Contaminants and Southern Resident Killer Whales

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Southern Resident Killer Whales

- Listed as endangered since 2003
- Current population size: 74
- Icons of the Salish Sea: revered by coastal and Indigenous communities.
- Diet: Chinook salmon (primarily)
Anthropogenic Threats to Recovery

- Prey availability
  - DFO
- Contaminants
  - ECCC
- Acoustic and physical disturbances
  - TC

Exposure to Contaminants

Biomagnification

Ocean Wise, 2020
Whales Initiative

- Launched by the federal government in June 2018
- Supports recovery of 3 endangered whale species

Imminent Threat Assessment

- Additional funds for Southern Resident Killer Whales (Oct 2018)
- Technical Working Groups:
  1) Prey availability
  2) Sanctuaries
  3) Commercial Vessel Noise
  4) General Vessel Noise
  5) Contaminants

Contaminants of concern

<table>
<thead>
<tr>
<th>Level of Concern</th>
<th>Southern Resident Whales</th>
<th>Chinook salmon</th>
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</thead>
<tbody>
<tr>
<td>Tier 1 Major concern</td>
<td>PCBs, DDT, PFOS, PFOA</td>
<td>PCBs, DDT, PFOS, PFOA, copper, phthalates (DEHP), bisphenol family (BPA), Current-Use Pesticides</td>
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<tr>
<td>Tier 2 Medium concern</td>
<td>PBDEs, HBCD, mercury and organic mercury</td>
<td>PBDEs, HBCD, mercury and organic mercury, pharmaceuticals and Personal Care Products</td>
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<tr>
<td>Tier 3 Minor concern</td>
<td>chlorinated alkanes, 4-nonylphenol, dioctin, tributyltin, dibutyltin, triclosan, current use pesticides, biological contaminants</td>
<td>PAHs, hydrocarbons, volatile organic compounds, cadmium, lead, microplastics, biological contaminants</td>
</tr>
</tbody>
</table>
Contaminant sources

• Wastewater treatment plants
• Pulp and paper plants
• Surface runoff
• Landfill leachate
• Contaminated Sites
• Agricultural runoff
• Mining

Contaminants Technical Working Group Progress

• Launching a mapping inventory tool to identify contaminant sources using all available data
• Recommending guidelines protective of predatory marine mammals
• Sharing data among partners to address information and knowledge gaps
• Increasing outreach to the public and stakeholders
• Conducting monitoring and research to better quantify sources of contaminants
Other ongoing efforts
The Government of Canada is also:

- Enhancing regulatory controls to further restrict certain persistent contaminants (Prohibition of Certain Toxic Substances Regulations)

- Reducing contaminant releases by supporting upgrades to wastewater systems (required under the Wastewater Systems Effluent Regulations)

- Enforcing regulations by detecting offenders with high non-compliance for contaminants of concern to endangered whales

- Banning the use of certain single-use plastics

What can you do?

- Talk to family/friends about how they can help
- Household Hazardous Waste programs
- Practice green boating
- Shoreline clean-up events
Find out more

Environment and Climate Change Canada webpage launched in 2020

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2020 Contaminants TWG Accomplishments and recommendations