

Puget Sound Institute 2024-2025 WSG Hershman Fellowship Position Description

Science to Policy for Puget Sound Recovery Planning

HOST ORGANIZATION

Center for Urban Waters – Puget Sound Institute
University of Washington Tacoma

LOCATION

326 East D St.
Tacoma, WA 98421

PRIMARY MENTORS

Aimee Kinney, Policy Lead
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Marielle Larson, Stakeholder Engagement and
Science Communication Manager
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OVERVIEW

[Puget Sound Institute](#) (PSI) provides analysis, research, and communication to advance the science of ecosystem protection. We receive major funding from the U.S. Environmental Protection Agency to provide technical support for [Implementation Strategies](#) aimed at improving the health of Puget Sound. In addition to applied research that promotes science-based solutions to Puget Sound recovery, we synthesize results of [Puget Sound Program](#) grants to support adaptive management and publish independent journalism about the science driving Salish Sea ecosystem recovery. We often work on emerging natural and social science with significant policy and management implications.

This fellowship will provide experience in research, collaborative planning, and science communication. Our small but multidisciplinary team consists of policy analysts, chemical engineers, ecologists, journalists, modelers, and GIS specialists. The primary mentors will be intentional about engaging other PSI staff members and agency partners based on the Fellow's specific interests. We operate in a hybrid work environment, with 3-4 days per week remote and 1-2 days in our Tacoma office, on-site with partner agencies, or at the UW Seattle campus.

PROJECT DESCRIPTION

The Fellow's primary project will involve research on one of the [critical uncertainties](#) identified during the development of an Implementation Strategy. These questions span a wide range of topics—marine shorelines, estuaries, floodplains, shellfish, water quality, land development patterns, toxics in marine life—and disciplinary orientations including policy, law, economics, public administration, and natural sciences. Based on the Fellow's unique skills and interests, they will select a topic from the provided list, scope and conduct research, and communicate results. Support and guidance will be provided by PSI staff, but the Fellow will have full ownership of their research project.

In addition, the Fellow will have opportunities to contribute to other PSI ongoing projects such as:

Developing a new Marine Vegetation Implementation Strategy

Key PSI staff: Caitlin Magel, Aimee Kinney, Sandra Dorning

Kelp and eelgrass provide crucial habitat and ecosystem services to Puget Sound. Unfortunately, marine vegetation distribution and abundance are declining due to several stressors including climate change and continued development. The Washington Department of Natural Resources is leading an effort to develop a new [Marine Vegetation Implementation Strategy](#) that identifies approaches for achieving regional recovery targets and provides guidance about the types of actions needed to inform funding priorities. The Fellow can support PSI Implementation Strategy development tasks including:

- Contributing to landscape analysis/literature review on relevant policies, programs, and science
- Participating in workshops with regional experts to identify and prioritize scientific uncertainties and barriers to Puget Sound recovery
- Communicating key findings to both scientific and management audiences using a range of engagement formats like briefings, blogs, and creative outreach

Example of equity consideration: Kelp has cultural significance to Indigenous communities. The Implementation Strategy will build on recent efforts to incorporate Traditional Ecological Knowledge of marine vegetation distribution shifts over time.

Feasibility Study for a Stormwater Infrastructure Fund

Key PSI staff: Aimee Kinney, Marielle Larson, Chris Wally Wright

Stormwater runoff from roads is an important source of pollution to Puget Sound. For example, researchers at the Center for Urban Waters helped discover [6PPD-quinone](#) a byproduct from tires that can kill coho salmon before they have a chance to spawn. PSI and the Washington Department of Ecology are collaborating on a feasibility study for a new state program to provide local jurisdictions with funding and technical support to install stormwater retrofits that reduce 6PPD-quinone and other contaminants in roadway runoff. The Fellow will have the opportunity to support the feasibility study, which may include analysis of model programs, stakeholder interviews and workshops, input on program design, and effective communication of the findings.

Example of equity considerations: A key component of this effort will be siting stormwater infrastructure to reduce environmental health disparities and to develop a funding mechanism that does not disproportionately affect low-income populations.

Contaminants and Machine Learning

Key PSI staff: Andy James, Maya Faber, Veronika Polushina

The health and environmental effects of contaminants of emerging concern (CECs) are poorly understood and as a result most remain largely unregulated. The Fellow could help explore the [potential utility of large language models and machine learning](#) to predict the toxicological exposure threshold for untested CECs. Once the most concerning contaminants are identified and prioritized, regulators can begin collecting the data needed to develop water quality standards.

Example of equity considerations: Contaminants often have a disproportionate impact on frontline communities, particularly people with a subsistence fish diet.

KEY MENTORSHIP, PROFESSIONAL DEVELOPMENT, AND NETWORKING OPPORTUNITIES

PSI's role as a [boundary spanning organization](#) means our work is highly collaborative. Depending on the focus area(s) the Fellow selects, they will have opportunities to expand their network by engaging with:

- State agencies including Puget Sound Partnership, Department of Fish and Wildlife, Department of Natural Resources, Department of Ecology, Department of Commerce
- Local jurisdictions including the City of Tacoma and King County
- Federal agencies including the U.S. Environmental Protection Agency
- Other research collaborators including Tribal staff; UW, OSU, WWU, and WSU scientists; and non-profit organizations (e.g., Puget Sound Restoration Fund, The Nature Conservancy)

The Fellow will also have unique opportunities to engage in regional forums, scientific conferences, and state trainings including a course on respectful engagement with Tribes.

DIVERSITY, EQUITY, AND INCLUSION STATEMENT

We are proud to be a part of the [most diverse University of Washington campus](#), where 61% of undergraduates identify as a person of color and 51% of undergraduates are the first in their families to go to college. As a unit of the University of Washington, Puget Sound Institute is guided by the overarching framework provided in the University's [Diversity Blueprint](#). We are working to create a welcoming environment where people of all backgrounds are valued, heard, and supported. We are committed to learning about diversity, equity, and inclusive practices both as individual contributors and in our collective work to recover a complex socio-ecological system. We enthusiastically welcome staff and collaborators with diverse perspectives and experiences. As highlighted in the project descriptions, we strive to meaningfully incorporate equity considerations and collaborators with lived experience into our research. Some recent examples include:

- [Leading a wastewater fee study that revealed hardship for low-income households](#)
- [Preserving and promoting collaborative natural resource policy making in Washington state](#)
- Elevating research by [Front and Centered](#) that highlighted inequities in the administration of Washington's Model Toxics Control Act during development of the [Toxics in Fish Implementation Strategy](#)