

NEW PUGET SOUND VITAL SIGNS FOR HUMAN HEALTH AND QUALITY OF LIFE



HOW ARE HUMAN HEALTH AND QUALITY OF LIFE LINKED TO PUGET SOUND RECOVERY?

The Puget Sound Vital Signs are shared measures for tracking the health of Puget Sound. The Washington State Legislature recognized the strong link between human wellbeing and ecosystem health when they established two of the six statutory goals for the Puget Sound Partnership (Partnership):

*A **healthy human population** supported by a healthy Puget Sound that is not threatened by changes in the ecosystem.*

*A **quality of human life** that is sustained by a functioning Puget Sound ecosystem.¹*

In July 2015, the Partnership adopted nine new and revised Vital Signs with associated indicators for Human Health and Quality of Life to track these goals. These Vital Signs will support the integration of human wellbeing throughout the planning and evaluation stages of Puget Sound recovery.

WHAT IS HUMAN WELLBEING?

Human wellbeing is an interdisciplinary perspective on what allows humans to thrive. It includes familiar topics such as physical and psychological health, as well as governance, social, cultural, and economic wellbeing. We are particularly interested in human wellbeing as it relates to people's engagement with the natural environment of Puget Sound, and these interests are reflected in the Partnership's goals related to human health and quality of life.

Indicators, or measures, of human wellbeing offer an innovative tool to better inform discussions around Puget Sound ecosystem recovery. They are particularly important for identifying multi-benefit approaches. By examining the tradeoffs of proposed strategies, we can more completely inform our decision making around sustaining healthy ecosystems while promoting strong communities and economies and supporting diverse cultural practices and livelihoods.

The effort to address human wellbeing within the context of our Puget Sound recovery goals falls within a broader attempt to better understand the full spectrum of roles that people play in ecosystem recovery. [Understanding the human dimensions of Puget Sound recovery](#) helps to ensure a more complete, holistic, and ultimately more successful approach to achieving ecosystem goals.

An [Integrated Conceptual Model for Ecosystem Recovery](#)⁴ provides a framework for understanding the diverse roles that people

play in Puget Sound health. The balanced design of the model gives equal importance to the conditions of human wellbeing and ecosystems, showing that we can't have one without the other. The model also articulates how people's diverse engagement with the ecosystem—as beneficiaries of ecosystem services, as pressures on natural systems, and as implementers of recovery efforts—can affect achievement of Puget Sound recovery goals.

HOW WERE LOCAL PERSPECTIVES ON HUMAN WELLBEING TAKEN INTO ACCOUNT?

Working directly with three local area partners—[Hood Canal Coordinating Council](#), the [Puyallup Watershed Initiative](#), and [Whatcom County](#)—and learning from a parallel effort with Coast Salish tribes² to identify indicators of indigenous health, we developed [candidate indicators for human wellbeing in the Puget Sound region](#). Further review and revision by regional partners, social scientists, and the Partnership's Science Panel and Social Science Advisory Committee led to the [selection of nine Vital Signs and associated indicators](#) across six domains of human wellbeing, all of which are affected by the status or management of the natural environment: Cultural, Economic, Governance, Physical, Psychological, and Social.³ The new Vital Signs capture aspects of human wellbeing that are both regionally relevant and locally important.

HOW WILL HUMAN WELLBEING BE TRACKED AND MEASURED?

Most of the new Vital Sign indicators will rely on data collected in a biennial survey administered by the Partnership; pilot projects are already underway. Data and reporting for most other indicators will be derived from existing datasets in collaboration with partners. One new Vital Sign, Drinking Water, was adopted as a placeholder until an appropriate indicator is determined. We anticipate reporting on many of the new Vital Signs in the 2017 State of the Sound.

¹ Washington State RCW 90.71.300, Section 107.

² Personal Communication (Pers. Comm.) Donatuto, J., T.A. Satterfield, and R. Gregory. 2011. Poisoning the body to nourish the soul: Prioritizing health risks and impacts in a Native American community. *Health Risk and Society* 13(2): 103-127.

³ Biedenweg, K., K. Stiles and K. Wellman. *In Press*. A holistic framework for identifying human wellbeing indicators for marine policy. *Marine Policy*.

⁴ Harguth, H., K. Stiles, K. Biedenweg, S. Redman and S. O'Neill. 2015. *Integrated Conceptual Model for Ecosystem Recovery*. Puget Sound Partnership technical memorandum.

GOAL: HUMAN HEALTH	
VITAL SIGN	INDICATOR
SHELLFISH BEDS	Acres of harvestable classified shellfish beds*
ONSITE SEWAGE SYSTEMS	Onsite sewage inspection and repair* Extent of Marine Recovery Areas program*
OUTDOOR ACTIVITY	Swimming beaches* Nature-based recreation: Average number of hours per week spent outdoors recreating Nature-based work: Average number of hours per week spent working in natural environment
AIR QUALITY	Air quality: <i>Specific indicator not yet identified</i>
LOCAL FOODS	Locally harvestable foods: Percent of residents able to harvest local food species Recreational shellfish beds: <i>Specific indicator not yet identified</i>
DRINKING WATER	<i>Placeholder for future development</i>
GOAL: HUMAN QUALITY OF LIFE	
VITAL SIGN	INDICATOR
ECONOMIC VITALITY	Natural resource industry output (GDP)**: GDP for natural resource industries per year Percent GDP in natural resource industries to state total GDP**: Percent natural resource GDP in Puget Sound to total GDP in Puget Sound Employment in natural resource industries: Number of jobs in natural resource industries
CULTURAL WELLBEING	Participation in cultural practices: Percent of residents who feel they are able to maintain cultural practices associated with the natural environment
GOOD GOVERNANCE	Good Governance Index <ul style="list-style-type: none"> Opportunity to influence decisions: Percent of residents who feel they have the opportunity to influence natural resource decisions if they want to Freedom to make decisions: Percent of residents who feel they have the rights and freedom to make decisions about how resources are managed Trust in government: Percent of residents who trust local and regional government to make the right decisions related to protecting and recovering Puget Sound Representation in community and government leaders: Percent of residents who feel represented by community and government leaders Access to information: Percent of residents who obtain information about natural resource issues from pre-defined sources
SENSE OF PLACE	Sense of Place Index <ul style="list-style-type: none"> Positive connections: Percent of residents who express a positive connection to the region Sense of stewardship: Percent of residents who feel strong sense of stewardship for the watershed Pride of place: Percent of residents who express a sense of pride about being from Puget Sound Psychological Wellbeing Index <ul style="list-style-type: none"> Inspiration: Percent of residents who experience inspiration from being in nature Stress reduction: Percent of residents experiencing reduced stress from being in nature Overall life satisfaction (<i>baseline for most other human wellbeing indicators</i>)
SOUND STEWARDSHIP	Sound Behavior Index* Engagement in stewardship activities: Percent of residents engaging in environmental stewardship

* Existing indicators prior to July 2015

** GDP = Gross Domestic Product, a measure of the size of an economy. In this case, industries measured include commercial fisheries, commercial shellfish, agriculture, timber, non-timber products, mining, and tourism.