

1. WSPRC Sound-Friendly Mission

OVERVIEW

In December 2005, the Governor and Legislature identified that Washington State Parks were appropriate places to provide model projects to Puget Sound residents on how to care for the Sound. Green Vision Plans for Saltwater, Twanoh, and Fort Casey State Parks are under development through a coordinated planning effort in response to the Governor's Puget Sound Initiative and demonstrate the latest concepts in best management practices, low-impact development, and necessary facility renovations to fulfill the project's intent. When the vision plan for these three state parks is executed, each park will model green design strategies that ultimately protect and enhance the overall health of the Puget Sound.

Implementing the vision plans for the three state parks should reduce the impact of the built environment on the natural environment while meeting the following Washington State Park guidelines:

- Maintain balance between natural resources, cultural resources, and recreational resources.
- Development concepts must maintain financial capacity of the agency (low operating impacts and high money generating capabilities).
- Solutions must not increase risks to the agency.
- Solutions must demonstrate a measurable benefit to the Puget Sound and park landscape.
- Solutions must have partnership elements.
- Solutions must be bold and easily explained.
- Solutions must not encumber large areas, or main recreational areas, of the park for non-recreational purposes.

The Green Vision Plan for Fort Casey, Saltwater, and Twanoh State Parks is under development through a coordinated planning effort. The 7-month timeframe and process for completing this project is purposely streamlined to demonstrate the Governor's point that Sound-Friendly projects initiated by the state government on park lands can be implemented in a highly efficient and timely manner.

Washington State Parks selected Fort Casey, Saltwater, and Twanoh State Parks to model sustainable design and low-impact development practices. Part of the Governor's Puget Sound Initiative, these projects demonstrate best practices that contribute to Puget Sound community health.

2. Project Purpose and Process

The Governor and Legislature chose Washington's state parks as platforms to model how residents can care for the Puget Sound. Green Vision Plans for Fort Casey, Saltwater, and Twanoh State Parks will be developed through a coordinated planning effort in response to the Governor's Puget Sound Initiative. These Green Vision Plans are intended to demonstrate the latest concepts in best management practices, low-impact development, and necessary facility renovations. When the Plans are executed, each park will model green design strategies that ultimately protect and enhance the overall health of Puget Sound.

To initiate this Sound-Friendly project, the Jones & Jones design team and WSPRC toured the state park sites in November 2006, and gathered data and site analysis information. In response to the Puget Sound Initiative, a fair amount of research had already taken place with the intention of embracing the overall issues that exist within the Puget Sound. This research included examining major water quality issue areas, park-specific data collection, site visits with professional environmental participants and brainstorming sessions both within the agency and with other agencies. This collected information along with the consultants' available resources were synthesized in narrative and graphic form describing the site conditions for each state park.

The design team also reviewed various planning documents and reports addressing Puget Sound issues and goals previously generated by groups such as the Puget Sound Action Team, Washington State Parks, Washington State Department of Ecology, and other organizations. This groundwork was incorporated into this green visioning process, and the final Sound-Friendly Green Vision Report will largely encapsulate the ideas and strategies developed in prior Puget Sound planning efforts.

Washington State Parks hosted three Technical Team workshops in December 2006, scheduling one workshop at each of the parks. The purpose of these workshops was to develop a common site understanding of each park and brainstorm opportunities for green design strategies. The Jones & Jones design team facilitated discussion with the broad range of park staff and other interested stakeholders. The design team, which includes expertise in architecture, landscape architecture, fisheries, habitat restoration, civil engineering, and public involvement, exchanged information and ideas with these stakeholders to ensure that the team had an accurate understanding of the park's needs for improvement and the possible strategies for making those improvements.

Each workshop included an introduction to the project, and a group tour of the park to observe and examine key areas, as well as explore possible park improvements. The consulting team described their observations and analyses related to the current state and functioning of the parks' key ecological and social systems. These systems or topics included: hydrologic, biogeochemical, habitat, cultural/historic, recreation, and community. Workshop participants were then able to share their wisdom and ideas with the consulting team, creating both an improved sense of the situation "on the ground" at each park, as well as the Sound-Friendly opportunities that may be available at each site. The workshops resulted in engaged, interactive, and productive discussions that provided the consultant team with the in-depth information they needed to move forward on the Sound-Friendly Green Vision Plan.

The Jones & Jones team met with Washington State Parks core team members in January 2007 to synthesize the Technical Team's proposed actions into "green strategies" for each state park. Five major goals were identified as common to all state parks in the Puget Sound:

GOAL 1

HEALTHY WATER QUALITY: Reduce water and sediment pollution into the Puget Sound

GOAL 2

HEALTHY WATER QUANTITY: Address water quantity (e.g., flooding, sea level rise)

GOAL 3

HEALTHY HABITAT: Create healthy habitat and populations of fish and wildlife species

GOAL 4

HEALTHY PEOPLE: Promote diverse community and recreational opportunities that enhance Puget Sound health

GOAL 5

HEALTHY STRUCTURES: Sustainable design and low-impact design

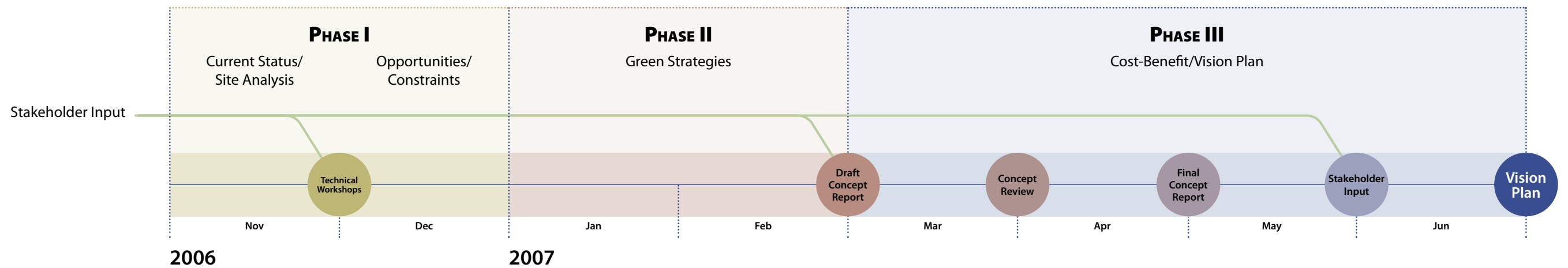
The team identified a suite of "green" strategies common to all state parks to achieve the five goals. Very specific actions or concepts were developed to carry out a given strategy for an individual state park. Thus, while the goals and strategies remain consistent for each of the three focus state parks, and potentially for all state parks, the way they are carried out in an individual state park is tailored to that park's unique physical characteristics, recreational and social uses, management issues, and other important considerations. For example, the Goal "Healthy Water Quality" and its associate six Strategies (e.g., "treat storm water run-off before discharge to the Sound") apply to all state parks, however, the Actions vary at each park to fit the special park character.

Built upon stakeholder input and site analysis, these green strategies and actions form the basis of the Graphic Concept Plans for Fort Casey, Saltwater, and Twanoh State Parks, and the overall Concept Report. This Concept Report will be circulated for review and comment by all of those who attended the December workshops, as well as a wide variety of other individuals and groups from throughout the Puget Sound region who have expressed an interest in this planning effort.

After this initial public review, the concepts for the three parks will be further modified and refined through cost-benefit and other analyses. A value assessment of the net qualitative and quantitative benefits along with general costs will be conducted. Where alternative concepts or actions are presented, they will be rated according to their value: "Highest Sound Benefit," "Moderate Sound Benefit," and "Modest Sound Benefit."

WSPRC and the design team will circulate “second draft” plans for review and comment by a wide audience of stakeholders, and, based on this input and further refinement, the final concepts will be solidified into “green visions” for all three state parks. It is anticipated that by Spring 2007 the WSPRC Sound-Friendly Green Vision Plan Report will be finalized and presented to the state legislature and other key decision-makers. The Green Vision Report will document the refined green strategies and vision plans for each park. It will establish, within the context of standard measurable units, how implementing the proposals of the Green Vision Report will: conserve energy and/or water; remove pollutants from non-point or point source discharges; improve near-shore and aquatic habitats; and otherwise model “Sound-Friendly” development. Supporting narrative text, diagrams, and photos will be provided. The report will be used as a platform for more detailed design work and project implementation.

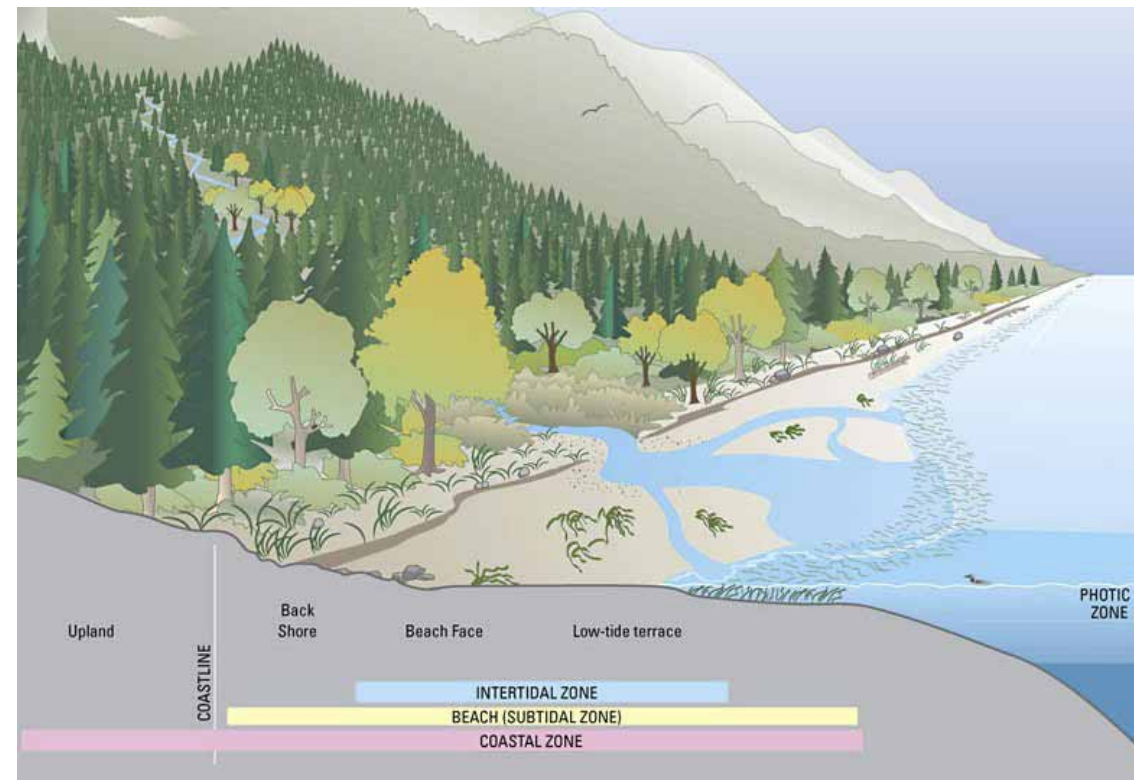
WASHINGTON STATE PARKS PROJECT TIMEFRAME



3. Existing Conditions and Key Issues

PUGET SOUND STATE PARKS

Many of Washington State Parks provide public access to the Puget Sound and offer visitors unique opportunities to visit forested areas within their communities. Parks provide protected habitat for animals and foster natural ecosystems (protecting trees, rivers, and beaches). However, increased residential and commercial development in the Puget Sound Region has put a strain on ecosystems and habitats. Dramatic changes in land cover over the last 50 years have reduced forested areas and replaced them with pavement, buildings, and landscaped areas. Parks have therefore become places where visitors from urban and suburban areas can enjoy a natural setting and access lakes, rivers, and beaches.



Produced by Visual Communication and GIS Unit, King County Department of Natural Resources
File Name: 9901 Stream Mouthups



I. WATER QUALITY

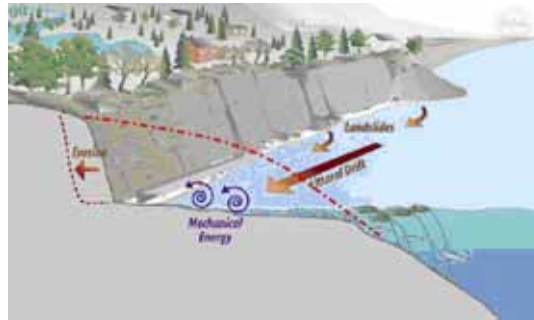
The reduction in natural, forested areas creates challenges to park management and maintenance. Streams, creeks, and shorelines have been over-used to the degree that there is ongoing, potentially lethal damage to their ecosystems and dramatic effects to the water quality of water bodies. Natural locations of shorelines and streams that were historically beaches have been relocated and confined to make way for parking and grass areas. Several older parking areas were not designed to treat water from automobile pollutants. Many park comfort stations are outdated; they were not designed to meet current capacity requirements and are therefore failing. Campgrounds and trails are located within riparian corridors; these creek-side facilities cause erosion and reduction of critical fish habitat.

Washington State Parks currently has the opportunity however to restore natural elements, improve park amenities, and repair failing systems that are reducing the quality and ecologic function of adjacent water bodies.

II. WATER QUANTITY

Already the effects of climate change, also called global warming, are being felt around the world and right here in Puget Sound. While there are many predicted effects on Puget Sound from climate change, one of the most important for shoreline State Parks is sea level rise. Significant sea level rise is predicted in many areas of Puget Sound. In the Seattle area current models predict a 2.8-foot rise in mean sea level over the next 100 years.

Such increases are compounded by extreme high tides and low air pressure, high wave, storm events. Flooding will result when waves overtop the armoring or natural beach crest forming the shoreline of most parks. Some parks are already experiencing flooding problems in shoreline areas. Different amounts of sea level rise will occur by the end of this century in different locations, based on geologic factors of subsidence and uplift. Areas of most subsidence, or land lowering, such as in the Tacoma and Olympia areas, are predicted to experience sea level rise of approximately three feet, while areas of the greatest uplift, such as Neah Bay, are predicted to experience slightly over one foot of sea level rise.



III. HABITAT

The Washington State Parks system includes numerous parks along the shoreline of Puget Sound. These parks often provide a broad range of natural habitats including marine nearshore, streams, small estuaries, wetlands, and forested uplands. All of these habitats exist within systems of physical, habitat forming processes that support biological processes. In order to be good stewards of Puget Sound, park managers need to understand how their parks function within these larger systems. For example, Puget Sound beach habitats are dependant on a supply of sediment (sand and gravel). The majority of Puget Sound sediment sources are unstable bluffs. When deposited on the beach, this sand and gravel sediment is pushed by prevailing wind driven waves from source areas to deposition areas. Often, beaches and bluffs are modified with bulkheads and rock armoring as part of upland development. As a result of these modifications, the sediment sources are often reduced, blocked, or eliminated.

Other results of shoreline modifications are elimination of habitats by conversion from aquatic to upland, and loss of shoreline vegetation. Similar, parallel effects can occur along streams that run through parks and end in Puget Sound. The small estuaries formed by streams entering Puget Sound are especially biologically productive habitats deserving special attention by park managers. The stewardship of the parks has generally protected habitat function more so than in privately held shoreline areas; however, the Governor's Puget Sound Initiative is setting an even higher standard for how people and habitat coexist.

A critical issue for park managers is the recognition that habitat and human use are not necessarily in conflict. As our shorelines continue to be developed, our State Parks serve more as habitat oases for people to enjoy. As a result, people come to parks to enjoy watching fish and wildlife and to interact with more natural habitats. The recognition by park managers that natural habitats are the attraction creates an opportunity to incorporate more habitat-friendly features and to use Puget Sound State Parks as models of good habitat stewardship.

A good example of this opportunity is the shoreline areas of parks. Currently, these areas often consist on mowed lawns on filled areas protected by rock armoring and lacking riparian vegetation. The armoring, fill, and removal of vegetation all negatively impact habitat quality, and also diminish the resource park visitors came to experience. Alternatively, a more Sound-Friendly shoreline would include a more natural beach, usable by park visitors, including drift logs, trails, picnicking, and native vegetation. Similar examples could be given for how parks are designed at stream mouth estuaries, along stream corridors, and around freshwater wetlands.

IV. COMMUNITY AND RECREATION

Washington State Parks is gearing up for their centennial celebration, improving park facilities, building community support, and adding new parks. The 94-year old park system originally served surrounding rural communities by providing recreational facilities for camping, boating, and day use. The types of recreation have not changed much, but the amount of use has changed dramatically. Visitors from out of state increasingly come to State Parks to enjoy Washington's wonderful outdoor environment. As the state parks host more regional and national visitors, facilities such as boat launches, hiking trails, picnic areas, buildings, campgrounds, and transportation corridors are being improved to accommodate the higher use. Greater use has also led to more impacts to the environment and the health of the Puget Sound. If 300 people used a boat launch during the summer 50 years ago, now 3000 people use that boat launch, increasing pollution from car and boat engines and from boat waste in the Sound. Sound-Friendly recreational practices will become even more essential as the population grows, to avoid impacting the Puget Sound.

The State Park System around Puget Sound has changed over the years from an agency focusing on recreation and on locating that recreation as close to the scenic and environmentally significant sites as possible to an agency that owns prime parcels of land in the Puget Sound and manages those properties by paying attention to their cultural and natural resources. Park staff increasingly provide education and interpretive programs, redefining recreation as a learning experience.

While park facilities vary in terms of condition and quality, their Puget Sound setting makes them unique and provides a place for local communities to recreate and learn about their native environment. Park staff work closely with local school groups, environmental stewardship groups and volunteers of all ages to preserve and protect these special places. As budgets shrink, invasive species maintenance, stream restoration, and Clean Up days are increasingly staffed by community volunteers who learn more about their state park's landscape than they could by just visiting for a day. This community connection is integral to the parks throughout Puget Sound and is the best hope for spreading a message of environmental stewardship to all park users and the people of Puget Sound.





V. DESIGN AND DEVELOPMENT

The Puget Sound has been a nexus of human development for centuries, first as a bountiful traditional homeland for Native peoples, and later as the location for most of the urban centers of choice for settlers arriving in the Northwest. The necessity of water transport for shipping, as well as the aesthetic appeal of the water pulled many of these later settlements into direct contact with the Sound, and as the pace and scale of construction increased, so did their effects upon the watersheds and habitats around the Sound.

Over the years, there have been increasing demands placed on both the Puget Sound and on the State Parks around it, as both local populations and tourist numbers have swelled. Development has changed the very nature of each park's boundaries. Saltwater and Twanoh State Parks, both originally rural parks, have increasingly become urban or ex-urban parks with heavy residential development surrounding them. In cases like these, the parks represent the most pristine and healthy ecosystem in a significant area; conversely the health of the local ecosystem depends upon the park's integrity more than ever.

Many of the parks in Washington State were originally developed in the 1930s (with the help of programs such as the Civilian Conservation Corps) or even earlier. Traditional design of parks and facilities at this time focused on maximizing recreational opportunities, as the scale and ramifications of human environmental impact had not yet become apparent. Many of the drivers in the development model from this era were user-based, and as often as not, attempted to bring the park visitor as close to the water's edge as possible. This policy created many parks whose infrastructures (parking, lawn, buildings) were adjacent to the most sensitive coastal areas, a condition that is not optimal for stormwater infiltration, healthy habitat, and the effects of rising sea level.

In spite of all these challenges, the development of the Parks System offers a great opportunity for improving human impact upon the waters of Puget Sound. Parking areas can be redesigned to allow better infiltration; lawns can be strategically re-allocated to native habitat; buildings can be made significantly greener. As opportunities for minimizing these effects, the Park architecture generally falls into one of three categories: historic structures, existing non-historic structures, and potential new construction to meet growing needs. Historic structures present the most limitations in terms of sustainable retrofits, though there are many interventions which can improve their efficiencies without detracting from their historic significance. Rehabilitating existing buildings with sustainable features in turn offers more opportunities and can often be quite cost effective. Finally, new structures offer a chance to create buildings which sit as lightly as possible upon the land and implement truly progressive design standards. All park development performs a double function, both as useful infrastructure and as highly visible educational objects promoting Sound-friendly approaches to visitors.

