

## **148 Pat Rasmussen – Attachment**

Subject **Comments - Scoping for DEIS**  
From Pat Rasmussen [REDACTED]  
To <comment@capitolakewatershedeis.org>  
Date 2018-10-29 15:19



- 
- Deschutes Comments WTRN.docx (~361 KB)

Please find my comments for the World Temperate Rainforest Network attached.

Thanks,

Pat Rasmussen, Coordinator

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Pat Rasmussen  
World Temperate Rainforest Network  
[REDACTED]

Please include the following in the EIS:

**1. What is a watershed? Definition, map, illustration.**

A watershed is a land area that channels rainfall and snowmelt to creeks, streams, and rivers, and eventually to outflow points such as reservoirs, bays, and the ocean.

**2. What is the name of the river watershed that empties into Puget Sound in Olympia?**

Deschutes River Watershed

**3. What is the Deschutes River Watershed and where is it? Include map.**

The Deschutes River is a river flowing almost entirely within Thurston County into Puget Sound. It runs 57 miles from its headwaters in Lewis County, past Rainier and through Tumwater, until it reaches Budd Inlet in South Puget Sound. It drains a total area of 162 square miles.

<https://www.ci.tumwater.wa.us/departments/public-works/utilities/stormwater/surface-waters/deschutes-river>



**4. What is an estuary? The definition, description.**

Estuaries and their surrounding wetlands are bodies of water usually found where rivers meet the sea. Estuaries are home to unique plant and animal communities that have adapted to brackish water—a mixture of fresh water draining from the land and salty seawater.

Estuaries are among the most productive ecosystems in the world. Many animals rely on estuaries for food, places to breed, and migration stopovers. Estuaries are delicate ecosystems.

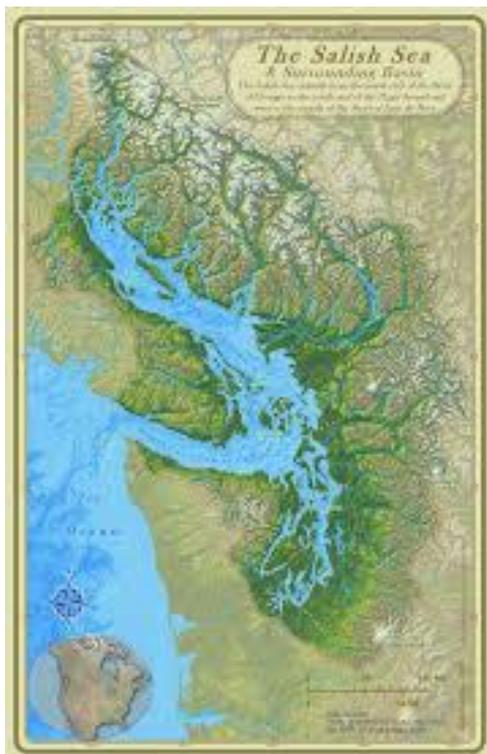
## 5. What are the watersheds of the Salish Sea? Include maps and list of watersheds.

The SALISH SEA extends from the north end of the Strait of Georgia and Desolation Sound to the south end of the Puget Sound and west to the mouth of the Strait of Juan de Fuca, including the inland marine waters of southern British Columbia, Canada and northern Washington, USA. These separately named bodies of water form a single estuarine ecosystem. Formally adopted by British Columbia and Washington State in 2009, 'The Salish Sea' as a name for these waters has been embraced by citizens on both sides of the border for years including the Coast Salish Gathering (the alliance of Coast Salish Tribal and First Nations leaders).

The Salish Sea is connected to the Pacific Ocean primarily via the Strait of Juan de Fuca (with relatively slight tidal influence from the north around Vancouver Island and through Johnstone Strait) and is contained by Vancouver Island and the Olympic Peninsula. In addition to the Gulf and San Juan Islands the watershed contains the lower Fraser River Delta and the Puget Lowlands as well as the Hood Canal, the [Tacoma](#) Narrows and Deception Pass.

Over 7 million people live within the drainage basin of the Salish Sea<sup>1</sup> (sometimes referred to as the "Georgia Basin - Puget Sound" watershed), including the cities of Vancouver, Seattle, Victoria, Olympia, Nanaimo, Bellingham, Everett, Port Angeles, Port Townsend and Tacoma.

[http://staff.wvu.edu/stefan/salish\\_sea.shtml](http://staff.wvu.edu/stefan/salish_sea.shtml)



<https://www.eopugetsound.org/maps/puget-sound-watershed-boundary>

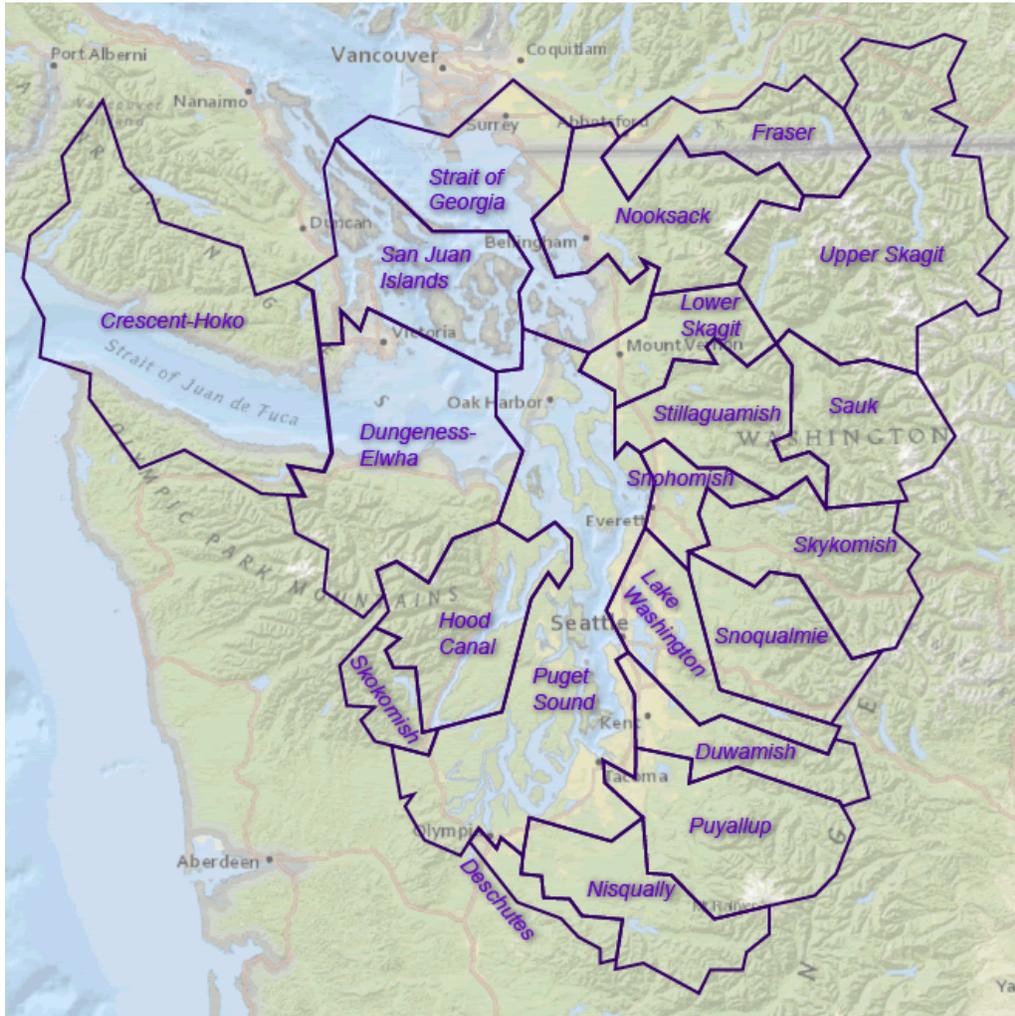


List of watersheds emptying into the Salish Sea.

<https://www.eopugetsound.org/terms/86>

- [Crescent-Hoko Watershed](#)
- [Deschutes Watershed](#)
- [Dungeness-Elwha Watershed](#)
- [Duwamish Watershed](#)
- [Fraser Watershed](#)
- [Hood Canal Watershed](#)
- [Lake Washington Watershed](#)
- [Lower Skagit Watershed](#)
- [Nisqually Watershed](#)
- [Nooksack Watershed](#)
- [Puget Sound Watershed](#)
- [Puyallup Watershed](#)
- [San Juan Islands Watershed](#)
- [Sauk Watershed](#)
- [Skokomish Watershed](#)
- [Skykomish Watershed](#)

- [Snohomish Watershed](#)
- [Snoqualmie Watershed](#)
- [Stillaguamish Watershed](#)
- [Strait of Georgia Watershed](#)
- [Upper Skagit Watershed](#)



## 6. What is the function of an estuary in a watershed?

<https://www.epa.gov/nep/basic-information-about-estuaries>

An estuary is a partially enclosed, coastal water body where freshwater from rivers and streams mixes with salt water from the ocean. Estuaries, and their surrounding lands, are places of transition from land to sea. Although influenced by the tides, they are protected from the full force of ocean waves, winds and storms by land forms such as barrier islands or peninsulas.

Estuarine environments are among the most productive on earth, creating more organic matter each year than comparably-sized areas of forest, grassland or agricultural land. The sheltered waters of estuaries also support unique communities of plants and animals specially adapted for life at the margin of the sea.

Many different habitat types are found in and around estuaries, including shallow open waters, freshwater and saltwater marshes, swamps, sandy beaches, mud and sand flats, rocky shores, oyster reefs, mangrove forests, river deltas, tidal pools and seagrass beds.

**<http://www.psp.wa.gov/NEP-puget-sound-estuary.php>**

As transition areas between fresh and saltwater, and land and sea, estuaries are rich in nutrients. They create a nourishing foundation – from plankton to plants – that supports the abundant array of life in Puget Sound. From oysters, clams and crab to salmon, orca and birds, all are sustained by estuaries.

Estuaries:

- Provide habitat for animals to live, feed and reproduce
- Serve as buffers to protect shorelines from erosion and flooding
- Filter pollutants, improving water quality

Estuaries are also among the most biologically productive ecosystems on earth, supporting Washington's multi-million-dollar shellfish and fishing industries, as well as estuary-dependent tourism and recreation industries.

## **7. Which river estuaries in Puget Sound are being restored?**

**<http://www.psp.wa.gov/NEP-overview.php>**

## **PUGET SOUND National Estuary program (NEP)**

- [NEP OVERVIEW](#)
- [PUGET SOUND ESTUARIES](#)
- [HEALTH OF PUGET SOUND](#)
- [REGIONAL APPROACH TO RECOVERY](#)
- [WHAT RECOVERY IS HAPPENING LOCALLY?](#)
- [HOW IS THE NEP FUNDED](#)
- [NEP SOLICITATION AND GRANTS](#)
- [NEP COMMUNICATIONS TOOLKIT](#)

Congress created the [National Estuary Program](#) in 1987. Twenty years later, in 2007, Congress designated Puget Sound as an Estuary of National Significance because it is

critical to the environmental and economic well-being of the nation. Also In 2007, Washington passed legislation creating the Puget Sound Partnership, a state agency dedicated to protecting and restoring Puget Sound.

The Puget Sound National Estuary Program is a non-regulatory initiative and a forum for engaging and aligning diverse organizations in partnership to create, implement and monitor approaches to achieve economic and environmental health of the Puget Sound. These organizations include federal agencies, tribal governments and organizations, state agencies, regional entities, local governments, not-for-profit organizations, higher education, the private sector, and people from around the Puget Sound region.

Collectively, the governments, organizations, businesses, and individuals engaged in Puget Sound recovery are called the [Management Conference](#). Using a collaborative, consensus-building approach, the Management Conference engages in developing and implementing the [Puget Sound Action Agenda](#). The Action Agenda serves as the Puget Sound Comprehensive Conservation and Management Plan. It aligns and integrates regional conditions, builds upon local input and supports both local and regional priorities for protection and recovery of Puget Sound.

In 2016, [Region X of the Environmental Protection Agency \(EPA\)](#) implemented a funding model intended to accelerate recovery and protection of Puget Sound. Under this model, the Puget Sound Partnership acts as a convener of the Puget Sound Management Conference and curates the [Puget Sound Action Agenda](#). The funding model supports the Partnership, the [Northwest Indian Fisheries Commission](#), and three strategic initiatives – habitat, shellfish, and stormwater managed by state agencies, the [Strategic Initiative leads](#). Those aligned under the EPA funding model work to maximize and leverage National Estuary Program dollars, and seek tangible on-the-ground results.

<http://www.psp.wa.gov/NEP-regional-approach.php>

## A REGIONAL APPROACH TO PUGET SOUND RECOVERY

With hundreds of organizations and thousands of projects dedicated to recovering Puget Sound's health, aligning those efforts is both necessary and challenging. With National Estuary Program support, Puget Sound partners work together to develop the Puget Sound Action Agenda – the organizing framework guiding Puget Sound recovery efforts. The Puget Sound Partnership, in turn, leads implementation of the agenda, creating and implementing systems and programs that make Puget Sound restoration, protection and recovery efforts:

1. **Accountable** - The Partnership tracks the progress of Action Agenda implementation and individual project performance.

2. **Measurable** - The Partnership assesses environmental progress and evaluates the effectiveness of key management actions.
3. **Rigorous and Adaptive** - The Partnership supports, synthesizes and communicates relevant science information to improve management programs, and to identify and adapt to emerging threats.
4. **Aligned and Integrated** - The Partnership works with local entities to align and integrate their programs with ecosystem-level priorities and strategies.

<http://www.psp.wa.gov/gis/NEPAtlas/LocalAreas>

Investments in local areas

## **8. What role does the Deschutes River play in providing salmon for Endangered Southern Resident Orcas?**

<https://www.seattletimes.com/seattle-news/environment/struggling-orcas-heavily-rely-on-urban-chinook-from-seattle-area-rivers-new-analysis-shows/>

**Southern-resident orcas depend on a wide diversity of chinook-salmon runs throughout a big geographic range, according to the analysis by NOAA Fisheries and the Washington Department of Fish and Wildlife.**

July 24, 2018

By [Lynda V. Mapes](#) Seattle Times environment reporter

Struggling orca whales need even urban chinook to survive, [new findings show](#).

A new look at just where orcas are eating big kings reveals the importance of rivers in north and south Puget Sound to the orcas' survival. Even the Puyallup, Green and Duwamish rivers count for the top predators.

The Nooksack, Elwha, Dungeness, Skagit, Stillaguamish and Snohomish to the north and Nisqually, Puyallup, Green, Duwamish, Deschutes and Hood Canal river systems to the south were among the rivers most important to the whales for providing the chinook that the critically endangered southern-resident killer whales eat, according to the analysis by NOAA Fisheries and the Washington Department of Fish and Wildlife.

## **9. When was the Deschutes River dammed?**

1951