Parks and Recreation Commission, Northwest Marine Trade Association and Recreational Boating Association of Washington work with the U.S. Coast Guard and National Association of State Boating Law Administrators to require that the print and online curricula, testing, and outreach for the mandatory Washington State Boater Education Card: (1) include *Be Whale Wise* guidelines; (2) include related updates to voluntary and regulatory measures by May 2019; and (3) include broader outreach to charter boat, boat rental companies and exempted audiences from outside Washington state (particularly in Canada) and those whose lifetime certification was obtained prior to the updated standards. *(Formerly potential vessel recommendation 10)*
- Establish a mandatory \$10 marine endorsement fee on boater registration, to fund education and enforcement activities that promote recreational vessels' compliance with best boating practices near orcas. The Department of Licensing should also note SRKW regulations and guidelines on their website. *(Adapted from earlier potential vessel action #5B)*

**Recommendation 19: Increase enforcement capacity and fully enforce regulations on small vessels to provide protection to Southern Residents.**

- Create a WDFW Marine Enforcement Unit providing a minimum of eight officer positions at WDFW focused on protection and enforcement; base these resources in Northern Puget Sound.

**Implementation details:**

- In the 2019 legislative session, the state legislature and governor should provide proviso funding to WDFW to create at least four fish and wildlife officer positions or FWOs, including the two FWOs currently funded under the governor's 2018 executive order, that will be dedicated toward the goal of providing marine-based Southern Resident orca protection on every day of the whale-watching season and at other times of need. The proposed FWOs will be based in northern Puget Sound and will be strictly focused on protection of all marine resources when not engaged in priority Southern Resident orca protection activities (such as promoting compliance with RCW 77.15.740 and any new regulations). *(Formerly potential vessel recommendation 2)*

**Reduce noise from the use of echo sounders near orcas**

*(rationale to be added here in final report)*

**Recommendation 20: Discourage the use of echo sounders and underwater transducers within one kilometer of orcas.**

- Establish a “standard of care” for small vessel operators limiting the use of 50-kHz echo sounders and other underwater transducers within ½ nautical mile of Southern Residents. Implement as a voluntary measure and provide exceptions for safe navigation.
- Conduct education and outreach.
- Consider phasing in mandatory equipment requirements and regulations.

**Implementation details:**

- By December 2018, the Puget Sound Harbor Safety Committee should establish a “standard of care” for small vessel operators to turn off 50-kHz (or less common 80-kHz) echo sounders and other underwater transducers when within ½ nautical mile of orcas except when necessary for safe navigation. The adopted standard should be reported to the task force and communicated to registered vessel owners in Puget Sound counties through the Department of Licensing. The Southern Resident Orca Task Force and its Vessels Working Group should work immediately with maritime organizations with broad communications networks — such as the Northwest Marine Trade Association, Recreational Boating Association of Washington, U.S. Coast

Guard Auxiliary and Boating Squadron, Washington State Ferries, State Parks, ports, marinas, Be Whale Wise — to develop and implement a complementary outreach campaign for voluntary compliance. In 2019, the task force should consult with the legislature about opportunities to phase in mandatory equipment requirements (for whale-watching vessels in the putative limited entry permit system, for example) and initiate a formal conversation with echo sounder manufacturers and suppliers. (*Formerly potential vessel recommendation 3*)

## Reduce noise from ships and ferries near Southern Resident orcas

(rationale to be added here in final report)

### **Recommendation 21: Implement shipping noise-reduction initiatives and monitoring programs, coordinating with Canadian and US authorities.**

- Support and participate in the ECHO (Enhancing Cetacean Habitat and Observation) program to reduce noise impacts to Southern Residents.
- Provide funding to complete an underwater acoustic monitoring network for Puget Sound, filling in gaps and supporting acoustic and visual mapping to improve the ability to identify when and where Southern Residents are present.

#### **Implementation details:**

- Given the high rate of transboundary participation and compliance in voluntary, targeted trials to slow down ships and shift them away from key Southern Resident orca foraging areas near the international shipping lanes to reduce the level of shipping noise (led by the Enhancing Cetacean Habitat and Observation [ECHO] program of the Vancouver Fraser Port Authority), the governor should continue to encourage strategic US and Washington state collaborations with ECHO — from the U.S. Coast Guard, Washington State Ferries, Puget Sound ports, the Pacific Merchants Shipping Association, the Puget Sound Pilots and others — that continue to support parallel and adaptive implementation of ECHO and related shipping noise-reduction initiatives while promoting safe, sustainable shipping practices. (*Formerly potential vessel recommendation 5*)
- To better detect the location and movements of Southern Resident orcas in near real-time, and potentially reduce the underwater noise of nearby ships and small vessels through targeted advisories, Governor Inslee and the legislature should: (1) fund the deployment of a permanent scientific grade hydrophone on South San Juan Island and fill in other key gaps in the underwater acoustic monitoring network of Puget Sound, and (2) support advancement of acoustic and visual mapping efforts by Orcasound, Orca Network, Washington State Ferries and others, with the goal to share Washington data with the (Southern Resident Killer) Whale Report Alert System being developed in Canada by ECHO, the Vancouver Aquarium, and others and gain access to the eventual platform so that professional mariners (pilots/public and private ferries/navies/enforcement officers) and the public can use it for potential

lead-time (and real-time) ship speed and route management. (*Formerly potential vessel recommendation 6*)

**Recommendation 22: Reduce noise from the Washington State Ferries by accelerating the transition to quieter vessels and reducing speeds when Southern Residents are present.**

- Conduct a ferry fleet noise baseline study as the basis for establishing noise reduction goals and developing plans.
- Based on the results of the baseline study, develop and implement protocols to safely reduce noise by slowing ferries when Southern Residents are present.
- Provide capital funding to accelerate the transition to quieter ferry designs and technologies.

**Implementation details:**

- The governor and legislature should support and accelerate transition of the Washington State Ferries fleet to quieter, more fuel-efficient designs and technologies — while funding the Washington State Ferries fleet noise baseline analysis project in 2019 — to achieve data-driven noise reduction goals. (*Formerly potential vessel recommendation 9*)
- Conduct study to determine need for/benefit of slow down. If warranted, slow down Washington State Ferries in the presence of orcas during the fall months of October through December when conditions are safe and effective to do so. (*Formerly potential vessel action 18*)

**Increase protection of Southern Residents from the risk of a catastrophic oil spill**

*(rationale to be added here in final report)*

**Recommendation 23: Reduce the threat of oil spills in Puget Sound to the survival of Southern Residents**

- Require escort tugs for oil transport barges over 5,000 tons.
- Implement existing draft recommendations regarding an emergency response towing vessel in Haro Strait and Boundary Pass.
- Update oil spill prevention and cleanup standards to address new types of oil and increased use of articulated tug barges.

**Implementation details:**

- Address ongoing vessel safety issues, including oil transport, in the shared waters of the Salish Sea. Utilizing recommendations from the Department of Ecology's Strait of Juan de Fuca and Puget Sound Vessel Traffic Safety Report (2018), the 2019

Washington legislature should enact legislation to reduce the risk of oil spills in Puget Sound. The legislation should: (1) require escort tugs for all oil transport vessels over 5,000 tons, including oil barges and articulated tug-barges; (2) implement the draft recommendations for the Strait of Juan de Fuca and Puget Sound Area Vessel Traffic and Vessel Safety Report regarding an emergency response towing vessel in Haro Strait and Boundary Pass; and (3) require updated oil spill prevention and cleanup standards to address new types of oil (e.g., diluted bitumen) and increased shipments by articulated tug-barges. The governor should meet with Canadian officials and seek involvement from the US Coast Guard and the joint meetings of the Puget Sound Harbor Safety Committee and Canadian Pacific Coast Marine Advisory Review Panel and Navigation Aids and Navigation Services. The governor should direct the Department of Ecology and the Department of Fish and Wildlife to engage in Canadian environmental assessments of project-related shipping's cumulative effects on Southern Resident orcas. (*Formerly potential vessel recommendation 13*)

### **Goal 3: Reduce Southern Resident orcas' exposure to contaminants**

#### **Pollution prevention**

*(rationale to be added here in final report)*

#### ***Recommendation 24: Accelerate the implementation of the ban on PCBs in state purchased products and make information available online for other purchasers***

- Direct the Department of Enterprise Services to accelerate implementation of the ban, enacted by the legislature in 2014, on PCBs in products purchased by the state.
- This law includes a provision for suppliers to provide information on PCBs in products to the state, which should be shared publicly to facilitate PCB free purchasing by other entities.

#### **Implementation details:**

- The Department of Enterprise Services should immediately accelerate implementation of the ban on PCBs in state-purchased products and make information about PCB levels in state-procured products and packaging available online to the public so other purchasers can access this information and make informed purchasing decisions.

Washington state adopted a procurement law in 2014 that states: “no agency may knowingly purchase products or products in packaging containing polychlorinated biphenyls above the practical quantification limit except when it is not cost-effective or technically feasible to do so.”(RCW 39.26.280) Implementation of this law should be accelerated to reduce PCBs entering Puget Sound from products such as paints, hatchery fish feed, adhesives, electrical equipment, caulking, paper products and lubricants. Product suppliers to the state will provide information about PCBs in their products, and this information can be shared with other purchasers that want to

avoid products containing PCBs. (*Formerly potential contaminant recommendation 1*)

**Recommendation 25: Identify, prioritize and take action on chemicals that impact orcas and their prey.**

- The Department of Ecology should develop a prioritized list of chemicals of emerging concern (CECs) that threaten the health of orcas and their prey by March 2019 and pursue policy and/or budget requests in the 2019 legislative session to prevent the use and release of CECs into Puget Sound.
- Direct the Department of Ecology to convene discussions and develop a plan to address pharmaceuticals, identifying priorities, source control, and wastewater treatment methods.
- Periodically review and update toxicological information as new science emerges and adaptively manage plans and programs.

**Implementation details:**

- The Department of Ecology should develop a prioritized list of the chemicals of emerging concern (CECs)\* based on greatest benefit to Southern Resident orcas and their prey if action is taken. The Department of Ecology, with input and review from regional experts, should begin this prioritization process in 2018 and complete the list in March 2019.

It is important to note that there is limited toxicological information on many CECs and this process will need to be periodically revisited to ensure that new chemicals and new research findings are incorporated into our efforts to decrease chemical exposure to Southern Residents and their prey. (*Formerly potential contaminant recommendation 2*)

- The Department of Ecology should develop a plan and pursue agency request legislation and/or budget requests in the 2019 legislative session to address control of those chemicals of emerging concern (CECs)<sup>1</sup> based on greatest benefit to Southern Resident orcas and their prey if action is taken (based on the outcome of potential contaminant recommendation 2 above). This legislative request should include funding to implement existing policies as well as identify new policies and actions to decrease the load of priority CECs\* to Puget Sound (e.g., phaseouts, disclosure, assessment of safer alternatives and enhanced treatment). Given that pharmaceuticals require a different control mechanism, the Department of Ecology should convene discussions about priority pharmaceuticals, source control and wastewater treatment options. The plan will identify the most effective actions to

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<sup>1</sup> The following groups of chemicals were identified as potentially important (in no particular order): flame retardants, per- and polyfluoroalkyl substances (PFAs), phthalates, bisphenols, nonylphenols, medications, pesticides and chemical(s) in tires.

decrease loading of priority CECs\* to Puget Sound and be completed by 2025.  
(Formerly potential contaminant recommendation 3)

## Removal and clean-up

(rationale to be added here in final report)

### **Recommendation 26: Reduce stormwater threats and accelerate clean-up of toxics that are harmful to orcas**

- Provide funding to accelerate the clean-up and removal of legacy sources of PCBs, PAHs, PBDEs, and PFAS present in Puget Sound.
- Prioritize and fund clean-up actions that are likely to have the greatest impact on Southern Residents.
- Identify toxic hotspots in the stormwater entering Puget Sound. Prioritize these for retrofits and/or redevelopment to meet current standards.
- Provide increased funding for the Stormwater Financial Assistance Program to incentivize immediate and accelerated retrofits and other source control actions.
- Prioritize and accelerate sediment remediation, nearshore restoration, and clean-up of hot spots in forage fish and Chinook rearing habitats based on risk to SRKW.

#### **Implementation details:**

- The legislature should fund the Department of Ecology in 2019 for a program that incentivizes the accelerated removal of primary legacy sources of PCBs, PAHs, PBDEs and PFAS present in the built environment in the central Puget Sound. In phase 1, Ecology should develop the program, to include a) prioritizing those legacy chemicals likely to have greatest impact on Southern Resident orcas, b) coordinating with ongoing programs, c) gathering stakeholder input, and d) undertaking targeted communications and outreach. In phase 2, the incentive program will be implemented. (Formerly potential contaminant recommendation 4)
- The Department of Ecology should reduce stormwater threats in existing hotspots as soon as possible. In 2018-2019, Ecology, in consultation with regional experts, should identify toxic stormwater hotspots and prioritize them for source control, stormwater retrofits and/or redevelopment projects to meet today's standards. Ecology should seek new funding in the 2019 legislature through the Stormwater Financial Assistance Program to incentivize stormwater retrofits and source control to achieve goals faster. Programs such as the Stormwater Financial Assistance Program, retrofits through the Washington State Department of Transportation and federal funding through the Clean Water State Revolving Fund are in place to support this effort but they need substantially increased funding to increase the pace and provide the necessary pollutant removal. (Formerly potential contaminant recommendation 7)

- The Department of Ecology and the Department of Natural Resources should immediately prioritize and accelerate sediment remediation and nearshore restoration and clean-up of hotspots in forage fish and juvenile Chinook rearing habitat (in sensitive areas) where toxics are known to impact prey survival. All prioritized cleanup actions should ensure that “upstream” source control is also addressed. During the prioritization process, Ecology should coordinate with other agencies such as the Washington Department of Fish and Wildlife and the National Oceanic and Atmospheric Administration. Previously identified hotspots include the Duwamish Estuary and river, Commencement Bay, Hanford Reach, Sinclair and Dyes Inlets and Lake Union. (*Formerly potential contaminant recommendation 8*)

## Pollution permitting and management

(rationale to be added here in final report)

### **Recommendation 27: Improve effectiveness, implementation, and enforcement of NPDES permits to address direct threats to Southern Residents and their prey**

- Update aquatic life water quality standards focused on pollutants most harmful to southern residents and their prey.
- Direct the Department of Ecology to consider developing stronger pre-treatment standards for municipal and industrial wastewater discharges under NPDES.
- Provide funding for the Department of Ecology to increase inspections, assistance programs, and enforcement to achieve water quality standards. Prioritize enforcement where limits are exceeded for pollutants known to be harmful to Southern Residents.

#### **Implementation details:**

- The Department of Ecology should report in 2019 on how to accelerate effectiveness, implementation and enforcement of National Pollutant Discharge Elimination System or NPDES permits. Using the existing regulatory framework and authority under the Clean Water Act and Water Pollution Control Act, Ecology should update aquatic life water quality standards focused on pollutants most harmful to Southern Residents and their prey. To fill gaps, this will primarily focus on PBDEs, CECs<sup>2</sup> and other chemicals based on greatest benefit to Southern Resident orcas and their prey. In addition, Ecology should consider developing stronger pre-treatment standards for municipal and industrial wastewater dischargers under NPDES.

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<sup>2</sup> The following groups of chemicals were identified as potentially important (in no particular order): flame retardants, per- and polyfluoroalkyl substances (PFAs), phthalates, bisphenols, nonylphenols, medications, pesticides and chemical(s) in tires.

- Improved permit requirements would also result in increased innovation and source control for permitted dischargers and drive improved technology requirements under the existing “best available technology” standard. For municipal wastewater facilities this would combine improved industrial pretreatment and deployment of improved treatment technologies with already planned or required upgrades to wastewater treatment facilities. New standards could be implemented through renewals of the five-year NPDES permit cycle and could allow permittees the necessary time to fully implement solutions (ideally within one permit cycle). *(Formerly potential contaminant recommendation 5)*
- To ensure that new and existing NPDES permit conditions and water quality standards are met, the Department of Ecology should seek funding in the 2019 legislative session to conduct more robust inspections, assistance programs and enforcement. This funding should support field staff and data analysis and should include a clear directive to increase enforcement against entities that exceed limits for pollutants known to cause harm to the Southern Residents and their prey. *(Formerly potential contaminant recommendation 6)*

***Recommendation 28: Increase monitoring of toxics substances in marine waters; create and deploy adaptive management strategies to reduce threats to orcas and their prey.***

- Expand and better coordinate existing toxic monitoring programs in Puget Sound focused on chemicals harmful to Southern Residents.
- Fund the development and implementation of a program to study and monitor the impact of CESs on Southern Residents.

**Implementation details:**

- The legislature should fund the Department of Ecology and the Department of Fish and Wildlife to expand and coordinate existing monitoring and new science programs in 2019. Funding is needed immediately to develop and support a robust toxic monitoring program as well as new science to understand the effects of CEC exposure on Southern Resident orcas, their prey and other species in the lower trophic levels. This funding is critical to gain a more comprehensive understanding of CECs\*; to collect data to address areas where there are critical uncertainties; to evaluate the impact of CECs\* on Southern Resident orcas to prioritize cleanups, phase outs and bans; to document whether the actions that are taken are effective; and to make changes to actions/strategies that are implemented if the data demonstrates there is no impact. *(Formerly potential contaminant recommendation 9)*

# Additional Recommendations

This section includes additional draft recommendations that have been added based on input from Task Force members.

## Sustainable funding

*Many if not most of the recommendations require increased funding both in the short and long term. Providing adequate funding of immediate actions and creating a sustainable funding to support Southern Resident recovery over the longer term is essential for the survival of this species.*

### **Recommendation 29: Provide sustainable funding for implementation**

- Provide immediate capital and operating funds in the 2019-20 biennium budget to implement near term high priority actions.
- Request that the Governor and Legislature establish a sustainable, durable funding source to implement these recommendations and meet needs as they arise.
- Include funding to state agencies for staffing, research, and ongoing management needed to initiate and implement Task Force recommendations.

## Research, science, and monitoring

Note to Task Force members: There have been suggestions that we pull out other science and monitoring recommendations and put them together in one section like this; currently they are still integrated into other sections related to the relevant threats.

### **Recommendation 30: Conduct research, science, and monitoring to inform decision making, adaptive management, and implementation of actions to recover Southern Residents**

- NOAA Northwest Fisheries Science Center should model the Task Force's Year One recommendations related to prey abundance to determine how many adult Chinook they would produce.

## Year 2 accountability and additional actions

### **Recommendation 31: Monitor progress of implementation and identify needed enhancements.**

- Agencies shall report to the Governor and the Task Force on progress implementing recommendations by May 1, 2019. These reports are to address progress, shortcomings, issues, barriers, and gaps associated with initial implementation.
- The Task Force will review and report on this progress to the Governor.
- The Task Force will identify enhancements, changes needed, any new ideas, and other actions needed to recover Southern Residents.

# RECOMMENDATIONS WITH LIMITED AGREEMENT

The following recommendations have limited agreement and need further Task Force discussion. Some Task Force members expressed strong support for one or more options, while others voiced strong opposition to one or more options around these potential recommendations. Several questions were also received around which entities had the authority to implement the actions, timeline to benefits, and/or appropriate mechanisms to move the actions forward.

***Recommendation A: Determine whether removal of Lower Snake River Dams would provide benefits to Southern Resident orcas commensurate with the associated costs and implementation considerations.***

This action is advanced for further discussion and decision making by the Task Force. Options under consideration and proposed for discussion include - but are not limited to:

- Support the ongoing federally mandated NEPA process (Proposed and most supported by Working Group)
- Initiate a Governor-led stakeholder process - in conjunction with the NEPA process - to facilitate development of a regional approach to the future of the Lower Snake River dams. (Proposed and most supported by Working Group)
- Advocate to Congress and the US Army Corps of Engineers for Lower Snake River Dam removal, along with replacement of energy with carbon-free alternatives and mitigation for affected communities and industries. (Proposed by public comments and Task Force members)
- Pursue salmon recovery in the Lower Snake River without breaching the dams. (Part of draft recommendations and proposed by public comments and Task Force members)

## **Potential implementation details from draft report:**

- The governor should express support for the ongoing National Environmental Policy Act (NEPA) process for the federal Columbia River Hydropower System and continue to participate in evaluating alternatives. The analysis will include a range of alternatives around the 14 federal hydropower facilities that exist along the Columbia and Snake River. (*Formerly potential hydropower recommendation 5A*)
- The governor should hire a neutral third party to initiate the development of a forum for local, state, tribal, federal and other stakeholders to begin developing a regional approach to understanding the needs of stakeholders and costs, benefits, risks and other issues related to the possible future removal of the four Lower Snake River dams. The third-party entity should report to the task force by September 2019. This stakeholder effort should be completed in time to inform decisions resulting from the

ongoing development of the environmental impact statement for Snake and Columbia River dam operations. (*Formerly potential hydropower recommendation 5B*)

***Recommendation B: Restrict boat access when Southern Resident orcas are in important foraging areas.***

Potential options, which need further refinement and Task Force discussion:

- Seasonal or ‘real-time’ closures in important foraging areas in a geographic zone on the west side of San Juan Island.
- Fund the development of a ‘real-time’ system to determine and communicate when Southern Residents are present in foraging areas important for the survival of the species.
- Apply closures to all boaters, or to one or more of the following stakeholder groups: recreational boaters, fishermen, commercial whale watching vessels.
- Implement this system by May 1, 2019, with start-up and ongoing funding provided by the legislature.
- Provide education and outreach to facilitate implementation.

**Potential implementation details from draft report options (Harvest 4, Vessel 7A, 7B, & 7C):**

- Fund and develop a “real-time” (within days) system to determine and communicate when Southern Residents are in an important foraging area in order to close WDFW-managed commercial and recreational fisheries for that area. The identification of the areas and development of the system should be coordinated with the appropriate tribes and local governments. To accomplish this action, WDFW needs authority under the Administrative Procedures Act to implement emergency regulations to close commercial and recreational fisheries during these days for these reasons. The system should be in place by May 1, 2019, with ongoing state funding provided to implement the system through WDFW; funding needs are estimated at \$250,000 per biennium for acoustic equipment and coordination. Funding should also be allocated for outreach and education around the establishment of this system (estimated at \$60,000 for the 2019-2021 biennium). (*The development of this system could be used to implement other actions around vessels.*) (*Formerly potential harvest recommendation 4*)
- Redirect vessels in near real-time when Southern Resident orcas are near or approaching a fishing area, through temporary closures. (*Formerly potential vessel recommendation 7C*)
- The governor and legislature should fund WDFW, outside orca experts, San Juan County and other local governments to collaborate with affected user groups and other partners to establish protection areas (no-go zones) that apply to all vessels not exempted under RCW 77.15.740, in critical areas for whales, as well as geographic areas that include but are not limited to the west side of the San Juan Islands and marine areas 4, 5 and 6 (roughly extending from Admiralty Inlet to Neah Bay). This should include the science related to foraging behavior and habitat and options for

establishing geographically distinct protection areas (no-go zones); pilot closure with effectiveness monitoring; seasonal no-go zones; and no-go zones that reflect where and when whales are actively feeding. Such efforts should align with the Washington Fish and Wildlife Commission policy on marine protected areas and include formal consultation with tribes. Any emergency closures implemented in 2019 must be accompanied by adequate monitoring to measure effectiveness. *(Formerly potential vessel recommendation 7A)*

- No later than December 1, 2018, WDFW must convene affected user groups, tribes, and governments to establish zones restricting entry of commercial whale-watching vessels and recreational vessels to protect Southern Resident orcas north of Pile Point and south of Mitchell Bay. If additional authority is necessary for WDFW to establish and implement such zones, it should request such authority from the 2019 Washington legislature. The work should employ updated scientific methodologies and seek to balance competing objectives by providing maximum benefit to the Southern Resident orcas at the least cost to ocean users. The zones should avoid high commercial navigation lanes. WDFW should consult with the United States Coast Guard to avoid conflicts with federal regulations. WDFW should adopt regulations establishing the zones no later than May 1, 2019, by emergency regulations if necessary. *(Formerly potential vessel recommendation 7B)*

## Appendix 1. Crosswalk between draft report and new draft package

Potential draft recommendation in Sept. 24 draft report	Steering Committee proposal	Rationale	New action in Oct 9. draft package
<b>HABITAT</b>			
Habitat 1	Include, group with some of Habitat 2, Hydro 2, Forage Fish 1	Significant TF support in latest round of feedback (top 10)	See Recommendation 1
Habitat 2	Include as revised, group with Habitat 1	Several TF commenters asked to alter and group with Habitat 1	See Recommendation 1
Habitat 3	Include, group with Habitat 5 and 8	Significant TF support in latest round of feedback	See Recommendations 3 and 4
Habitat 4	Include, group with Habitat 3 and 8	Significant TF support in latest round of feedback	See Recommendation 3
Habitat 5	Include, group with Habitat 3	Grouped with other supported habitat protection recommendations	See Recommendation 4
Habitat 6	Consider in Year 2	So general that it's basically the same as 3+4+5	Saved for Year 2 discussion
Habitat 7	Include	Adds incentives recommendation to package to go with protection and restoration	STAND alone – change made. See Recommendation 5
Habitat 8	Include, group with Habitat 3		See Recommendation 3
<b>HATCHERIES</b>			
Hatcheries 1A	Not include	Only 2 TF members expressed strong support in latest round of feedback	
Hatcheries 1B	Not include	Only 3 TF members expressed strong support in latest round of feedback	
Hatcheries 1C (was 1A+1B)	Include	Significant TF support in latest round of feedback (top supported of	See Recommendation 6

Potential draft recommendation in Sept. 24 draft report	Steering Committee proposal	Rationale	New action in Oct 9. draft package
		all recommendations)	
<b>HYDROPOWER</b>			
Hydro 1	Include	Significant TF support in latest round of feedback	See Recommendation 7
Hydro 2	Include, group with Habitat 1	Hydro 2 and Habitat 1 are basically the same. Significant TF support in latest round of feedback	See Recommendation 1 – in habitat 1
Hydro 3	Include, group with Predation 3	Group with other predatory fish recommendation	See Recommendation 13
Hydro 4	Include	Significant TF support in latest round of feedback (top 10)	See Recommendation 8
Hydro 5A	Include for further TF discussion of 5A and 5B	Needs TF discussion after webinar	See Recommendation A
Hydro 5B	Include for further TF discussion of 5A and 5B	Needs TF discussion after webinar	See Recommendation A
<b>HARVEST</b>			
Harvest 1	Consider in Year 2	Needs more work/refinement; 3 TF members expressed strong opposition	Saved for Year 2 discussion
Harvest 2	Include, expand to be about more of west coast, not just AK	Several TF members asked for revision; Significant TF support in latest round of feedback	See Recommendation 10
Harvest 3	Include	Significant TF support in latest round of feedback	See Recommendation 9
Harvest 4	For further TF discussion. If include, perhaps revise/group with Vessels 7A, 7B, 7C	Opposition from 3 TF members; very related to Vessels 7A, 7B, 7C because more about static whale protection zone	See Recommendation B

Potential draft recommendation in Sept. 24 draft report	Steering Committee proposal	Rationale	New action in Oct 9. draft package
Harvest 5	Not include	Few TF members strongly support, 2 strongly oppose	
<b>PREDATION</b>			
Predation 1A	Not include	Less support from TF than 1B (2 also strongly opposed)	
Predation 1B	Include	Significant TF support in latest round of feedback (top 10) (though 2 strongly opposed)	See Recommendation 11
Predation 2A	Include	Significant TF support in latest round of feedback (top 10)	See Recommendation 12
Predation 2B	Not include	Less support from TF than 2A	
Predation 3	Include, group with Hydro 3 to put predatory fish recommendations together	Significant TF support in latest round of feedback (top 10)	See Recommendation 13
<b>FORAGE FISH</b>			
Forage fish 1	Include	Significant TF support in latest round of feedback (top 10)	See Recommendation 2
Forage fish 2	Include, group with Forage fish 4 into a forage fish assessment action	Significant TF support in latest round of feedback (top 10)	See Recommendation 14
Forage fish 3	Include, stand-alone to focus on zooplankton	Significant TF support in latest round of feedback	See Recommendation 15
Forage fish 4	Include, group with Forage fish 2 into a forage fish assessment action	Significant TF support in latest round of feedback	See Recommendation 14
<b>VESSELS &amp; NOISE</b>			
Vessels 1	Include	Significant TF support in latest round of feedback (top 5)	See Recommendation 16
Vessels 2	Include	Significant TF support in latest round of feedback	See Recommendation 19

Potential draft recommendation in Sept. 24 draft report	Steering Committee proposal	Rationale	New action in Oct 9. draft package
Vessels 3	Include	Significant TF support in latest round of feedback	See Recommendation 20
Vessels 4	Include	Significant TF support in latest round of feedback (top 10)	See Recommendation 17
Vessels 5	Include, group part with Vessels 6 and part with Vessels 10		See Recommendations 18 and 21
Vessels 6	Include, group with Vessels 5		See Recommendation 21
Vessels 7A	Not include	Only 3 TF members expressed strong support in latest round of feedback; 2 strongly opposed	See Recommendation B
Vessels 7B	Not include	Only 3 TF members expressed strong support in latest round of feedback; 4 TF members expressed strong opposition	See Recommendation B
Vessels 7C	For further TF discussion. If include, group with Harvest 4	Only 2 TF expressed strong support in latest round of feedback; 3 TF members expressed strong opposition; mapping interrelated with Recommendation 24	See Recommendation B
Vessels 8	Not include	Only 3 TF members expressed strong support in latest round of feedback	
Vessels 9	Include; reincorporate ferry slowdown as a way that WSF could take action based on results of the study		See Recommendation 22

Potential draft recommendation in Sept. 24 draft report	Steering Committee proposal	Rationale	New action in Oct 9. draft package
Vessels 10	Include but broaden to be about education to other audiences too, not just through state test; public support for boating registration fee and outreach in Vessels 12	Significant TF support in latest round of feedback	See Recommendation 18
Vessels 11	Not include		
Vessels 12	Not include	Only 3 TF members expressed strong support in latest round of feedback	
Vessels 13	Include, changing part 2 of 3		See Recommendation 23
<b>CONTAMINANTS</b>			
Contaminants 1	Include		See Recommendation 24
Contaminants 2	Include, grouped with Contaminants 3	Significant TF support in latest round of feedback	See Recommendation 25
Contaminants 3	Include, grouped with Contaminants 2		See Recommendation 25
Contaminants 4	Include		See Recommendation 26
Contaminants 5	Include, grouped with Contaminants 6	Both 5 and 6 are about NPDES	See Recommendation 27
Contaminants 6	Include, grouped with Contaminants 5	Both 5 and 6 are about NPDES	See Recommendation 27
Contaminants 7	Include	Significant TF support in latest round of feedback	See Recommendation 26
Contaminants 8	Include	Significant TF support in latest round of feedback (top 10)	See Recommendation 26
Contaminants 9	Include, possibly as part of an overall monitoring/science action for the whole package		See Recommendation 28
<b>OTHER</b>			
Overarching recommendation on	Add		See Recommendation 29

Potential draft recommendation in Sept. 24 draft report	Steering Committee proposal	Rationale	New action in Oct 9. draft package
long-term funding source			
Research, science, monitoring, adaptive management	Add		See Recommendation 30
Year 2 accountability and additional actions	Add		See Recommendation 31