

PUGET SOUND VITAL SIGNS

VITAL Sign BIRDS

Puget Sound draws a wide variety and abundance of seabirds and land birds. The region supports over a dozen [Important Bird Areas](#) and offers ample birdwatching opportunities. The Birds Vital Sign tells us about the health of populations of native resident and migratory bird species associated with Puget Sound. These species are highly dependent on the marine and terrestrial environments of Puget Sound and the greater Salish Sea. Habitat alteration and degradation, changes in prey populations, disease, and contamination from toxic chemicals may all affect bird abundance and distribution.



Golden-crowned kinglet. Photo credit: Scott Pearson.

Related Strategies

- Awareness of Effects of Climate Change
- Climate Adaptation & Resilience
- Education Partnerships
- Floodplains & Estuaries
- Funding
- Healthy Shorelines
- Research & Monitoring
- Riparian Areas
- Smart Growth
- Stewardship & Motivating Action
- Stormwater Runoff & Legacy Contamination
- Strategic Leadership & Collaboration
- Working Lands

Vital Sign Reporter

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| VITAL SIGN > INDICATOR | PROGRESS | STATUS |
|---|---------------------------|-----------|
| Birds | | |
| Abundance of terrestrial bird populations | GETTING WORSE | NO TARGET |
| Abundance of marine bird populations | MIXED RESULTS | NO TARGET |
| Estuarine birds | INDICATOR TO BE DEVELOPED | NO TARGET |

KEY VITAL SIGN MESSAGES

Indicator Species

- **Marine bird indicator** - Marbled murrelet, rhinoceros auklet, and pigeon guillemot breed locally in Puget Sound and the Strait of Juan de Fuca, whereas the three scoter species (surf, black, and white-winged) overwinter here and breed elsewhere.
- **Terrestrial bird indicator** - Forest interior indicator species include golden-crowned kinglet, varied thrush and brown creeper. Human-associated indicator species include American crow, rock pigeon, house sparrow, house finch, and European starling.

Population Trends

- **Marine bird indicator** - Species in the marine bird indicator show different trends in abundance. Marbled murrelets, a federally threatened species, have declined by nearly 5% per year since surveys began in 2000. Scoter density has also declined by 2% per year and is driven primarily by declines in Surf Scoter abundance, while black scoter numbers have increased in recent years. In contrast, Sound-wide trends for pigeon guillemots and rhinoceros auklets suggest stable populations, although recent low abundance estimates for rhinoceros auklets are worth noting.
- **Terrestrial bird indicator** -The breeding population abundance of forest interior species has steadily declined since 1968 while human-associated species have remained relatively stable. The declining trend in forest interior species is driven by declines in the golden-crowned kinglet, the most abundant of the three indicator species. Declines in Puget Sound forest species parallel [patterns of loss in bird abundance across all western forests](#). This indicator was last updated in 2021.

Factors Influencing Populations

- Habitat alteration and degradation, changes in prey populations, disease, and contamination from toxic chemicals may all affect bird abundance and distribution. Human and environmental pressures in parts of species' ranges outside of Puget Sound can also lead to changes in the number of birds we see locally in Puget Sound.
- Changing ocean and climate conditions associated with climate change can:
 - disrupt historical patterns of prey abundance and diversity, resulting in inadequate food or changes to the food quality having impacts of unknown severity if sustained for multiple years; and
 - increase the prevalence of disease in seabird breeding colonies in Puget Sound through increases in sea surface temperatures.

How You Can Participate

- Volunteer opportunities for marine bird monitoring in Puget Sound include the [Coastal Observation and Seabird Survey Team \(COASST\)](#), the [Salish Sea Guillemot Network](#), and the [Seattle Audubon Puget Sound Seabird Survey](#).

BACKGROUND DOCUMENTS

- [Leadership Council Resolution 2014-01: Adoption of marine and terrestrial bird indicators as a Puget Sound Vital Sign](#)
- [Marine and Terrestrial Bird Indicators for Puget Sound report and Bird Indicator Supplementary Material](#)

OTHER RESOURCES

- Articles related to [birds](#) in the [Encyclopedia Of Puget Sound](#)
- [Marine bird habitats of Washington](#)
- Washington Department of Fish and Wildlife [Marine Birds webpage](#) and [webmap](#)

CONTRIBUTING PARTNERS

The following organizations contribute marine bird monitoring data to the Birds Vital Sign for Puget Sound:



Washington
Department of
**FISH &
WILDLIFE**



TO LEARN MORE ABOUT THE VITAL SIGNS VISIT: vitalsigns.pugetsoundinfo.wa.gov OR CONTACT: vitalsigns@psp.wa.gov