

Puget Sound Ecosystem Recovery Targets

The Puget Sound Partnership’s Leadership Council has adopted the following ecosystem recovery targets, which describe desired future conditions of human health and well-being, species and food webs, habitats, water quantity, and water quality. These targets are policy statements that reflect the region’s commitments to and expectations for recovery, or a trajectory toward recovery, by 2020 based on scientific understandings of the ecosystem. Although targets are not regulatory, they are designed to guide the work of all organizations and people living in the Puget Sound region.

	Puget Sound Vital Sign	Related Targets
HEALTHY HUMAN POPULATION	Onsite Sewage	<ul style="list-style-type: none"> By 2020, all on-site sewage systems in marine recovery areas and other areas with equivalent enhanced operation and maintenance programs are inventoried, 95 percent are current with inspections, and all failed systems are fixed Designations of marine recovery areas or designation of other areas with equivalent enhanced operation and maintenance are expanded to 90 percent of marine shorelines not primarily served by sewers.
	Swimming Beaches	By 2020, all monitored Puget Sound beaches meet enterococcus standard.
	Shellfish Beds	A net increase from 2007 to 2020 of 10,800 harvestable shellfish acres, which includes 7,000 acres where harvest is currently prohibited.
HUMAN QUALITY OF LIFE	Puget Sound Quality of Life Index	Target not set
	Sound Behavior	Target not set
	Recreational Fishing Permit Sales	Target not set
	Commercial Fisheries Harvest	Target not set
	Chinook Salmon	By 2020, we stop the overall decline and start seeing improvements in wild Chinook abundance in two to four populations in each biogeographic region.
SPECIES AND FOOD WEB	Orcas	By 2020, achieve an end of year census of southern resident killer whales of 95 individuals, which would represent a 1 percent annual average growth rate from 2010 to 2020.
	Pacific Herring	By 2020, achieve increased spawning biomass for each genetic grouping to a minimum of: <ul style="list-style-type: none"> 5,000 tons for Cherry Point stock. 880 tons for Squaxin Pass stock. 13,500 tons for all other stocks combined.
	Birds	Target not set
	Shoreline Armoring	From 2011 to 2020, the total amount of armoring removed is greater than the total amount of new armoring in Puget Sound (total miles removed > total miles added); feeder bluffs receive strategic attention for removal of existing armoring and avoidance of new armoring; and soft shore techniques are used for all new and replacement armoring unless it is demonstrably infeasible.
PROTECT AND RESTORE HABITAT	Eelgrass	Eelgrass extent in 2020 is 120 percent of area measured in the 2000-2008 baseline period
	Land Cover and Land Development	<ul style="list-style-type: none"> By 2020, average annual loss of forested land cover to developed land-cover in non-federal lands does not exceed 1,000 acres per year and 268 miles of riparian vegetation are restored or restoration projects are underway. By 2020, the proportion of basin-wide growth occurring within Urban Growth Areas is at least 86.5% (equivalent to all counties exceeding goal by 3%) and all counties show an increase over their 2000-2010 percentage. Basin-wide, by 2020, loss of vegetation cover on indicator land base over a 5-year period does not exceed 0.15% of the 2011 baseline land area.

Puget Sound Vital Sign		Related Targets
PROTECT AND RESTORE HABITAT	Flood Plains	By 2020, 15 percent of degraded floodplain areas are restored or floodplain projects to achieve that outcome are underway across Puget Sound and there is no additional loss of floodplain function in any Puget Sound watershed relative to a 2011 baseline.
	Estuaries	By 2020, all Chinook natal river deltas meet 10-year salmon recovery goals (or 10 percent of restoration need as proxy for river deltas lacking quantitative acreage goals in salmon recovery plans) and 7,380 quality acres are restored basin-wide, which is 20 percent of restoration need.
WATER QUANTITY	Summer Stream Flows	By 2020, meet the following river-specific targets: <ul style="list-style-type: none"> • Maintain stable or increasing flows in highly regulated rivers: Nisqually, Cedar, Skokomish, Skagit, Green. • Monitor low flow in the Elwha River after dam removal. • Maintain stable flows in unregulated rivers that currently are stable: Puyallup, Dungeness, Nooksack. • Restore low flows to bring the Snohomish River from a weakly decreasing trend to no trend. • Restore low flows to bring the Deschutes River, North Fork Stillaguamish River, and Issaquah Creek from a strongly decreasing trend to a weakly decreasing trend.
WATER QUALITY	Marine Water Quality	Dissolved Oxygen in Marine Waters By 2020, human-related contributions of nitrogen do not result in more than 0.2 mg/L reductions in dissolved oxygen levels anywhere in Puget Sound.
	Freshwater Water Quality	Freshwater Water Quality <ul style="list-style-type: none"> • By 2020, at least 50 percent of all monitoring stations with suitable data have Freshwater Water Quality Index scores of 80 or higher. • By 2020, achieve a decrease in the number of impaired waters (303(d) list) in Puget Sound freshwaters. Insects in Small Streams By 2020, 100 percent of Puget Sound lowland stream drainage areas monitored with baseline B-IBI scores of 42-46 or better retain these “excellent” scores and mean B-IBI scores of 30 Puget Sound lowland drainage areas improve from “fair” to “good.”
	Marine Sediment Quality	By 2020, all Puget Sound regions and bays achieve the following: Chemistry measures reflect “minimum exposure” (i.e., mSQS is <0.1 and the SCI is >93.3), Sediment Quality Triad Index (SQTI) scores reflect “unimpacted” conditions (i.e., SQTI values >83), and no measurements exceed the Sediment Quality Standards chemical criteria set in the Washington State sediment management standards.
	Toxics in Fish	By 2020, toxics in fish are below threshold levels. Target is achieved if each of the following conditions is observed in monitoring results from 2019 or 2020: <ul style="list-style-type: none"> • Bioaccumulative toxics – 95 percent of samples meet the following thresholds: <ul style="list-style-type: none"> » Concentrations of PCBs and PBDEs in Puget Sound herring, English sole, salmon and steelhead are below adverse effects thresholds (e.g., 2,400 ng PCB/g lipid and 1,400 ng PBDE/g lipid). » Concentrations of PCBs and other biocumulative toxics in Puget Sound herring, English sole, salmon, and steelhead are below human-health screening levels (e.g., Department of Health screening levels for recreational or subsistence consumption rates, currently 33 ng PCB/g and 10 ng PCB/g fish tissue, respectively for a non-cancer endpoint). • PAHs and endocrine disrupting compounds – all samples meet the following thresholds: <ul style="list-style-type: none"> » English sole in Puget Sound exhibit no PAH-related liver disease. » English sole in Puget Sound exhibit no toxics-related reproductive impairment. » PAHs in herring are below an effects threshold.