## Contaminants

<table>
<thead>
<tr>
<th>Action</th>
<th>Survey Response</th>
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<tbody>
<tr>
<td><strong>Action #1:</strong> Reform Federal Toxic Substances Control Act to <strong>prevention of new chemical threats.</strong></td>
<td><img src="chart1" alt="Q1 Should the Task Force recommend this action?" /></td>
</tr>
<tr>
<td>Reform federal toxics law to take a precautionary approach to chemical regulation. Washington State could work to establish an interstate program with other west-coast states through the Pacific Coast Collaborative or the National Caucus of Environmental Legislators. This would include requiring toxicity data disclosures, require minimum data sets and evaluations including assessments of alternatives, and subsequent enforcement.</td>
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<td><strong>Action #2:</strong> Ban by-product (“inadvertent”) PCBs in consumer products through existing state policy tools.</td>
<td><img src="chart2" alt="Q2 Should the Task Force recommend this action?" /></td>
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<tr>
<td>This could also include accelerating the implementation of the ban on PCBs in state purchased products. It would initiate a phase out with full implemented targeted for 2025. Ecology would conduct alternatives assessments, product testing and enforcement. The State would need new regulatory authority to set limits and enforce a full ban.</td>
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<td><strong>Updated language after survey:</strong></td>
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<tr>
<td><strong>Action #2:</strong> Accelerate the implementation of the ban on PCBs in state purchased products and make information regarding PCB levels in state procured products and packaging available online so other purchasers can access this information and eliminate their purchase of PCB containing products.</td>
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**Action #3a:** Prioritize chemicals for their likely impact on SRKW. Develop plans to reduce harm. Pursue plan implementation through bans, phase-outs, and restrictions.

This action is to increase the impact of current Chemical Action Plan work conducted by the Department of Ecology. This includes prioritizing Contaminants of Emerging Concern (CECs), and identifying and implementing responses such as alternatives assessments, bans and incentives. The Dept. of Ecology would prioritize contaminants for their likely impact to SRKW. High priority CECs include phthalates, and expanding existing product laws regarding Persistent Bioaccumulative Toxics. The department could further implement existing bans, identify alternatives to new priority toxics, and/or implement phase-outs, restrictions or bans.

**Action #3b:** Identify priority chemicals. Forward this list to the state legislature for immediate bans. (This is a much simpler-expedited version of action 3A. It would have the same goals, but would skip some of the Chemical Action Plan process relying on the legislature’s authority to enact bans.)

**Action #4:** Provide incentives for swap-outs to reduce toxic sources.

Use incentives to reduce PAHs, PCBs, PBDEs and PFAS. Priority emphasis should be on reducing toxic impacts to juvenile salmonids, and forage fish.

Phase 1: Develop program and coordinate with ongoing programs. This would include work to specifically target the program, and to the communications outreach, and gather stakeholder input.

Phase 2: Fund and implement targeted incentive program. Target pilings or other treated wood in priority forage fish habitat or juvenile Chinook rearing habitat (PAHs). Target utility corridors for transformer and capacitor replacement, and developed areas with buildings constructed prior to PCB bans. These should target PCB hotspots if possible (PCBs). Target household and office goods (PBDEs). Target areas where there is firefighting activity, or where military operations use firefighting products (PFAS).
**Action #5A: Improve effectiveness, implementation, and enforcement of Clean Water Act (NPDES) permits.**

The National Pollutant Discharge Elimination System (NPDES) regulates and permits discharges from ‘point sources’ of pollution, these most commonly include municipal stormwater systems, industrial stormwater runoff, and wastewater treatment systems. This action recommends exploring new standards, increasing implementation and enforcement.

**Action #5B: Establish new monitoring requirements at wastewater treatment plants to address Persistent Bioaccumulative Toxics (PBTs), and Contaminants of Emerging Concern (CECs).**

This action is a specific subset of Action 5A, but was identified as a ‘stand-alone’ action.

**Action #6: Reduce stormwater threats in existing hotspots.**

This recommendation begins with prioritizing using monitoring data or identifying high loading areas (for example commercial or industrial areas). Toxic sources could be addressed through clean-up or removing contaminated building materials. Or, it could include stormwater retrofits to provide treatment. Alternatively, there could be areas that may be good candidates for redevelopment—such as underutilized industrial land.
**Action #7: Prioritize and accelerate sediment remediation and nearshore restoration based on risk to SRKW.**

This is a recommendation to prioritize and accelerate nearshore restoration and cleanup targeting forage fish habitat and juvenile chinook rearing habitat—prioritizing ‘hot-spots’ over ‘sensitive areas’. Known or likely hotspots include: Duwamish estuary/river, Commencement Bay, Anacortes, Portland Harbor, Hanford Reach, Sinclair/Dyes inlet, Lake Union, (Victoria Harbor and the Frasier Delta), and other areas where there is a history of industrial development.

Restoration and remediation actions would likely include dredging, disposal, capping. Current clean-up efforts are ongoing, and should be accelerated.

**Action #8: Support monitoring and new science.**

Monitoring and new science are important to developing effective management solutions. There are current data gaps that make implementation less sure. Monitoring recommendations include air quality monitoring, monitoring volatilization on the water surface, monitoring freshwater, and wastewater inputs of CECs in Puget Sound, monitor CECs in forage fish and salmonids, and identifying thresholds for CECs that are protective of whales and their prey.

This would include expending existing programs, and identifying new analytical methods.

**Additional actions proposed by Task Force members on August 7:**

**Action #9: Specify that MTCA funds be prioritized towards projects that [address SRKW recovery priorities].**
**Action #10:** Encourage the state Legislature and Governor to support legislation that will ban offshore oil/gas development in all state waters, [and other waters where the state can legally restrict development].

**Action #11:** Limit, or Eliminate, any process [or practice] that could introduce invasive species or disease, or concentrate contaminants that can impact salmon or the ecosystem—such as finfish aquaculture.

**Action #12:** Letter to Trump Administration opposing any rollback of state water quality standards.
Q15 Are there any new actions that you think are important to add related to contaminants?

Answered: 11  Skipped: 22

<table>
<thead>
<tr>
<th>#</th>
<th>RESPONSES</th>
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<tbody>
<tr>
<td>1</td>
<td>Recent study linking waste water containing anti-depressants to impacts to forage fish (making them less wary of predators). Should this be address as part of the recommendations?</td>
</tr>
<tr>
<td>2</td>
<td>Contaminants and strategies to address should include human cause nutrients which are having measurable negative impact on health of Puget Sound and may be linked to changes in food web or biodiversity. Nutrient reduction and removal can occur at wastewater treatment facilities and if advanced treatment at facility is added ancillary benefits of personal care and pharmaceutical product removal from the waste stream can also occur. May help make progress on CEC front too.</td>
</tr>
<tr>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>Raise fish to feed the Whales should be Number 1,2,3 and 4!!!!!!!!!!!!!</td>
</tr>
<tr>
<td>5</td>
<td>no</td>
</tr>
<tr>
<td>6</td>
<td>The previous questions do not fix past practices that produced the burden that the whales are carrying.</td>
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<tr>
<td>7</td>
<td>Eliminate all direct discharges to waterways from WSDOT highways.</td>
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<tr>
<td>8</td>
<td>In my mind, I see dealing with contaminants a long-term solution for improving SRKW health and population viability. We need to be clear in our messaging that these are long-term solutions that will benefit SRKWs, the entire ecosystem AND human health.</td>
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<tr>
<td>9</td>
<td>No</td>
</tr>
<tr>
<td>10</td>
<td>Contamination from road runoff - ask DOT to work with partners to address this through &quot;greening&quot; their projects. Provide funding support to local governments to take efficient actions (such as high efficiency street sweeping) to reduce contaminants.</td>
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<td>11</td>
<td>Multiple COC Health Impacts to SR Orcas Most researchers are focusing on the priority COC's i.e. PCB's, PBDE's etc. but few if any are looking at total body burden issues of all COC's in SR Orca tissue. Those COC's including metals, pesticides, PAH's etc. should be run through health analysis for carcinogenic and immune system disruptions impacts. They are likely much more challenged that people think.</td>
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<td>Action</td>
<td>Survey Response</td>
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<td><strong>Action #1</strong>: Establish a no-wake zone with a speed limit of 5 knots in all Washington State waters for small vessels (&lt;65ft) and commercial whale watching vessels within sight of orcas (and no less than 400 yards), with discretion to enforcement officers, while dedicating resources and capacity towards associated education and enforcement.</td>
<td>Q16 Should the Task Force recommend this action?</td>
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<tr>
<td><strong>Updated language after survey:</strong></td>
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<tr>
<td><strong>Action #1</strong>: Establish a no-wake bubble with a speed limit of 5 knots in all Washington State waters for small vessels (&lt;65ft) and commercial whale watching vessels within sight of orcas (extending 0.5 nautical mile or about 1km), with discretion to enforcement officers, while dedicating resources and capacity towards associated education and enforcement.</td>
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<td><strong>Action #2</strong>: Require that small vessel operators eliminate the use of echo sounders and other underwater transducers at the 50-kHz setting when near SRKWs (or switch to the harmless 200-kHz frequency on many models) except when necessary for safe navigation. Begin with an immediate outreach campaign for voluntary compliance and phase in a mandatory requirement. Support adoption of best practices through education and outreach with boaters, including through ports and marinas, and a formal conversation with echo sounder manufacturers and suppliers.</td>
<td>Q17 Should the Task Force recommend this action?</td>
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<tr>
<td><strong>Action #3</strong>: Establish a limited-entry permit system, to be potentially managed by DFW, that dramatically reduces the number of commercial whale watching vessels around the SRKW on a given day and that sets a cap on the number of permits issued in the state with an associated buyback program. Couple this system with requirements, such as the use of Automatic Identification Systems (AIS), to promote effective monitoring and compliance. Consider requiring a few quiet days (e.g., Mondays-Thursdays off limits for commercial whale watching) and limiting group-kayaking. Begin discussions with Canada to encourage a similar system for Canadian commercial whale watching vessels.</td>
<td>Q18 Should the Task Force recommend this action?</td>
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</table>
### Action #4: Review the science to understand the relative effect on the orcas of idling versus shutting off and restarting engines, in order to inform a possible recommendation for commercial whale watching operators in the vicinity of SRKWs.

### Survey Response

**Q19 Should the Task Force recommend this action?**

![Survey Response Graph]

**Updated language after survey:**

**Alternative Action #5A (from TF member):** Establish a recreational license requirement for recreational boating community’s access to SRKWs, with officer discretion for enforcement.

**Alternative Action #5B (WG discussion 8/22):** Establish an optional $5 fee to boater registration, to fund education and enforcement activities that promote recreational vessels’ compliance with best boating practices near orcas.

### Action #5: Establish a limited-entry permit program to ration recreational boating community’s access to SRKWs, with officer discretion for enforcement.

### Survey Response

**Q20 Should the Task Force recommend this action?**

![Survey Response Graph]

**Action #6: Expand Washington State collaboration in—and support for—ECHO to:**

(1) promote voluntary participation by outbound ships in the lateral displacement trial in Strait of Juan de Fuca in summer 2018; and (2) advance and expand a Whale Report Alert System for potential use by professional mariners (pilots/ships/private ferries/navies/etc.) for potential lead-time (and real-time) ship course and speed management; and (3) more fully integrate Washington’s vision and interests in the group’s transboundary efforts following the summer trials described in (1) and (2).
**Action #7:** Request Governor Inslee and the Legislature take action to address potential vessel traffic impacts (raising risks of oil spills, noise and ship strikes) that may be generated by potential increases in vessel traffic that may result from any possible expansion of the “Puget Sound pipeline” spur from Canada. Work with state agencies, local governments, and tribes to identify their authorities to issue permits, authorizations, or mitigation measures related to any expansion. Request Governor meet with Canadian officials to address state concerns and recovery goals.

**Action #8:** Act to ensure that all tanker traffic from the Trans Mountain Pipeline expansion and associated impacts to SRKWs from vessel noise and disturbance and potential risks from oil spills and ship strikes are addressed. Request that the Governor meet with Canadian officials and seek Coast Guard involvement.

**Action #9:** Establish protection areas (no-go zones) that apply to all vessels, including fishing vessels, in critical areas for whales, including on the west side of the San Juan Islands and in marine areas 4, 5, and 6, (roughly extending from Admiralty Inlet to Neah Bay) based on the best available science showing where the SRKW are feeding.
Action #10: Create a 400-yard moving “bubble” around the orcas with long-term funding for enforcement. (In other words: Double the 200-yard NOAA approach distance limit; there is already a 400-yard NOAA restriction on parking in the orcas’ path). Work with Canada, BC, and the federal government to increase the number of vessels required to comply with this bubble.

Action #11: Require all permit applications in Washington State that would increase vessel traffic to specifically address potential impacts to SRKWs. For example:
- Update the State Environmental Protection Act (SEPA) checklist.
- Update the Joint Aquatic Resources Permit Application (JARPA) form.
- Update the Prevention of Significant Deterioration (PSD) Permit to Construct to specifically include potential vessel traffic impacts to SRKWs.
- Update state regulations and Ecology’s Shoreline Master Program (SMP) Handbook to address vessel traffic impacts and require SRKW expertise for all state application submittals.

Action #12: Support and accelerate transition of Washington State Ferries fleet to quieter designs and technologies to achieve data-driven noise reduction goals.
**Action #13:** Slow down Washington State Ferries (WSFs) during fall (October-December) in presence of orcas (when conditions are safe and effective to do so).

**Action #14:** Require slowdown by private ferries (e.g., Victoria Clipper, Black Ball) and local government ferries (e.g., King, Kitsap, and Skagit County ferries) in presence of orcas (when conditions are safe and effective to do so).

**Action #15:** Support funding of WSF noise analysis pilot project to collect additional new data to fill information gaps and develop baseline noise levels for the entire fleet.
Additional actions proposed by Task Force members on August 7:

**Action #16:** Place an emergency rescue tug on the west side of San Juan island to support oil spill response.

**Action #17:** Require that all oil barges have a tug escort in Puget Sound.

**Action #18:** Request a cover memo to the Strait of Juan de Fuca and Puget Sound Vessel Traffic Safety Report being completed this fall per Senate Bill 6269 that applies an orca lens to the analysis of vessel traffic risk.
**Action #19:** Prioritize new hybrid ferries for runs where orcas are more frequently present.

**Action #20:** Consider a moratorium on whale watching for a certain period of time.

**Action #21:** Ensure that the curriculum, testing, and outreach for the mandatory Boater Education Card includes Be Whale Wise guidelines.
**Action #22:** Increase funding for educational on-the-water programs like Soundwatch as well as governmental enforcement of private vessels for infractions.

**Action #23:** Collect information on the noise reduction potential of electric boat motors to determine whether to recommend incentives for the manufacture and purchase of such motors.

**Action #24:** Establish a collaborative forum that includes acoustics researchers, the State of Washington, NOAA, and the Pacific Whale Watch Association to create vessel and fleet sound profiles to determine acceptable underwater sound baselines (decibels at source/received, etc.) and identify whale watching guidelines for PWWA and private boaters that will better minimize underwater noise levels and the occurrence of acoustic masking and interference with orca communication.
Q40 Are there any new actions that you think are important to add related to vessels and noise?

Answered: 11   Skipped: 22

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<tr>
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<tbody>
<tr>
<td>1</td>
<td>Update ECHO action item or create a version of a ECHO type program that could work for ALL vessel operators with regard to SRKW location and the need to stay clear and observe the no go zone around the whales.</td>
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<tr>
<td>2</td>
<td>Whales are starving from lack of salmon. They have no problem charging into a flock of boats to est on a school of salmon. I know of two instances in the last two weeks.</td>
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<tr>
<td>3</td>
<td>1. Create a text alert system so state and private ferries (high speed vessels especially) are proactively notified when SRKW (or any whales) are in the vicinity. Goal is to reduce risk of collisions or other disturbance. Background: In 2016 an 18 year old male SRKW (J34) died from blunt force trauma in the Salish Sea, likely from being hit by a boat. In 2017 a King County ferry was heading directly towards J pod crossing between Alki and the south end of Bainbridge. A citizen saw the approaching ferry and found a way to reach the captain. It shouldn’t fail to private citizens to let ferries know they are speeding towards endangered whales. 2. Commercial kayaking companies should be included in permitting system and their activities managed to protect orcas, first. Increase shore-based enforcement to better manage kayaking companies. 3. Provide training and equipment so shore-based observers can accurately report boater violations for enforcement follow-up.</td>
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<td>4</td>
<td>Noise from military operations (and construction) was identified at the first task force meeting May 1 but was eliminated from work group consideration through an executive decision. This is a mistake - need to evaluate military impacts given the impacts on marine mammals. Egregious hole.</td>
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<tr>
<td>5</td>
<td>promote land-based viewing, oil spill prevention and preparation for oil spill response are not captured under vessels or contaminants</td>
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<tr>
<td>6</td>
<td>no</td>
</tr>
<tr>
<td>7</td>
<td>Low priority</td>
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<tr>
<td>8</td>
<td>We really need to be thinking about noise (and all recommendations) from a transboundary effort. I don't see that as a pervasive message in these recommendations.</td>
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<tr>
<td>9</td>
<td>Fund an enforcement response network and a reporting hotline (if one does not already exist) so that residents along the shoreline can report inappropriate boater behavior around orcas. (Ski-dos and boats recently were sighted in Eld inlet surrounding a couple of transient orca families and following them too closely over several hours, as other boaters were trying to intervene.</td>
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<tr>
<td>10</td>
<td>Establish an innovation fund related to Water Innovation (like we have for clean energy) to accelerate work on maritime innovation and clean commerce.</td>
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<tr>
<td>11</td>
<td>Within vessel action #3, I definitely think we should recommend two to four quiet days per week when no vessel may approach orcas, commercial or non-commercial. This would allow us to study the difference in behaviors when vessels are and are not present for extended periods of time, which could inform future regulations.</td>
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<tr>
<td><strong>Hydro A1.</strong> Recommend that Ecology adjust gas caps (match or exceed OR’s gas caps) on the Snake and Columbia rivers to allow flexibility to adjust spill regimes, as needed, to benefit Chinook salmon and other salmonids.</td>
<td><img src="image1" alt="Survey Response" /></td>
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**Updated language after survey:**

**Hydro A1.** Recommend that Ecology adjust total dissolved gas standards (match or exceed OR’s gas caps) on the Snake and Columbia rivers to allow flexibility to adjust spill regimes, as needed, to benefit Chinook salmon and other salmonids.

**Potential specific recommendations:**

a) Recommend that Ecology remove the 115% forebay total dissolved gas standard, leaving just the 120% tailrace standard in place on the Snake and Columbia Rivers to allow flexibility to adjust spill regimes, as needed, to benefit Chinook salmon and other salmonids.

b) Recommend that Ecology adjust gas standards to 125% on the Snake and Columbia Rivers to allow flexibility to adjust spill regimes, as needed, to benefit Chinook salmon and other salmonids.

| Hydro A2. Recommend that Ecology adjust gas caps (match or exceed OR’s gas caps) on the Snake and Columbia rivers and that spill be increased to benefit Chinook salmon and other salmonids. | ![Survey Response](image2) |

**Updated language after survey:**

**Hydro A2.** Recommend that Ecology adjust total dissolved gas standards (match or exceed OR’s gas caps) on the Snake and Columbia rivers and that spill be increased to these increased TDG standards to benefit Chinook salmon and other salmonids.

**Potential specific recommendations:**

a) Recommend that Ecology adjust gas standards to 120% tailrace-only standard on the Snake and Columbia rivers and that spill be increased to this level to benefit Chinook salmon and other salmonids.

b) Recommend that Ecology work with Oregon to adjust gas standards to 125% on the Snake and Columbia rivers and that spill be increased to this level to benefit Chinook salmon and other salmonids.
Hydro C. Increase survival at predation hot spots associated with dams.

Potential specific recommendations:

a) Distribute the discharge/release sites for juvenile salmonids collected at Columbia and Snake River dams

b) Support existing cormorant management plan objectives for East Sand Island in the Columbia River Estuary (including discouraging nesting on the Astoria/Megler bridge)

c) Request direct congressional appropriations and authority to USACE to restore/create cormorant nesting habitat in non-sensitive areas outside of the Columbia Basin, such as has already been done as part of the federal Caspian tern management plan. Creation of habitat will allow for expanded management options by alleviating habitat constraints in other areas of the cormorant’s range.

d) Support further relocation of Caspian terns from the Columbia River Estuary to historical or prepared colony sites outside of the Columbia River Basin.

e) Open Yakima River flow by removing Bateman Island causeway

f) Support the McNary pool/reservoir study to evaluate predatory fish population survival reduction through reservoir elevation management

g) Increase Snake and Columbia River spill to reduce predation rates below dams

h) Support non-lethal dissuasion to reduce bird predation near dams (lethal removal potential action is found in Predation section)

Hydro E. Prioritize and fund re-establishment of runs into currently blocked areas above dams in those areas that can successfully produce more salmon.

Potential specific recommendations:

a) Co-managers and regional organizations identify, assess and prioritize appropriate locations, cost, management, operations and other key information necessary to implement re-establishment of salmon runs

b) Provide policy support for reintroduction upstream of 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.
**Hydro F1.** Remove other hydro and non-hydro dams in locations that most benefit Chinook passage.

**Potential specific recommendations:**

a) Support funding for currently agreed to/supported dam removal projects across the state benefiting Chinook.

b) Develop a list of dams that have already been removed to benefit salmon and develop a list of priority projects for potential removal.

c) Halt dam projects that aim to address flooding on the Chehalis River. Instead, the state should pursue non-dam options to address flooding as WDFW assesses the potential impacts that dams on the Chehalis River would have on Chinook salmon and Southern Resident orcas.

d) From American Whitewater list:
   - Middle Fork Nooksack Diversion Dam on the Middle Fork Nooksack River,
   - Pilchuck on the Middle Pilchuck River, and
   - Nelson Dam on the Naches River.

   In the next 4-5 years:
   - Chambers Creek Dam on Chambers Creek
   - Enloe Dam on the Similkameen River

   5 years plus:
   - Electron Dam on the Puyallup River

**Hydro F2.** Remove the four lower Snake River dams to benefit Chinook passage.

**Potential specific recommendations:**

a) Support the ongoing NEPA process and other discussions around potential removal of the lower Snake River dams to benefit Chinook populations.

b) Develop a local/state/federal table to discuss how to mitigate impacts to local communities, energy transmission system, and regional stakeholders, including hatcheries, when/if the dams are removed.

c) Develop a potential outline of a package to fund hatchery production to prevent any decreases in Chinook abundance due to dam removal (Snake River hatcheries currently depend on funding tied to the dams’ existence and operation; LSRCP documents report the budget is $30 million annually)

d) Advocate that Army Corps unilaterally make a decision to stop operating the dams and seek authority to breach dams in near-term. Work to develop mitigation package for affected communities and stakeholders, and to fund necessary hatcheries and habitat actions in the absence of mitigation funding depending on dam operations. Work to ensure dam’s energy is replaced with carbon-free alternatives.

e) Pass executive order in favor of LSR dam removal and replacement with carbon-free alternatives.
**Hydro G.** Expedite NEPA process for Columbia River operations.

*Potential specific recommendations:*

a) Request Governor to send USACOE a letter requesting that NEPA be expedited
b) Request that the NEPA process and related BiOp fully consider the impact of the FCRPS on the SRKWs and recommend that the alternatives analysis fully consider, especially in light of climate change: (a) increased spill system-wide up to 125 TDG, and (b) breaching the lower Snake River dams.
c) Oppose any additional extension of time to complete the FCRPS NEPA review process.

**Hatchery A.** Increase hatchery production at facilities that most benefit SRKWs, in a manner consistent with wild fish conservation and the ESA.

*Potential specific recommendations:*

a) Increase hatchery production at facilities that most benefit SRKWs, in a manner consistent with wild fish conservation and the ESA. Pair this action with investments in habitat protection and restoration to be effective.
b) Increase hatchery production at facilities that most benefit SRKWs, in a manner consistent with wild fish conservation, state and federally adopted recovery plans, and the ESA. Pair this action with investments in habitat protection and restoration to be effective.

Ensure this action is coupled with investments in habitat restoration, protection, acquisition. Follow advice of regional recovery organizations to understand where these investments should occur

**Hatchery B.** Perform actions in hatcheries to increase productivity, smolt-to-adult survival and/or marine survival of Chinook (including but not limited to reducing predation on hatchery fish), adjust return timing and locations to align with whale needs, increase size and age of return, and reduce potential competition with wild fish.

*Updated language after survey:*

**Hatchery B.** Provide funding via WDFW to coordinate partners and begin testing actions in hatcheries to:

a) increase the marine survival of Chinook,
b) adjust return timing and locations to align with whale needs,
c) increase size and age of return, and
d) reduce potential competition with wild fish.
Harvest A. Further limit Chinook harvest in areas important to SRKW foraging.

Potential specific recommendations:

a) Further limit the number of days open to harvest for both recreational and commercial fisheries on the west side of San Juan Island in June-September.

b) Only in years with low Chinook availability in coastal and inland waters (which can be defined based on post-season quartile estimates of abundance), further restrict both commercial and recreational harvest on the west side of San Juan Island in June-September.

c) Further reduce the number of days open to harvest for both recreational and commercial fisheries in Marine Area 7 (San Juan Islands) in June-September.

d) Only in years with low Chinook availability in coastal and inland waters (which can be defined based on post-season quartile estimates of abundance), further restrict both commercial and recreational harvest in Marine Area 7 (San Juan Islands) in June-September.

e) Further reduce the number of days open to harvest for both recreational and commercial fisheries in Marine Areas 4, 5, 6, and 7 (Strait of Juan de Fuca and San Juan Islands) in June-September.

f) Only in years with low Chinook availability in coastal and inland waters (which can be defined based on post-season quartile estimates of abundance), further restrict both commercial and recreational harvest in Marine Areas 4, 5, 6, and 7 (Strait of Juan de Fuca and San Juan Islands) in June-September.

g) Encourage the Washington State Legislature to give WDFW the authority to develop a limited entry fishing permit system for recreational fisheries, to be implemented in foraging hotspots. 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 commercial and recreational fisheries for that area. Seek authority to perform emergency closures for recreational fisheries during these days.

Harvest B. Subsidize or compensate fishers to not fish.

Potential specific recommendations:

a) Fund and conduct a buyback for the all commercial fisheries
Harvest C. Reduce bycatch of Chinook in non-targeted fisheries, including limiting gear types that increase mortality and incentivizing innovative gear types that decrease mortality.

Potential specific recommendations:

a) Develop program to buyback salmon fishing gear types that have high Chinook mortality and/or convert those to reef nets, beach seines, or other gears that are highly selective and have very low mortalities.

b) Through the Pacific Fisheries Management Council work with the North Pacific Fisheries Management Council and commercial fishing interests to limit the allowable bycatch of Chinook in Alaskan fisheries to ensure that more Chinook reach Southern Residents.

Harvest D1. Include SRKW considerations in the next Pacific Salmon Treaty negotiations with AK and Canadian fisheries to allow more Chinook to reach WA waters.

Harvest D2. Support the implementation and funding of the upcoming/newly negotiated Pacific Salmon Treaty.

Updated language after survey:

Harvest D2. Support the full implementation of the recently renegotiated Pacific Salmon Treaty together with the funding components that benefit SRKW.
**Harvest F.** Implement slot size limits to get larger fish to whales, spawning grounds, and hatcheries (put a maximum size limit on catch).

**Updated language after survey:**

**Harvest F.** Implement slot size limits to get larger Chinook to whales, spawning grounds, and hatcheries (put a maximum size limit on catch)

**Potential specific recommendation:**

a) Request that WDFW form a small workgroup to evaluate the potential benefit, if any, of this action with tribal co-managers and other appropriate parties.

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**Habitat A.** Increase the implementation and enforcement of existing local, state, and federal habitat protection regulations.

**Updated language after survey:**

**Habitat A.** Ensure full implementation & enforcement of existing local and state habitat protection regulations

**Potential specific recommendations:**

a) WDFW and/or others assess and report the status of implementation compliance and enforcement of existing regulations statewide
b) Request increased funding for hydraulic code compliance monitoring and enforcement statewide
c) Review previously completed assessment of the no-net-loss policy issuing permits and use-authorizations of state-managed aquatic lands.
d) Should also explore feasibility of implementing an ecological-net-gain policy.
e) Direct WDFW to fully apply Hydraulic Code Rules and Fish Passage barrier regulations to all proposed projects and instruct that the precautionary principle be used to ensure habitat protection.
f) Direct DOE to fully apply SMA and stormwater/water quality regulations to all proposed projects and that the precautionary principle be used.
g) Direct WDFW and DOE to take legal action to enforce violations of habitat protection and water quality laws and regulations.
Habitat B. Enhance/change local, state, and federal protection regulations, especially for key Chinook/SRKW habitats or areas.

Potential specific recommendations:

a) Fund and complete and assessment of regulations relative to key chinook and SRKW habitats and report the effectiveness of existing regulations and enhance based on findings

b) WDFW update SRKW Priority habitat guidance for GMA and SMA implementation and updates

c) Require state agencies and local shoreline modification rules (WAC 173-26-231) consider cumulative impacts in issuing permits and use-authorizations of state-managed aquatic lands.

d) Emphasize avoidance versus mitigation for impacts to SRKW, salmon and forage fish habitat.

e) Revise the single-family exemptions laws and exceptions for docks (WAC 173-26-241) and shoreline armoring in shoreline master plans.

f) Have Ecology and local govts require emphasis on low-impact development practices (LID) and prioritize retrofits in urbanized areas in SRKW priority chinook and coho salmon watersheds.

g) Take immediate year one legislative and/or rulemaking action to improve habitat and fish life protection in the Hydraulic Code. Fish passage and water quality regulations.

h) Representative WG and TF members will work with the Governor’s office, Legislative Partners Tribes, DNR/WDFW/DOE and salmon recovery representatives to develop a habitat protection/regulatory reform legislative package to put forward for action during the upcoming legislative session. This proposal will be finalized and submitted to the Task Force by October 15.

i) Additional improvements that may be made through rulemaking or internal policy will also be identified and an action plan developed. This action proposal will be finalized and submitted to the Task Force by October 15.
### Habitat C. Acquire important Chinook habitat.

**Potential specific recommendations:**

a) support and fund habitat acquisition projects on the PSAR and SRFB project lists (Location, cost, sponsor, and other information will be available on the data dashboard and summarized in a report for the early action “demonstrate chinook recovery project benefits to SRKW”

b) increase the amount of funding to acquire important chinook habitat in PSAR, SRFB and other programs where acquisition is an eligible and high priority action

c) Amend/Expand list of projects to include unlisted Chinook stocks that do or could contribute to SRKW prey

d) Direct state agencies to conserve important SRKW, salmon and forage fish habitat on state-owned and managed aquatic lands from future development.

### Habitat D. Accelerate habitat restoration by increasing funding significantly to address current regional priorities, including fish blockages in areas most beneficial to SRKW.

**Potential specific recommendations:**

a) Support and fund habitat restoration projects on the PSAR, ESRP, WCRI, SRFB, FpBD, FFFPP PSNERP, and FBRB project lists (Location, cost, sponsor, and other information will be available on the data dashboard and summarized in a report for the early action “demonstrate chinook recovery project benefits to SRKW”

b) Amend/Expand list of projects to include unlisted Chinook stocks that do or could contribute to SRKW prey

c) Create a fund for major estuary restoration projects that includes the funding necessary to work with landowners and regulatory agencies to develop, design, and implement these large projects

### Habitat E. Create additional or bolster existing habitat protection and restoration incentives for landowners.

**Potential specific recommendations:**

a) Create safe harbor agreements for landowners voluntarily protecting or restoring habitat on their property

b) Create financial assistance for cooperative conservation programs (fish screens, riparian areas, private fish passage upgrades, etc.) implemented by individual landowners
### Habitat F. Engage BNSF railroad on shoreline management.

**Potential specific recommendations:**

- **a)** Direct regulatory agencies to allow deposition of landslide material into the nearshore of Puget Sound to contribute to nearshore sediment budget.
- **b)** Work with BNSF to address fish passage barriers, restore pocket estuaries, and otherwise restore natural habitat processes along the eastern shore of Puget Sound.

### Predation A1. Remove or alter artificial habitats or breeding locations so they are not as attractive to predators (Pinnipeds).

**Updated language after survey:**

**Predation A1.** Remove or alter artificial pinniped haul outs in places most important for SRKWs and Chinook so they are not as attractive.

**Potential specific recommendation:**

- **a)** Where feasible and permitted, pilot the removal or alteration of artificial haul out sites used by pinnipeds in the Puget Sound in places that may improve Chinook survival. Monitor the effectiveness of this approach through the pilot and support ongoing scientific analyses of potential predation hotspots to guide potential future haul out removals.
- **b)** Establish a fund to support infrastructure costs associated with modification of artificial haul-out sites that would be available to private entities, individuals or state agencies.
- **c)** Integrate “Best Management Practices” that discourage pinniped haul outs into review and permitting of projects (e.g., docks, swim platforms, buoys, riprap etc.) that could create haul-out sites at predation hotspots.
**Predation B1.** Lethal removal (Pinnipeds) to benefit specific runs and stocks.

*Updated language after survey:*

**Predation B1.** Lethal removal of pinnipeds to benefit specific runs and stocks

*Potential specific recommendations:*

a) Support efforts to amend the Marine Mammal Protection Act (MMPA) to more effectively manage pinniped predation of salmonids in the Columbia River (2018 bills in Congress).

b) Support efforts to amend the Marine Mammal Protection Act (MMPA) to more effectively manage pinniped predation of salmonids in the Columbia River (2018 bills in Congress). Secure funding for the removal program at Bonneville dam and Willamette Falls at a level sufficient to remove >95% of pinnipeds present.

c) Ask NOAA to expediently convene the Pacific Scientific Review Group to perform an assessment to determine the Optimal Sustainable Populations of the harbor seal stocks of Puget Sound. This assessment will determine allowable removal levels (number of animals; Potential Biological Removal) under the MMPA, and therefore inform management option decisions.

**Predation B2.** Lethal removal (Birds) to benefit specific runs and stocks.

*Updated language after survey:*

**Predation B2.** Lethal removal of birds to benefit specific runs and stocks

*ALL THE POTENTIAL ACTIONS RELATED TO LETHAL REMOVAL OF BIRDS WERE IN SOME WAY ASSOCIATED WITH DAMS, THEREFORE SEE HYDRO ACTION C*
**Predation B3.** Lethal removal (Fish) to benefit specific runs and stocks.

**Updated language after survey:**

**Predation B3.** Lethal removal of predatory fish to benefit specific runs and stocks (areas not associated with dams)

Potential specific recommendations:

a) Request and fund WDFW coordinate with appropriate management entities to assess level of predation at potential hotspots. If analysis suggests there are hotspots, support the development and implementation of a predator removal program at specific pinch points.

b) Support the reclassification of non-native predatory fish (such as catfish, walleye, and bass) from “sport fish” to “invasive species”

**Predation B4.** Continue the development of additional science to better understand pinniped predation in Puget Sound and the Outer Coast so that the Task Force could review new recommendations in Year 2.

**Updated language after survey:**

**Predation B4.** Continue the development of additional science to better understand pinniped predation on salmonids, especially Chinook.

**Potential specific recommendations:**

a) Fund monitoring to provide area specific estimates of Chinook survival between the mouth of the Columbia River and Bonneville Dam.

b) Support the continued development of science to better understand the extent pinniped predation in Puget Sound and the Outer Coast to determine and apply appropriate management actions. Analyses should help determine if pinniped predation is a limiting factor for Chinook 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 control actions. 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.

**Predation C.** Lethal removal in order to establish new baseline population levels of Pinnipeds
Forage Fish A. Increase Forage Fish populations through:
- Habitat restoration
- Habitat protection

Updated language after survey:

Forage Fish A. Increase forage fish populations through habitat protection and restoration

Potential specific recommendations:

a) Complete the on-going Puget Sound forage fish assessment to establish baseline condition/current condition to measure progress or future loss against
b) Continue to fully fund the Puget Sound forage fish spawning surveys to identify baseline spawning areas and spawning times and or population biomass.
c) Support and fund PSAR and ESRP nearshore projects this biennium to restore forage fish habitat
d) Support and fund PSAR and ESRP nearshore projects this biennium to restore forage fish habitats
e) Support initiatives that inventory and identify shoreline habitats (e.g., PSNERP geodatabase, ESRP Beach Strategies geodatabase, Department of Ecology Coastal Atlas) to prioritize protection and restoration actions that most benefit forage fish spawning habitat
f) Monitor and enforce regulations to protect nearshore habitat
g) Develop public awareness and landowner education regarding importance of properly functioning nearshore habitat and its relationship to SRKW by expanding the current Puget Sound “Shore Friendly” outreach efforts via ESRP, including funding and other incentives for landowners to remove armoring and restore natural shorelines
h) Require state agencies and local shoreline modification rules (WAC 173-26-231) consider cumulative impacts in issuing permits and use-authorizations of state-managed aquatic lands.
i) Direct state agencies to emphasize avoidance versus mitigation for impacts to forage fish habitat.
j) Revise the single-family exemptions laws and exceptions for docks (WAC 173-26-241) shoreline armoring and removal of management of riparian areas in shoreline master plans.
k) Conduct development and redevelopment operational activities in a manner that does not affect spawning behavior; disturb spawning substrate or sediment sources that support spawning including nearshore riparian shading in upper intertidal spawning areas.
l) Inventory shoreline geomorphology along with assessing spawning beaches to determine those
locations where upper beaches have space to migrate such that we can prioritize these areas for acquisition.

m) Reduce predation by pinnipeds
n) Reduce anthropogenic sources of light pollution in spawning areas
o) Fund synthesis and solution testing phase of the Salish Sea Marine Survival Project
p) Fund and implement Puget Sound-wide Zooplankton Monitoring Program
q) Ensure full application of hydraulic code regulations.
r) Direct WDFW to fully apply Hydraulic Code Rules and regulations to all projects and instruct that the precautionary principle be used, with existing regulations applied to historic, current and potential spawning areas. This will mean consistent application of the regulations with a goal of increased forage fish protections and populations.
s) Develop: legislative action to improve forage fish protections in the Hydraulic code. Work with the Governor’s office, Legislative Partners Tribes, DNR/WDFW/DOE and salmon recovery representatives to develop a forage fish habitat/protection legislative package to put forward for action during the upcoming legislative session. This proposal will be finalized and submitted to the Task Force by October 15.
t) Additional improvements that may be made through rulemaking or internal policy will also be identified and an action plan developed. This action proposal will be finalized and submitted to the Task Force by October 15.

**Forage Fish B. Increase Forage Fish populations through harvest reductions.**

**Potential specific recommendations:**

a) WDFW inventory and assess existing harvest levels and impacts to prepare a recommendation based on science

b) Close commercial and recreational harvest of surf smelt in Puget Sound until a full inventory and assessment of existing population levels and impacts from harvest or benefit from reduced harvest is determined.

c) Close commercial and recreational harvest of Herring in Puget Sound until a full inventory and assessment of population levels and impact from harvest or benefit from reduced harvest is determined.
**Q69 Are there any new actions that you think are important to add related to prey availability?**

**Answered:** 10  **Skipped:** 23

<table>
<thead>
<tr>
<th>#</th>
<th>RESPONSES</th>
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<tbody>
<tr>
<td>1</td>
<td>I think the Action Item: Lethal removal in order to establish new baseline population levels for pinnipeds should be returned to the Action Items for consideration. The process of breaking up the task force into four groups in Wenatchee was efficient with time but limited the thoughtful and complete discussion needed by all task force members.</td>
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<tr>
<td>2</td>
<td>Include shorelines on habitat restoration such as kelp forests for the salmon to hide in.</td>
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<tr>
<td>3</td>
<td>New study about the impacts of anti-depressants in waste water and the impact on the survivability of forage fish. Should we know more about the impact of these on our populations of forage fish</td>
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<tr>
<td>4</td>
<td>Target landowner incentive programs in key geographic areas of priority Chinook habitat restoration. Support funding for collaborative efforts to engage landowners in necessary actions to protect and restore Chinook habitat and improve water quality. The legislature should elevate the statutory role of incentive programs to address natural resource issues.</td>
</tr>
<tr>
<td>5</td>
<td>Under Hydro, the Columbia River analyses should also look at temperature regimes, in addition to TDG. There is no mention of the ongoing effort related to the Foster decision. The task force should encourage that Ecology cross walk approaches with orca needs.</td>
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<tr>
<td>6</td>
<td>Stop blaming everything but the real issue SALMON PRODUCTION!!!!!!!!!!!!!!! it's 80% salmon production 15% seals/sea lions 5% everything else!!</td>
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<tr>
<td>7</td>
<td>no</td>
</tr>
<tr>
<td>8</td>
<td>The obstacles to salmon recovery are man-made, and they must be removed</td>
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<tr>
<td>9</td>
<td>Relax perceived restrictions on hatchery fish affecting wild fish (chinook).</td>
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<tr>
<td>10</td>
<td>1. Negotiate reductions in AK and Canadian fisheries to allow more Chinook to reach WA waters. 2. We need a Prey / Habitat Proposal that addresses nearshore marine habitat protection, acquisition or restoration as it relates to providing food for out-migrating juvenile salmon. It is my impression that over the last decade we have learned a lot about how nearshore vegetation can provide terrestrial-based food for out-migrating salmon. It seems we need to be thinking about feeding both juvenile and adult salmon.</td>
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