

WEST SEATTLE

LIVING LATTICE

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BATHYMETRY / TOPOGRAPHY

In light of the diverse, dynamic and dramatic geomorphologic and marine features which are unique to this region, the West Seattle team created a specialized GIS map to visualize these features. The Seattle and West Seattle maps on this page are generated from a combination of digital elevation models which integrate oceanographic sonar data for marine topography and depth, with topographic elevation data for land forms. These maps illustrate both land and marine elevation contours at colored 20 feet contour intervals.

This type of information and visual expression of physical forces of the region is highly relevant to long-term planning for Seattle and the Puget Sound area in light of emerging findings with regard to climate change. It is anticipated that there will be more extreme weather events (e.g. floods, droughts, storms) as well as incremental long-term changes, such as a possible sea-level rise of at least two feet in the next 100 years in some places, depending on topography and tectonic activity (in the case of the Pacific Northwest). Such rises in sea level could have profound implications on infrastructure in low-lying areas and nearshore aquatic ecosystems.

It is therefore imperative that human settlement patterns throughout West Seattle, and elsewhere minimize potential hazard situations through sensitive design of built-environment structures in ecologically dynamic areas, such as shorelines, river courses, streams and steep ridges.

The natural forces which shaped Puget Sound and its adjacent inland waterways in the past, continue to exert a strong influence on the people of Washington and the Pacific Northwest today. Rock cliffs and bluffs rise vertically more than 300 feet from the shore in many places. In close proximity are adjacent coastal forests, ridges, rocky intertidal zones, sandy beaches, streams and expansive mud flats. West Seattle's highest point is over 400 feet, while the depth of the natural marine channel between West Seattle and Vashon Island is approximately 900 feet deep.

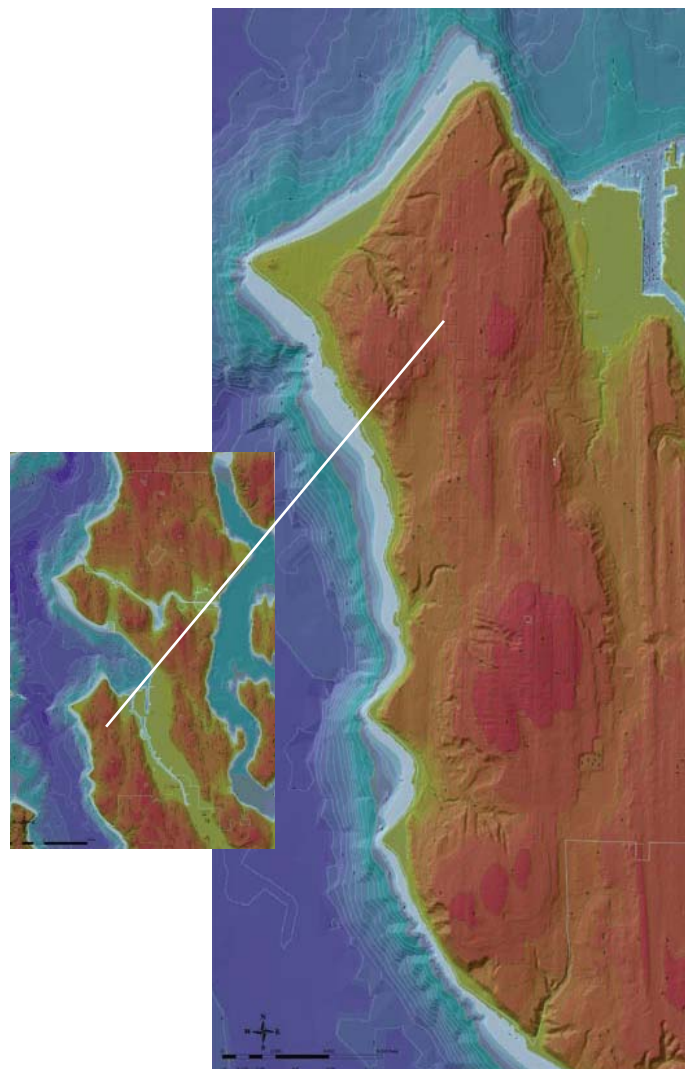
Much of the historic, economic, aesthetic and social dimensions of our heritage are in response to the considerable diversity of land forms that characterize the greater Seattle region and Puget Sound.

CONTEXT

The overall strategy for envisioning future horizons for West Seattle was to explore solutions which embraced probable realities of both increasing population density and climate-related changes to a shifting baseline of environmental conditions. Therefore, our team initiated our work with a series of eight GIS maps for West Seattle. Collectively, these maps highlighted:

- The existing geographic conditions of the elevated ridge-to-shore landforms and bathymetry of Puget Sound;
- Areas that are considered hazards from a built-environment perspective, yet are also ecologically dynamic and biodiversity rich areas (e.g. slopes, ravines, streams and tidal shorelines.);
- Present configurations of ecological green spaces in both the public and private domain (parks, gardens, plazas, shorelines); and
- Present human habitation areas (commercial, residential, civic, recreation) and transportation modes and corridors.

To examine the above linkages and launch the charrette design phase, the core elements of these physical and ecological planning perspectives were combined into an initial 'opportunities map' (shown on this page). This map illustrates the intricate linkages of environments and human activity in West Seattle given the area's terraced slope-to-shore orientation, with views to the Olympic Mountains across Puget Sound looking west, and towards Seattle and the Cascade Mountains looking east.



GREEN CORRIDORS AS CONNECTIONS

A key part of the West Seattle 2100 “Living Lattice” concept is the creation of ecologically functioning green spaces wherever and whenever possible.

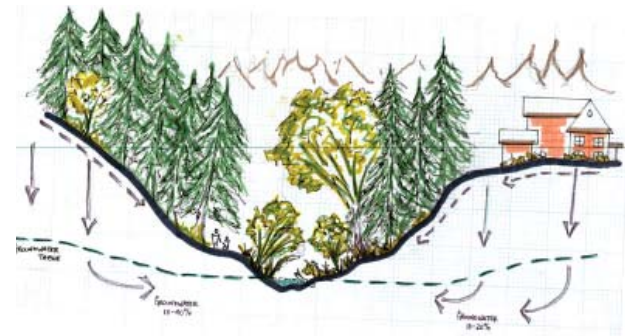
We have incrementally lost habitat, through the fragmentation of natural systems over time. We can rebuild these connections through re-discovering and re-creating an abundance of gardens, forests, streams and shoreline features as integral elements of the urban corridors and spaces we use everyday. The vignettes on this page were created during the charrette to illustrate application of these concepts for different settings and scales.



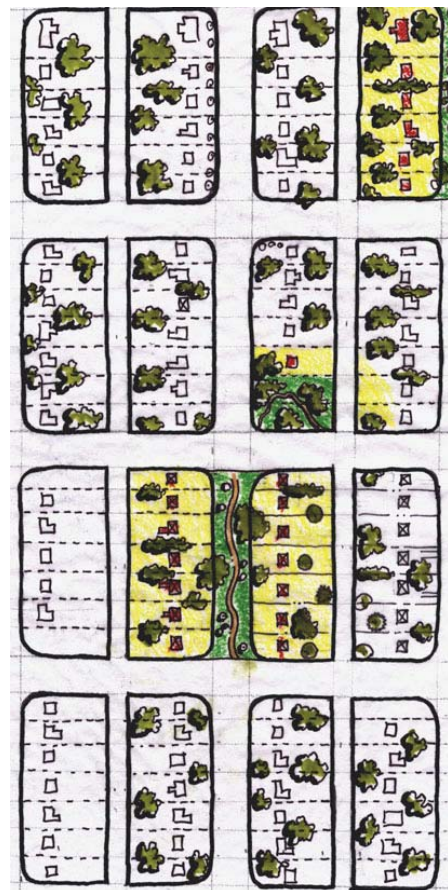
Daylighting and maintaining streams through the city grid



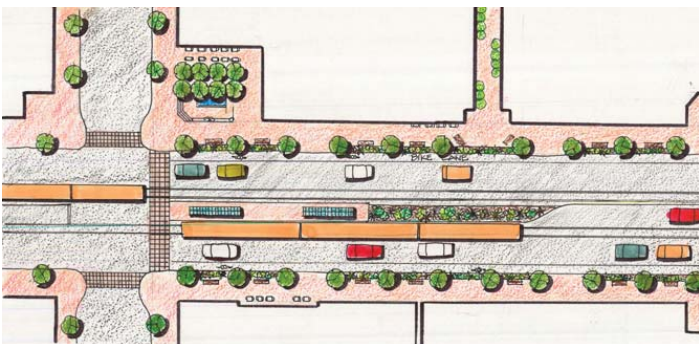
Gardens, street-side streams, tree-lined allees, and urban green plazas are essential elements of residential, commercial and transportation corridors.



Urban creeks and riparian buffers provide critical drainage, habitat and slope stability.



Green alleys can provide human and natural connections places.



LIVING LATTICE

West Seattle, and its role in the region, can be conceived as a 'Living Lattice', connecting people and environments to be functionally sustaining over time:

The Roots

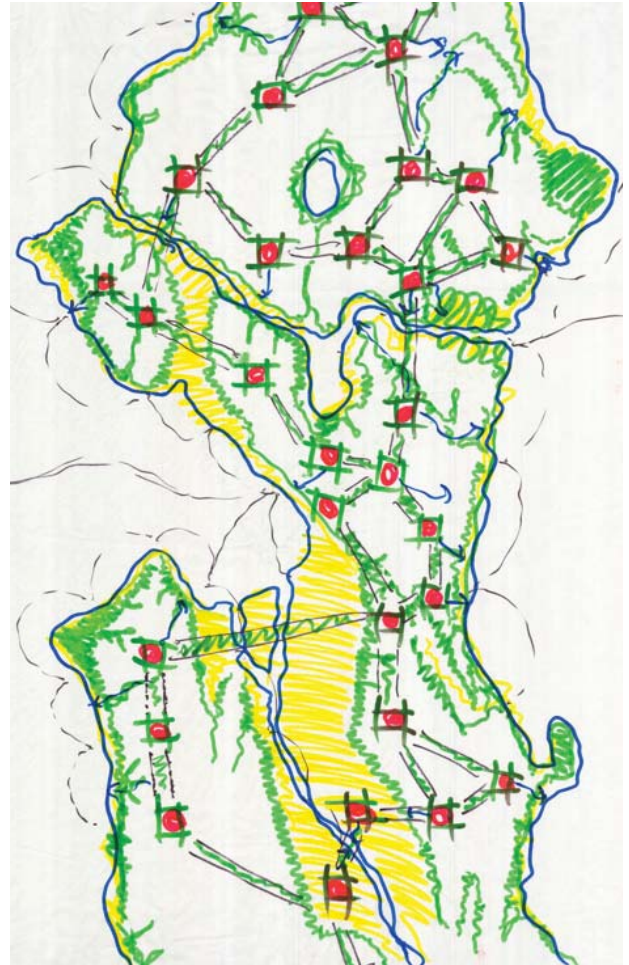
We should reinforce West Seattle's intrinsic pattern of plateaus and ravines by directing urban density to the high-flat areas while preserving and restoring the creeks, bluffs and shoreline as a connected system of habitat and hydrology.

The Twigs, Branches, and Trunks

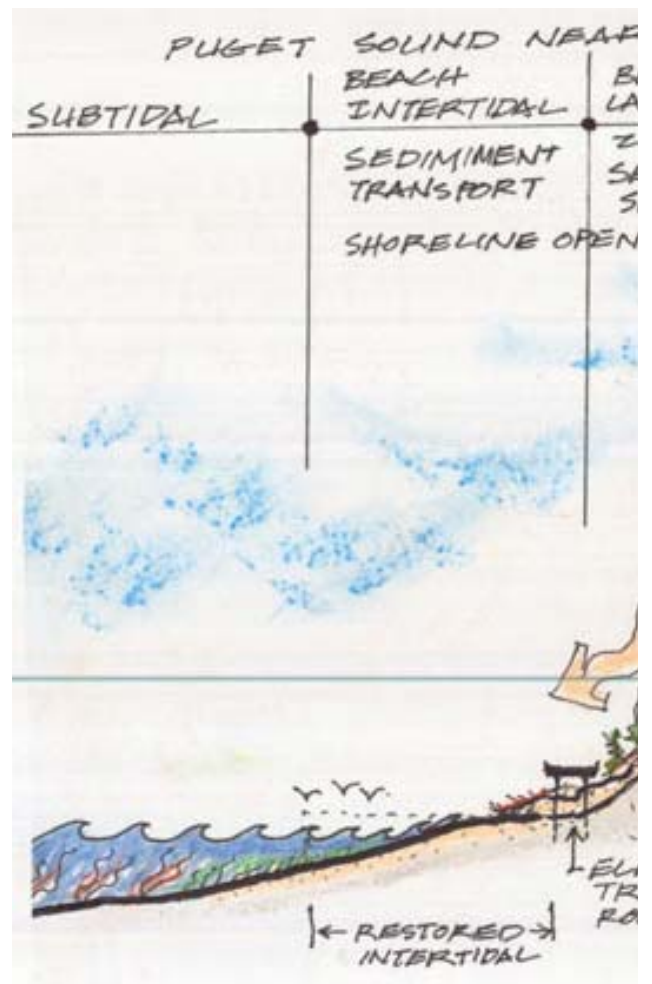
We should connect our community with a network of greenways that collect and direct the flow of water and people.

The Leaves

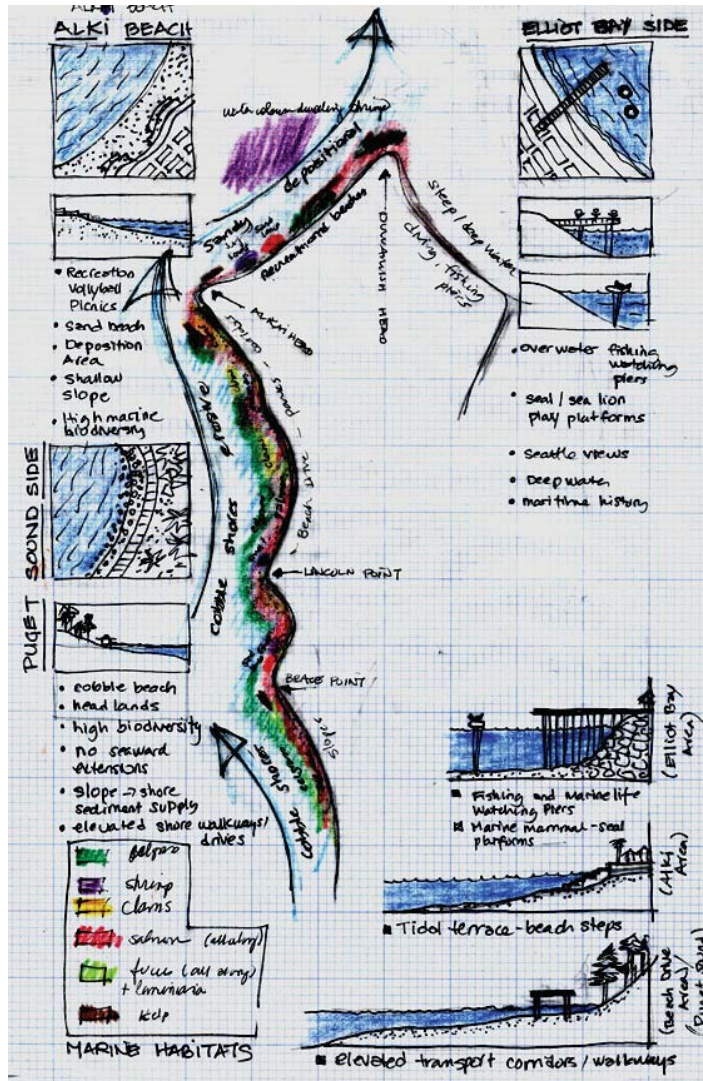
We should create meaningful places that express the integration of built and natural environments for the health of our community.



West Seattle



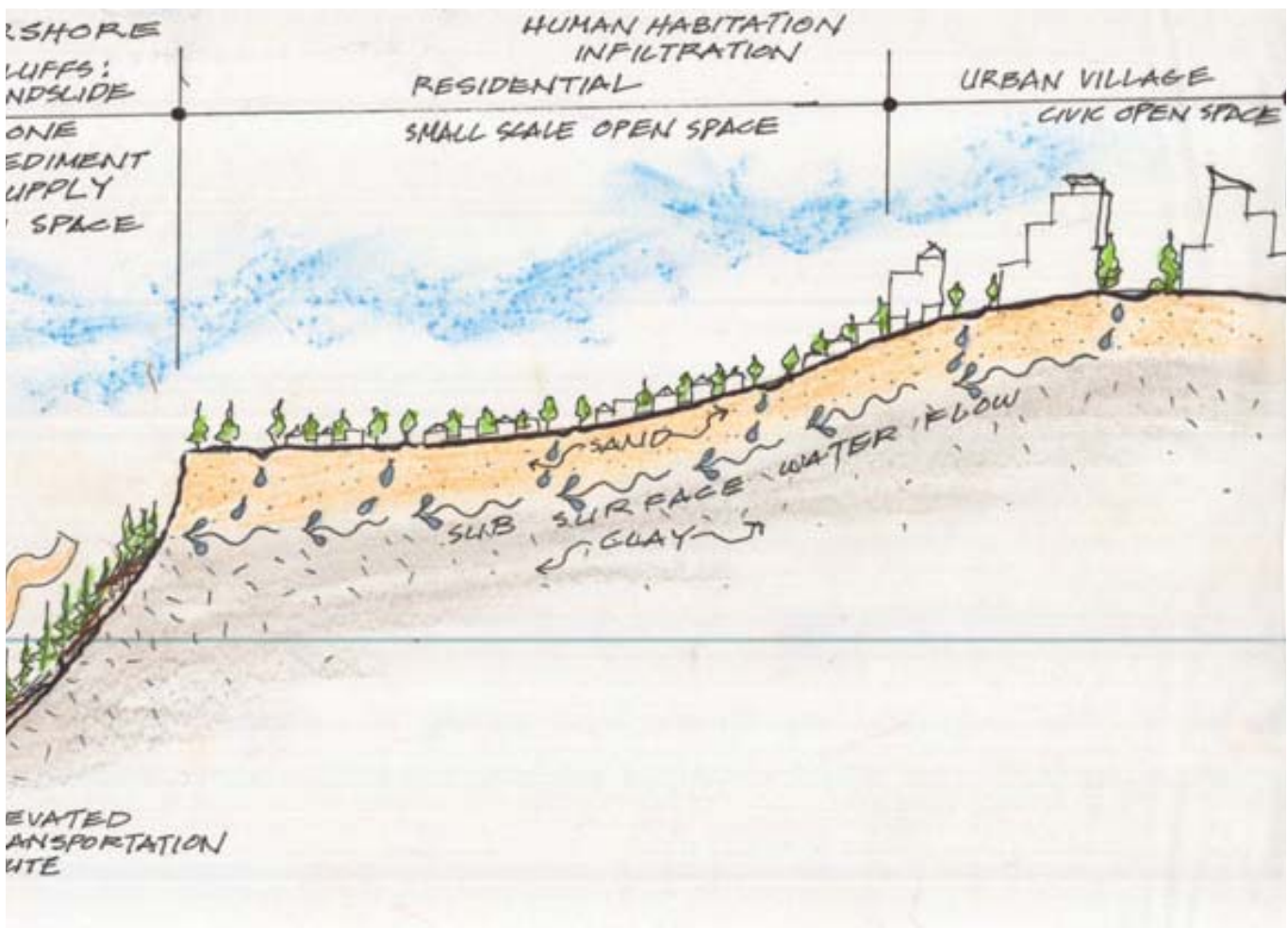
SLOPE-TO-SHORE CONNECTIONS



Like most of Puget Sound, the shorelines of West Seattle are highly dynamic and diverse areas that warrant sensitive planning and design considerations; as illustrated through these drawings created during the charrette.

These pictures present stylized aerial and cross-sections of the slope-to-shore zones and habitats of West Seattle. Ridge soils are sandy, with good drainage. The shoreline has steep slopes, with naturally eroding bluffs, held intact by forests and vegetation. The bluffs provide critical sediment supply to down-slope areas. The intertidal zone is dynamic with an average 15' tidal depth range.

The three shoreline areas of West Seattle, are each different, requiring distinct built-environment, ecological function treatments. The west side is a cobbly erosive shore; Alki is a sandy, depositional shore; while the Elliot Bay side is steep and deep. Sea-level rise changes could have potential impacts on the erosive dynamics and tidal extent for parts of West Seattle.



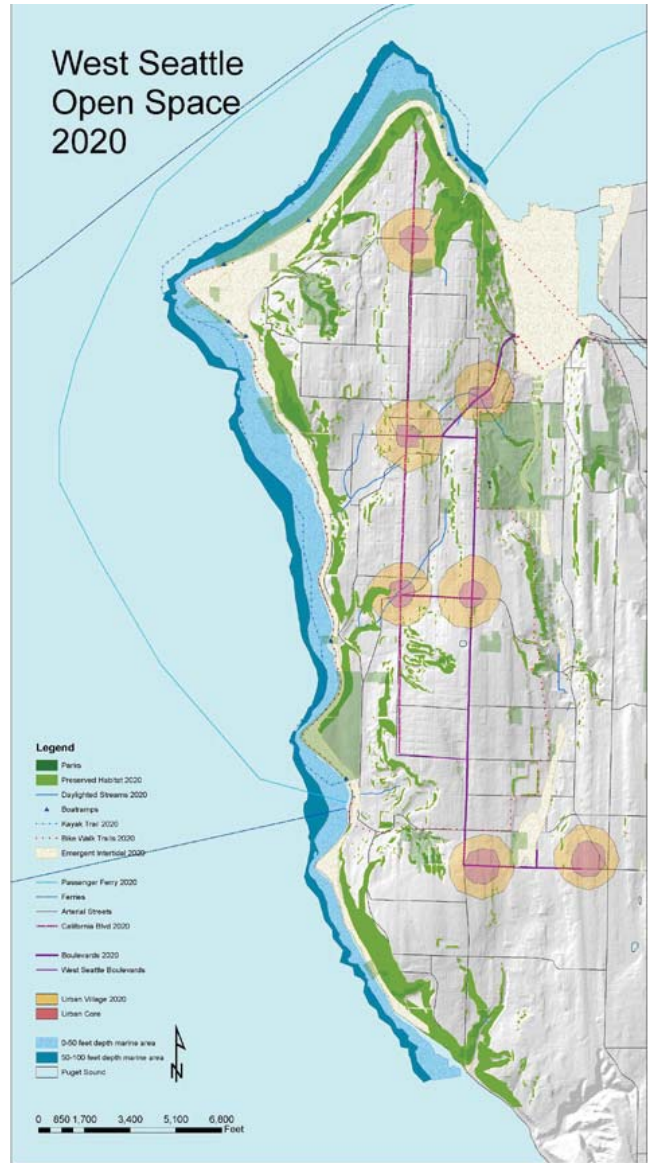
PRIORITIES FOR 2020

Near to Mid-Term Priorities (5-20 years)

- Park 'gap' analysis to update neighborhood pocket park acquisition strategy and implementation;
- Shoreline feasibility study to assess sedimentation and habitat connections and design recommendations;
- Facilitate zoning changes to accommodate decreasing density with less new build in ecologically vulnerable - hazard areas; e.g. nearshore liquifaction zones, steep ridges, slopes and streams;
- Open space plans for the urban villages and property acquisition strategies, incorporating design of urban village plazas as green lattice connection nodes;
- Implement school yard asphalt removal as part of city-wide greening and natural drainage restoration;
- Community effort to plan, design and implement 'green' street programs that are both city-wide and neighborhood oriented;
- Explore and trial developer incentives for open space development in urban villages and in support of neighborhood plans;
- Develop a mass transit transportation plan for high capacity transit corridor for multi-modal elements linked around green interconnections in West Seattle and the region (e.g. water taxis, trolleys, light-rail, buses); and
- Implement expanded people and habitat-experience trails, e.g. kayaks, passenger ferries, walk-ways, running and biking trails.

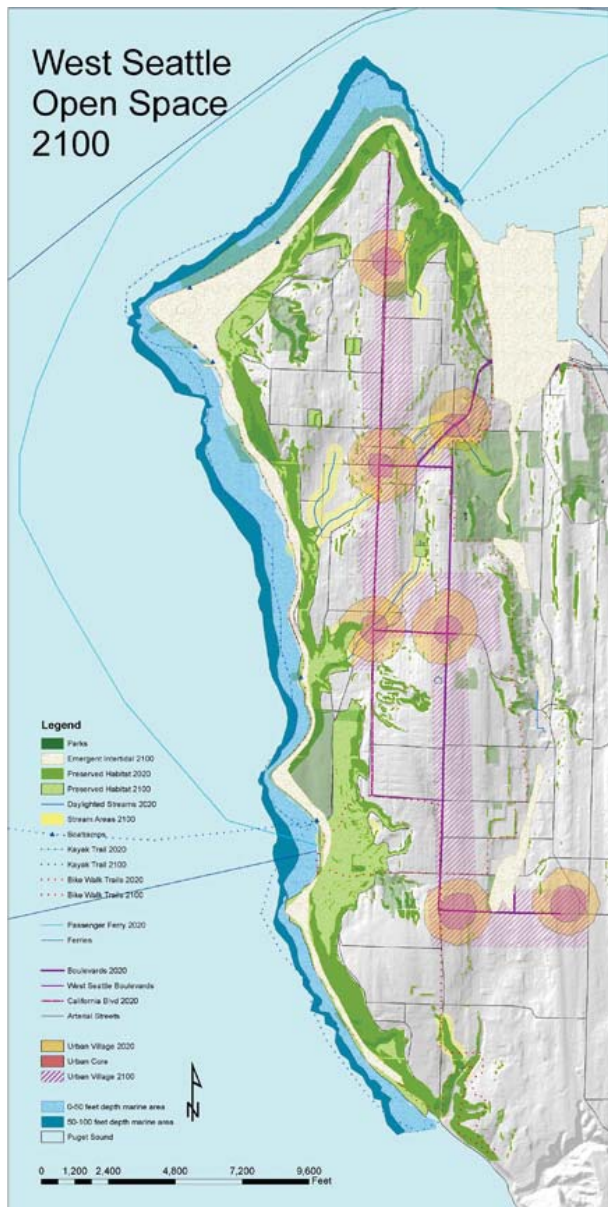
Pilot Projects

- Alki Point as an ecological and cultural heritage area;
- Schmidt Creek daylighting project;
- Fauntleroy Creek completion;
- SEA street implementation to connect natural areas; e.g. Meek-wa-Mooks or Schmitz Park; and
- Eddy Street stream restoration and recreation through the ravine.



PRIORITIES FOR 2100

- Have an interconnected system of built and natural open spaces throughout West Seattle neighborhoods to:
- Increase species diversity through enhanced tree canopy cover and re-establishment of hydrologic cycle functions;
- Restore slope-to-shore sediment supply throughout West Seattle and Puget Sound;
- Strengthen existing rules to reduce building in ecologically sensitive zones and to minimize injury and property loss in hazard prone areas (e.g. landslides, earthquakes and floods);
- Encourage public property acquisition along Beach Drive for recreation, access and coastal protection;
- Diversify and balance people transportation modes, e.g. 33% mass transit; 33% pedestrian / bike, 33% personal vehicle;
- Enhance local food production, e.g. 50%; through expanded farmer's markets, pea patches, community gardens and school gardens;
- Activate urban plazas with open spaces at each urban village center; and
- Achieve full realization of the "Living Lattice" concept for Seattle, with West Seattle as a regional demonstration area.



West Seattle