

The Puget Sound Partnership Presents: Draft Action Area Profiles

An important part of the Puget Sound Partnership's work is connecting with citizens, watershed groups and local governments. The legislation that created the Partnership established seven geographic action areas around the Sound to address and tackle problems specific to those areas.

Each of the seven action areas plays a unique role in sustaining the Puget Sound ecosystem. Distinct natural features and ecological process, urban and rural centers, wildlife populations, economics and history, and stressors on the environment characterize the different areas. In an effort to broadly describe the individual areas and ultimately develop tailored solutions to problems, the Partnership compiled information about each action area into an informative overview. The profiles are not meant to be detailed summaries of each action area; rather they are guided tours of what gives it a sense of place and the unique role in the ecosystem. The profiles will be refined to reflect the management actions needed to address threats in each area and be included in the Action Agenda.

The profiles are made up of three sections: the narrative, the action area map, and the action area concept diagram.

- Narrative
 - physical characteristics, demographics, land use, ecosystem characteristics and assets, and threats/stressors
- Action area map
 - base map for each action area, the incorporated and urban growth areas, public lands, tribal reservations, and major landmarks that are described in the text, and points of interest
- Action area concept diagram
 - graphic representation of the narrative related to ecosystem services and stressors

Please take some time to read through these action area profiles and familiarize yourself with an area you may or may not know much about. This is an opportunity to gain some insight and understanding as to how each action area is unique and why it needs attention.

The Puget Sound Partnership Presents: South Central Puget Sound Action Area Profile

Physical Description

Ecosystem “drivers” are the major forces that shape the physical processes of the environment, such as climate, geology, and increasingly, human actions. In the South Central Puget Sound Action Area, people are the drivers—both in terms of their millions of daily car trips, and in the way that they have reshaped the physical and biological structure of the region. This is the most urbanized portion of Puget Sound, with commercial and residential buildings, huge areas of pavement, a heavily modified shoreline, and a pervasive road network. Although portions of the action area have been intensively developed, approximately 77% of the area is not considered urban, with vast tracts of agricultural lands in rural King and Pierce County, and undeveloped wilderness in Mount Rainier National Park and the Mount Baker-Snoqualmie National Forest. The three major river systems originate in the Cascades near Snoqualmie Pass, Cascade Pass, and Mount Rainier, travel through forests and farms, and empty into Lake Washington and Puget Sound. Glacial melt from Mount Rainier feeds the Puyallup/White River system, while the Green/Duwamish and Cedar/Sammamish are supplied by snow melt and rainfall. Lowland areas receive average rainfall of 40 inches per year. In highly urbanized portions, many streams or stream segments have been placed in drainage pipes and re-assert their presence during storms and flood events.

The two largest bays in the region are Seattle’s Elliott Bay and Commencement Bay by Tacoma. Vashon and Maury are the largest regional islands. The major currents within the saltwater basin of central Puget Sound generally flow northward along the west side of Vashon Island, and southward through the East Passage. The marine waters of Puget Sound form warm layers at the surface during the summer months due to river input and solar heating. These layers are mixed during winter months by seasonal winds and cool weather. An underwater sill by the Tacoma Narrows also alters the pattern of marine water circulation.

Land Use, Population, and Economy

South Central Puget Sound is the economic driver of the region, and largely of the State of Washington. The region generates approximately \$165 billion in annual economic activity, comprising approximately 62% of the gross state product. Major commercial and industrial enterprises are concentrated here, including technology, aerospace, finance, insurance, health care, business and professional services, commercial fishing, recreation, and tourism. These industries are served by international port facilities in Seattle and Tacoma, along with SeaTac international airport, Boeing Field, and passenger and freight railroad services. The region has 14,900 acres of designated manufacturing industrial centers in six locations: Ballard Interbay, Duwamish, North Tukwila, Auburn/Kent, Overlake, and the Port of Tacoma. Water supply for most of the population of the area is provided by the City of Seattle and the City of Tacoma, through their operations on the Cedar and Green Rivers, respectively.

Historically, South Central Puget Sound was the home of the ancestors of the Muckleshoot and Puyallup Tribes, who were supported by rich shellfish resources, salmon, and wildlife in the upland forests. Today, the 2.5 million residents of the South Central Action Area live in three of Washington's largest cities—Seattle, Bellevue, and Tacoma, and in suburban and rural residential development that reaches across unincorporated King and Pierce Counties. The northernmost portion of the action area is located in southwest Snohomish County. Following the adoption of the Growth Management Act in the 1990s, land use strategies have been effective in containing some of the sprawl, as 96% of the growth in King County has been concentrated within the designated urban growth boundary. Significant tracts of commercial forest and agriculture remain in the eastern and southeastern portions of the area. Local government staff report challenges in trying to retain habitat features and natural amenities while trying to accommodate a projected 800,000¹ new residents in the next 20 -25 years.

Unique ecosystem characteristics and assets

The many ports and waterways of South Central Puget Sound have made it an international shipping center for regional and national industries, natural resource extraction (logging, fisheries, mining), and agricultural products. Urban estuaries support many small marine, ship building/repair and industrial enterprises. Public transportation to Kitsap County and Vashon Island is provided by the Washington State Ferry System and other vessel traffic consists of passenger ferries, fishing boats, research vessels, small recreational craft, and cruise ships. Recreation spots include Lakes Washington, Sammamish, and Tapps; Puget Sound beaches such as Alki Beach in West Seattle, Seahurst in Burien, and Pt. Defiance in Tacoma; and along the Mountain to Sound Greenway along Interstate 90, the middle Green River, and the White River above Enumclaw. The headwaters of the major rivers are protected through their status as parklands managed by the National Park Service; wilderness areas managed by the USDA Forest Service, and the headwater source areas of the water supplies of Seattle and Tacoma.

The federal listing of Puget Sound Chinook was the first time a threatened species listing for salmon had occurred in such an urban environment. Despite the extensive urbanization of South Central Puget Sound, Chinook salmon and other salmon species spawn in the major rivers and lakes. Unique salmon populations include the spring run of White River Chinook, Issaquah Creek and Cedar River summer and fall Chinook, Lake Sammamish kokanee, and Lake Washington sockeye. The Green River is one of the top ten steelhead rivers in Washington and supports substantial natural and hatchery populations of salmon. Bull trout, coho, rainbow and coastal cutthroat trout, chum and pink salmon are also present in some of the river systems. Strong community efforts and watershed partnerships are directed at salmon recovery throughout the area, and many restoration programs are regionally financed. While other fish, wildlife, and bird communities are abundant in undeveloped portions of the action area, those

¹ OFM numbers were used for this estimate. Represents the difference between 2030 and 2005 for King and Pierce County, plus 10% of the projection for Snohomish during the same period. OFM estimates 1.5 million total for Puget Sound counties from 2005 to 2030

species that co-exist well with humans are generally present in the urban sectors. Interestingly, Elliott and Commencement Bays contain six-gill sharks, which seem to prefer urban areas.

Ecosystem Stressors

Historical modification of the ecosystem is at an entirely different magnitude in the South Central Action Area than in other parts of Puget Sound. This region was re-plumbed when the White, Cedar, and Black Rivers were re-routed, and the Hiram Chittenden locks were constructed. The locks and ship canal dropped the level of Lake Washington by nine feet, and eliminated the marshes along much of its shoreline. Several large dams or diversions are present in the action area on the Cedar (water supply), Green (flood management and water supply), Puyallup, and White Rivers. The lower Puyallup and other rivers were heavily diked and straightened, cutting off meanders, side channels, flood plains, and wetlands that provided extensive habitat for salmon and birds. Industrial actions left toxic contamination in the lower Duwamish River (Seattle) and Commencement Bay in Tacoma, which became EPA-designated Superfund sites. Saltmarsh habitat at the mouths of the major rivers is essentially gone, and riparian forest has been eliminated along many water courses. Armoring of the shoreline to create the port facilities, railroad corridors, and other facilities that have supported the regional economy has been extensive. Along South Central Puget Sound, over 52% of the marine shoreline has been modified. The interruption of sediment movement from shoreline armoring has led to erosion and deposition problems in some locations. Overwater structures on the larger lakes in the region have a high density per shoreline mile. Forestry and agriculture removed forest cover along many rivers and streams. A complex web of roads, bridges, and culverts support the human transportation system, but have impacted the natural infrastructure of rivers and streams, and created barriers to the movement of fish and wildlife.

The historical decline of ecosystem health has not been universal or irreversible in all parts of the South Central action area. Lake Washington was heavily polluted in the 1950s from sewage, but local residents funded a highly successful cleanup program. Local areas are greatly committed to salmon recovery programs. Toxic sites are being cleaned up and land conservancies are working to maintain forest cover, wildlife corridors, recreational greenways, and rural farmlands.

Currently, polluted stormwater and industrial discharges that originate in South Central Puget Sound are some of the biggest threats to ecosystem health. Freshwater quality has been impaired in local streams from the metals and hydrocarbons that wash from roads and parking lots. “Endocrine disrupting compounds” from pharmaceuticals and personal care products have been found in water samples in King County. Industrial outfalls are concentrated in this region—80% of the waste discharged from point sources comes from South Central Puget Sound. Vessel traffic poses a risk of invasive species arriving from foreign ports, as well as major and minor oil and chemical spills. Small communities in the South Central Action Area, such as Vashon Island, face substantial challenges in addressing wastewater treatment and water supply. The South Central Action Area is expected to receive half of the projected growth in Puget Sound in the coming decades.

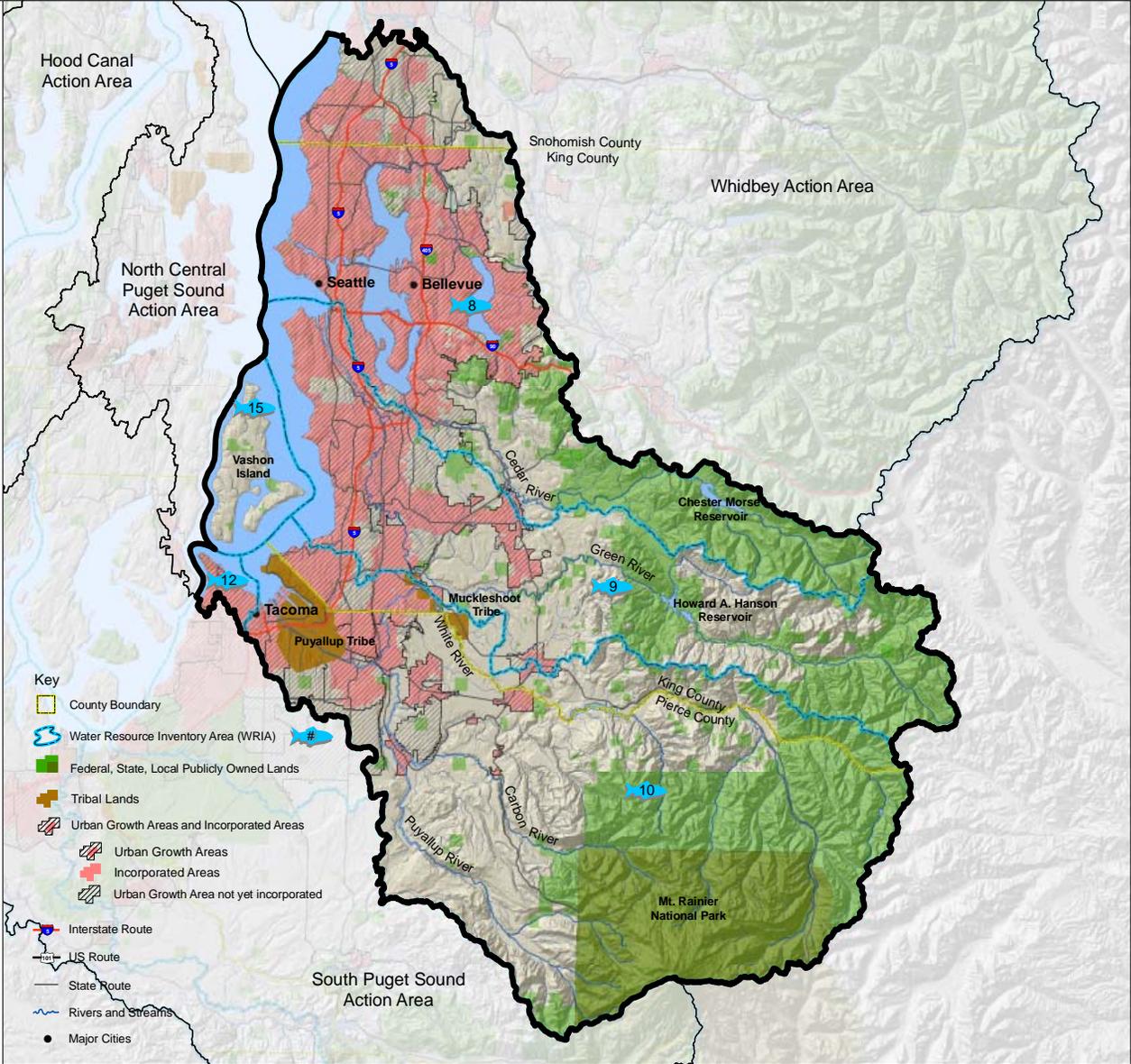
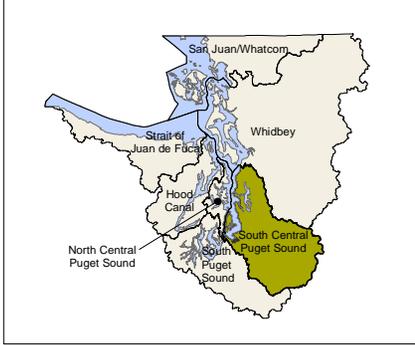
South Central Puget Sound Action Area (DRAFT July 11, 2008)

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|-------------------|-----------------|----------------------|--|
| Cities | Counties | WRIAs | |
| Algona | King | (8) Cedar-Sammamish | Hazelwood Park |
| Auburn | Pierce | (9) Duwamish-Green | Highlands Park |
| Beaux Arts | Snohomish | (10) Puyallup-White | Hillside Park |
| Bellevue | | (12) Chambers-Clover | Honey Creek Open Space |
| Black Diamond | | (15) Kitsap | Innis Arden Reserve |
| Bonney Lake | | | Issaquah Creek Natural Area |
| Bothell | | | Kanaskat Palmer Recreation Area |
| Brier | | | Kelsey Creek Park |
| Buckley | | | Kennydale Lions Park |
| Burien | | | Kiwanis Park |
| Carbonado | | | Klahanie Park |
| Clyde Hill | | | Kubota Gardens Natural Area |
| Covington | | | Lake Boren Park |
| Des Moines | | | Lake Sammamish State Park |
| Edgewood | | | Lakemont Park |
| Edmonds | | | Lakemont Stratford Open Space |
| Enumclaw | | | Lakeridge Park |
| Everett | | | Lakewood Park |
| Federal Way | | | Liberty Park |
| File | | | Lincoln Park |
| Hunts Point | | | Log Cabin Reach Natural Area |
| Issaquah | | | Lower Peterson Creek Corridor Natural Area |
| Kenmore | | | Luther Burbank Park |
| Kent | | | Magnolia Park |
| Kirkland | | | Magnuson Park |
| Lake Forest Park | | | Maplewood Heights Park |
| Lynnwood | | | Maplewood Park |
| Maple Valley | | | May Creek Park |
| Medina | | | May Valley Park |
| Mercer Island | | | McGarvey County Park Open Space |
| Mill Creek | | | Mee Kwa Mooks Park |
| Milton | | | Mercer Slough Nature Park |
| Mountlake Terrace | | | Mitchell Hill Forest |
| Mukilteo | | | Mount Rainier National Park |
| Newcastle | | | Newcastle Beach Park |
| Normandy Park | | | Newport Hills Park |
| Orting | | | Nolle State Park |
| Pacific | | | Norse Peak Wilderness |
| Puyallup | | | North Highlands Park |
| Redmond | | | North Squak Valley Park |
| Renton | | | Ollalie State Park |
| Ruston | | | Peterson Lake Natural Area |
| Sammamish | | | Petrovitsky County Park |
| SeaTac | | | Pine Lake Park |
| Seattle | | | Pioneer Park |
| Shoreline | | | Point Defiance Park |
| South Prairie | | | Preston Arboretum |
| Sumner | | | Preston Athletic Fields |
| Tacoma | | | Preston Ridge Park |
| Tukwila | | | Ravenna Park |
| Wilkeson | | | Redman Park |
| Woodinville | | | Redmond Watershed Preserve |
| Woodway | | | Ricardi Reach Natural Area |
| Yarrow Point | | | Richmond Beach Park |
| | | | Robinswood Park |
| | | | Saltwater State Park |
| | | | Sammamish Cove Park |
| | | | Schmitz Park |
| | | | Seward Park |
| | | | Shoreview Park |
| | | | Sierra Heights Park |
| | | | Soaring Eagle Regional Park |
| | | | Soos Creek Trail Site |
| | | | South Squak Valley Park |
| | | | Spring Lake/Lake Desire County Park |
| | | | Squak Mountain State Park |
| | | | Squak Mtn/Tiger Mtn Corridor |
| | | | St. Edwards State Park |
| | | | Sunrise Park |
| | | | Talus Open Space |
| | | | Taylor Mountain Forest |
| | | | Tibbetts Valley Park |
| | | | Timberlake Park |
| | | | Tradition Plateau Conservation Area |
| | | | Volunteer Park |
| | | | Washington Park Arboretum |
| | | | Wenatchee National Forest |
| | | | Weowna Beach Park |
| | | | West Hylebos Wetlands Park |
| | | | Westcrest Park |
| | | | Wetland 14 Natural Area |
| | | | White Center Pond Natural Area |
| | | | Wilburton Hill Park |

Tribal Lands

Places of Interest

Puget Sound Action Areas



- Key**
- County Boundary
 - Water Resource Inventory Area (WRIA) #
 - Federal, State, Local Publicly Owned Lands
 - Tribal Lands
 - Urban Growth Areas and Incorporated Areas
 - Urban Growth Areas
 - Incorporated Areas
 - Urban Growth Area not yet incorporated
 - Interstate Route
 - US Route
 - State Route
 - Rivers and Streams
 - Major Cities

