5.3.3 West Seattle to Burien

The West Seattle to Burien subarea includes one continuous drift cell that is the largest cell in WRIA 9 (see Map 2). The shoreline of this subarea is largely residential with accompanying extensive residential armoring. In most cases, the road nearest to the shoreline is immediately adjacent to the shore or is approximately one parcel-width landward of the shoreline (in the case of the area along the northern half of the subarea). In the southern third of the subarea, there are houses at the top and close to the edge of active feeder bluffs. Looking long-term, policy-level decisions will need to consider how and whether to administrate the rebuilding of these homes at the inevitable point in time when the bluff subsides.

As expected with high intensity residential development, most of the marine riparian vegetation has been highly modified. The marine riparian vegetation that is present is mature and extensive within a 200 foot distance from the shoreline at Lincoln Park, which composes the southern third of the subarea. However, this vegetation is separated from the shoreline by a walking path and picnic areas in most places.

The WDFW (2002) SASSI report identifies one stream (Fauntleroy Creek) with documented salmon utilization in the freshwater portion. However, several creeks in the southern portion of this subarea may be periodically utilized by salmon and the creek mouths of all tributaries, particularly those that are not in pipes, may be utilized by juvenile salmon migrating and rearing in the nearshore. These include Fauntleroy Creek, which approaches the shore from the south and outlets to the north side of the ferry dock. Approximately .25 mile north of Seahurst Park is Salmon Creek, which the WDFW (2002) SASSI report characterizes as having the potential for salmon utilization. Currently, the mouth of Salmon Creek has a fence across its mouth which prevents adult salmon passage into the stream.

Forage fish spawning has been documented in some areas of this subarea that contain sediment sources and/or fine-grained materials. Spawning has primarily been noted in the southern third of this subarea and parts of Alki Beach and the Fauntleroy area.

5.3.3.1 Habitat Needs and Goals

Maintaining a reliable sediment supply and restoring sediment sources in this long drift cell are key habitat needs for this subarea. Because of its location in the project area, the southern portions of this subarea have the potential to provide sediment material to much of the sediment-starved northern parts of the drift cell. The recent Seahurst Park nearshore restoration provides a demonstration of the potential to restore habitat from a heavily armored, sediment-starved condition to an area with the potential to accrete sediment. In the Seahurst Park project, material that slides onto the park trail is moved across to the beach area. There may be additional areas in the park that present opportunities for sediment accretion.

In addition to sediment supply, marine riparian vegetation, marshes, and creek mouths in this subarea are present or historical but show some need of improvement in order to provide critical prey resources for migrating salmon.

Brennan et al. (2004) found that the Lincoln Park beach is a high use area for juvenile Chinook, coho, and chum salmon. Also, there are a set of smaller parks south of the Alki Point Lighthouse (Cormorant Cove, Schmitz Memorial Overlook, and Lowman Beach Park) that may provide key habitat for feeding and refuge during outmigration because these parks represent some of the only non-privately-owned, unarmored or unaltered habitat from Alki Point south to Three Tree Point. Opportunities to conserve and improve these parks as migratory stops for juvenile salmonids should be seriously considered. Other efforts have identified opportunities that fall in line with these needs, including estuary restoration ideas for Owl Creek at West Point, which was identified as a potential project in the WRIA 8 Chinook Salmon Conservation Plan (WRIA 8 2005).

5.3.3.2 Priority Recommendations

Habitat recommendations in this subarea include the following (Map 9):

- *Conserve/Rehabilitate* Cormorant Cove Park. Habitat in this area could be rehabilitated by adding more native vegetation at the park.
- *Conserve* the street-end park at SW Carroll Street and Beach Drive SW.

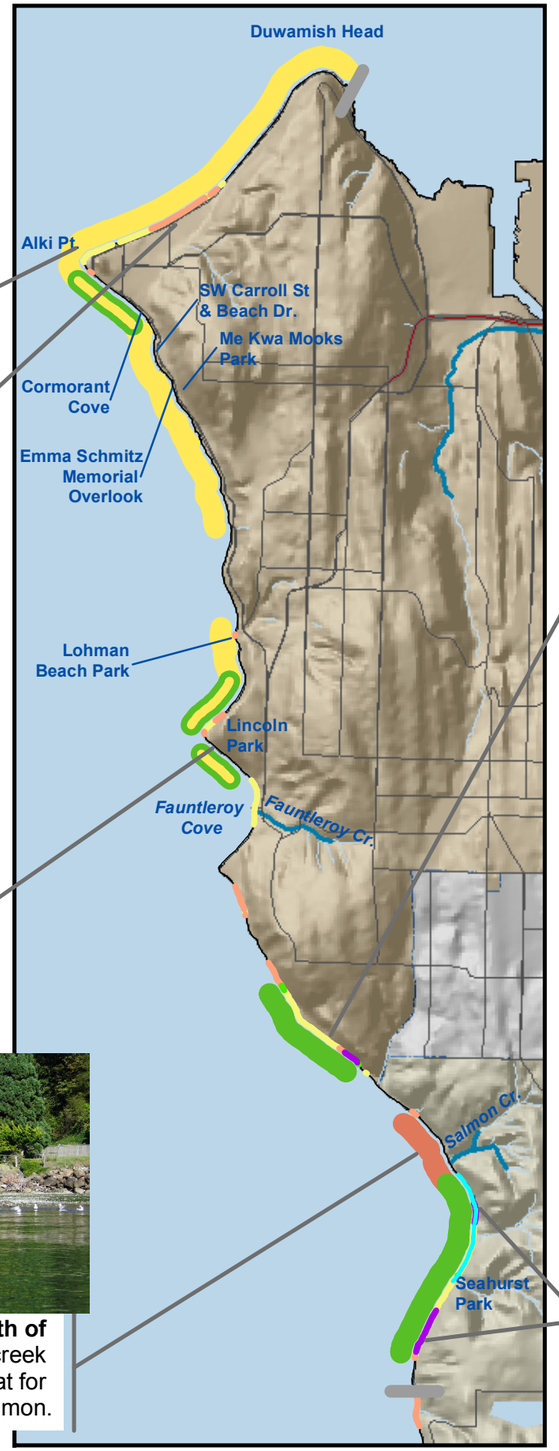
- *Conserve* eroding feeder bluffs north and south of Seahurst Park that are unarmored; discourage further bluff armoring.
- *Conserve* the existing marine riparian zone north of Lincoln Park and in Fauntleroy Cove.
- *Rehabilitate* the northern end of Lincoln Park and in Fauntleroy Cove, to include removal of the bulkhead and/or beach nourishment to create a sloping beach with opportunity for terrestrial prey and detritus inputs. Seahurst Park's recent nearshore restoration could be an example of how this kind of work could be implemented in a park setting.
- *Rehabilitate* longshore sediment transport and marine riparian vegetation from Duwamish Head to the Me Kwa Mooks Park seawall. Remove groins and areas of fill that protrude into the intertidal zone. Where possible, vegetate in ways that would not obstruct views but would provide terrestrial inputs to this area; or, if views are not determined to be important, full vegetation could be added to increase terrestrial inputs.
- *Restore* sediment supply in an armored area in the northern/central section of Seahurst Park by removing armor to create an extended reach of unarmored shoreline in the drift cell; remove armoring from the base of bluffs with no houses nearby.
- *Substitute (create)* a marsh and spit complex near the Alki Point Lighthouse; this could be a location for a pocket beach or open area to increase juvenile salmon feeding opportunities and refuge.
- *Rehabilitate* the Lowman Beach Park shoreline by vegetating in light of its potential function for migrating salmonids; if necessary, do this in ways that would not obstruct views but would provide terrestrial inputs to this area.
- *Rehabilitate* the mouth of Schmitz Creek. Because the lower reaches of the creek pass through a flat urban development that might be subject to flooding if the entire length were daylighted, rehabilitation could be accomplished by daylighting the mouth of the creek onto the beach.
- *Restore* the mouth of Salmon Creek, located approximately one quarter mile north of Seahurst Park by removing the fence at the outlet of the stream.

West Seattle to Burien

This subarea is comprised of the longest drift cell in the project area. The shoreline of this subarea is largely residential with accompanying extensive single family bulkheads.

Rehabilitate riparian vegetation and sediment transport around West Seattle
Rehabilitate riparian vegetation at parks and available areas. Riparian vegetation could be improved by planting tree and plant species in locations that balance the habitat benefits with the desire for views in this densely populated residential area. Removal of groins and areas of fill that protrude into the intertidal zone between Duwamish Head and Me Kwa Mooks Park would improve longshore sediment transport.

Rehabilitate mouth of Schmitz Creek
Daylight mouth of Schmitz Creek to flow in open channel through intertidal zone.



Conserve feeder bluffs
Conserve eroding feeder bluffs that contribute sediment to the intertidal zone in this drift cell that spans from Seahurst Park in Burien to the Duwamish Head. The highlighted priority is an extended reach of unarmored shoreline, but all unarmored areas, particularly those potentially providing sediment, have high value for conservation.

Conserve and rehabilitate two park shorelines
Conserve park shorelines with backshores and mature riparian vegetation adjacent to the intertidal zone. Remove bulkheads and create small embayment for fish rearing in low energy environment. Conserve small street-end parks (e.g., Cormorant Cove Park).

Legend

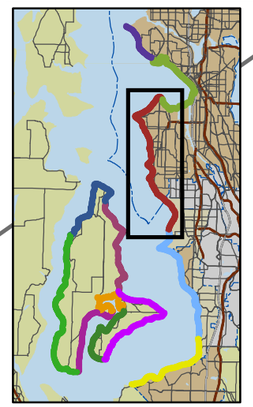
Subarea Recommendations

- *Conserve*
- *Conserve/Rehabilitate*
- *Rehabilitate*
- *Restore*

Model Results: Current Function

Current Function

- *0% - 40%*
- *40% - 60%*
- *60% - 80%*
- *80% - 90%*
- *90% - 100%*



Rehabilitate mouth of Salmon Creek This creek offers potential habitat for juvenile and adult salmon.

Conserve or restore feeder bluffs near updrift end of drift cell
Conserve intact sections of feeder bluff and riparian vegetation to north and south of Seahurst Park. Restore sediment supply and riparian vegetation connectivity to intertidal zone in northern and central sections of Seahurst Park. Recently completed restoration in southern section of park successfully achieved these goals, including allowing slide material to reach the intertidal zone.

0 1,500 3,000 6,000
Scale in Feet

ANCHOR ENVIRONMENTAL, L.L.C.

Map 9
West Seattle to Burien Subarea and Priority Recommendations
Identification of Priority Areas
WRIA 9 Nearshore Habitat Assessment

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