

PUGET SOUND VITAL SIGNS

VITAL SIGN ORCAS

Killer whales, also called orcas, are among Puget Sound's most distinctive and charismatic inhabitants. They occupy an important niche at the top of the food web and support a multi-million dollar whale-watching industry in Puget Sound. Southern Resident killer whales are a unique population of orcas that ranges in the Salish Sea and the West Coast. While the "transient" or Bigg's killer whale populations in Puget Sound prey on marine mammals, Southern Resident killer whales primarily eat fish, and depend heavily on Chinook salmon for food.

Reporting Lead

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Last Updated

11/15/2019

VITAL SIGN > INDICATOR	PROGRESS	STATUS
Orcas		
Number of Southern Resident killer whales	GETTING WORSE	BELOW 2020 TARGET

Key Messages

- Year-round, Southern Resident killer whales depend heavily on Chinook salmon for food, thus linking orca recovery with that of Chinook salmon. [Chinook salmon](#) are a threatened species, whose numbers are designated in the Puget Sound Vital Signs as dangerously low and categorized as "not improving".
- Southern Resident killer whales spend a considerable portion of the year outside the Salish Sea, where they eat Chinook salmon from Puget Sound and other regions of Washington—including the Columbia Basin—and from other areas, like the Fraser and Klamath rivers. Therefore, improving prey availability outside Puget Sound is also fundamental to the resident orca recovery.
- When Southern Resident killer whales can't find enough to eat, they must burn their own fat—releasing harmful pollutants picked up from the Salish Sea and elsewhere into their tissues. Science suggests that poorer body condition increases the orcas' vulnerability to disease and hinders reproduction.
- In the Salish Sea, underwater noise and disturbance from commercial and recreational vessels force Southern Resident killer whales to forage longer for dwindling and smaller prey, compared to decades past. Recent studies show that reducing noise and improving access to prey are crucial for orca recovery.



Point Robinson, Maury/Vashon. By Marla Smith.

Strategies, Actions, And Effectiveness

- Orca Task Force Year 2 Draft Report and Recommendations
- Orca Task Force Year 1 Comprehensive Report and Recommendations
- Actions proposed in the Action Agenda that advance this Vital Sign (*let us know if we missed any!*):
 - Feeding Salmon and Orca through Shoreline Restoration
 - Fireproof Killer Whales: Reducing Flame Retardant Contaminants to Puget Sound
 - Improving understanding of the magnitude and spatial variability of pinniped predation on juvenile and adult Chinook marine survival in Puget Sound
 - June is Orca Month - Grow public support for orca recovery, including abundant salmon, reduced toxics, and decreased vessel interference
 - Orcas Love Raingardens - a pilot program to make the connection between raingardens and orca conservation for generations to come
 - Sources and pathways of persistent organic pollutants (POPs) in Puget Sound's pelagic food web, and biomagnification of POPs from low troph.
 - Study to Improve Understanding and Increase Effective Engagement in Reducing Impacts from Vessel Traffic
 - The Economic Benefits of the Southern Resident Killer Whales
- Restoration and protection projects funded by the National Estuary Program and shown in the [National Estuary Atlas](#)
- Whats working to improve this Vital Sign? [Answers from effectiveness evaluations](#)

Background Documents

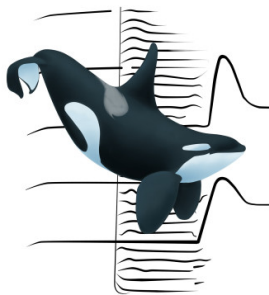
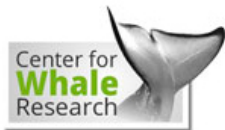
- [Leadership Council resolution adopting indicators and ecosystem recovery targets \(PDF\)](#)
- [Orca Target Briefsheet](#)

Other Resources

- Articles related to killer whales in the [Encyclopedia Of Puget Sound](#)
- [Economic Impact of Killer Whales in the Salish Sea](#), by Earth Economics, supported by the Seadoc Society

Contributing Partners

The following organizations monitor killer whales in Puget Sound:



Orca Behavior Institute