PUGET SOUND
VITAL SIGNS

VITAL SIGN
FLOODPLAINS

Floodplains are dynamic and diverse landscapes that provide invaluable ecosystem services including critical habitat for the health, growth, and survival of Pacific salmon and steelhead, flood damage mitigation, improved water quality, vital habitat for a suite of flora and fauna, recreational opportunities, and economically valuable farmlands. As population growth and the associated development needs continue to modify floodplains, the ability of floodplains to provide ecosystem services becomes increasingly impaired, with potentially adverse consequences to people, property, habitats, and the species that depend on floodplains. The Floodplains Vital Sign monitors the protection, loss, and restoration of functional floodplain areas in the 17 major rivers of Puget Sound in support of recovery planning, land use protection, and recovery investments.

Reporting Lead

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VITAL SIGN > INDICATOR	PROGRESS	STATUS
Floodplains		
Restoration of floodplains	GETTING BETTER	BELOW 2020 TARGET
Floodplain function	INSUFFICIENT OR NO DATA	INSUFFICIENT OR NO DATA

Key Messages

Floodplains provide productive farmlands.

- In Puget Sound, intact, healthy floodplains provide flood storage and flow mitigation to protect an estimated $18 million dollars of residential, commercial, and industrial development and infrastructure (Floodplains by Design 2016), productive agricultural lands, and a myriad of public recreational opportunities.
- Connected, functional floodplains improve water quantity and quality by recharging aquifers, storing sediment, and supporting forests and wetlands that filter pollutants out of the water. Floodplains also support diverse biological communities by providing critical habitat, including rearing and refuge areas for Endangered Species Act (ESA)-listed Chinook salmon, an important species to generations of tribes and Southern Resident Orca.
- Floodplains continue to be impacted by population growth and development. Over 60 percent of the floodplain areas in the 17 major rivers of Puget Sound have impaired or lost floodplain function related to constrained river flow and non-natural land cover.
- Large-scale efforts, like Floodplains by Design, are working to modernize floodplain management to reconnect and improve floodplain function while reducing flood-related hazards. The Floodplains Implementation Strategy is intended to accelerate progress toward floodplain restoration by developing an integrated, regional strategy that supports effective, local-scale actions.
- Since 2011, an estimated 188 floodplain improvement projects have been completed, resulting in over 8,000 acres of restored or improved floodplain habitat.
- Climate change is expected to further stress floodplain ecosystems (UW Climate Impacts Group 2016). Some floodplain communities are experiencing more frequent and severe winter floods and the pattern is expected to continue. While at the same time, summer flows are

expected to be lower and warmer, further reducing floodplain connectivity. Both of these climate impacts will impede salmon use of floodplains.
- Well-functioning floodplain systems with low levels of development are likely to be more resilient to climate change than compromised floodplains in urban watersheds.

Strategies, Actions, And Effectiveness

- The Puget Sound Partnership convened partners in the floodplain community to develop a floodplain implementation strategy for the region. The Floodplain Implementation Strategy is currently managed and implemented by the Washington Department of Wildlife and Department of Natural Resources with financial support from Environmental Protection Agency's National Estuary Program.
- Floodplain recovery is a priority focus topic for the Partnership's 2018 Action Agenda. View and download actions in the 2018 Action Agenda (*scroll to the bottom of the page*)
- Restoration and protection projects funded by the National Estuary Program that are associated with the Floodplains Vital Sign *(in the Puget Sound Info National Estuary Atlas)*
- What is working to improve Puget Sound floodplains? View effectiveness fact sheets for floodplain restoration projects.

Background Documents

- Floodplains Implementation Strategy (WDFW / DNR)
- Leadership Council Resolution 2011-13, Adopting a 2020 ecosystem recovery target for floodplains
- Floodplain Ecosystem Condition - Recommended Target Options briefsheet

Other Resources

- The Nature Conservancy Floodplains by Design
- Grant programs investing in improving floodplain function:
  - Floodplains by Design
  - Puget Sound Acquisition and Restoration (PSAR) fund
  - Estuarine and Salmon Restoration Program (ESRP)
- Washington State Department of Ecology Floodplain Management
- State of our Watersheds report by the Northwest Indian Fisheries Commission
- Articles related to floodplains in the Encyclopedia of Puget Sound
- Climate Change Impacts on Puget Sound Floodplains (UW Climate Impacts Group, February 2016)
- General floodplain information from National Geographic

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