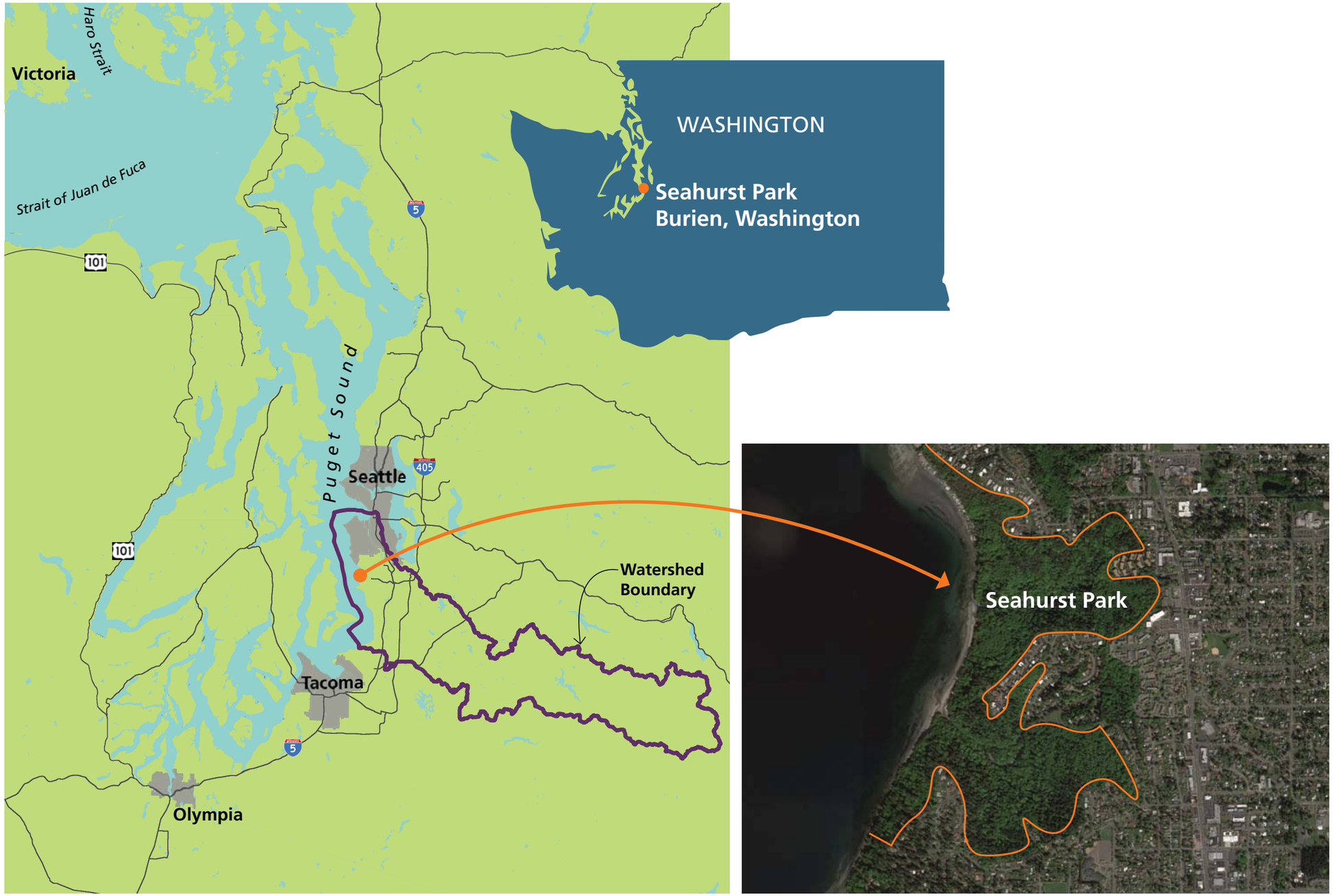
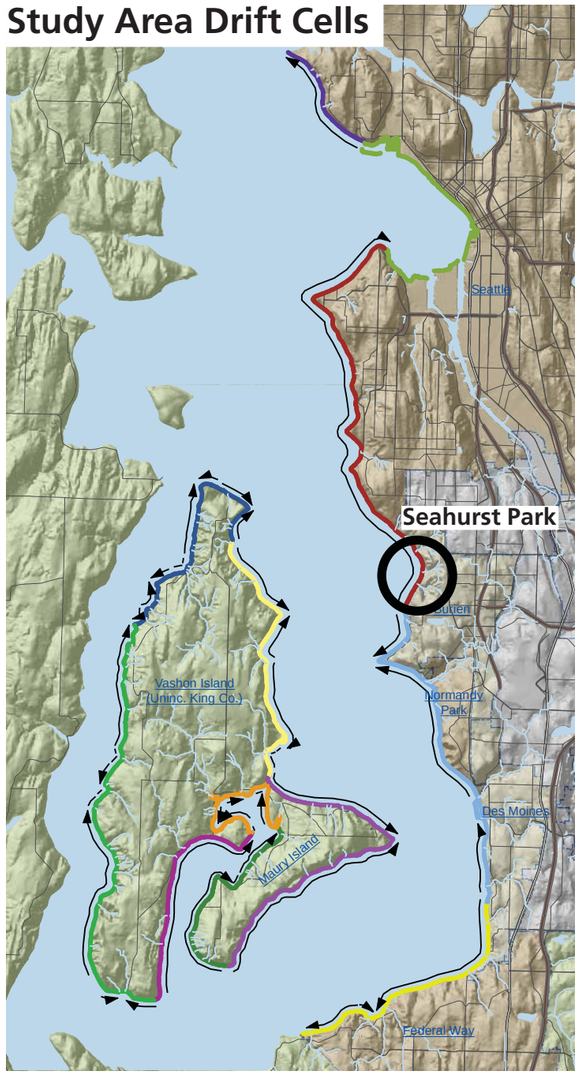


Seahurst Park, the largest shoreline park between Seattle and Tacoma, is within a highly urbanized watershed, where 60% of marine shorelines are hardened with bulkheads. The project is the largest bulkhead removal and beach restoration project on Puget Sound.

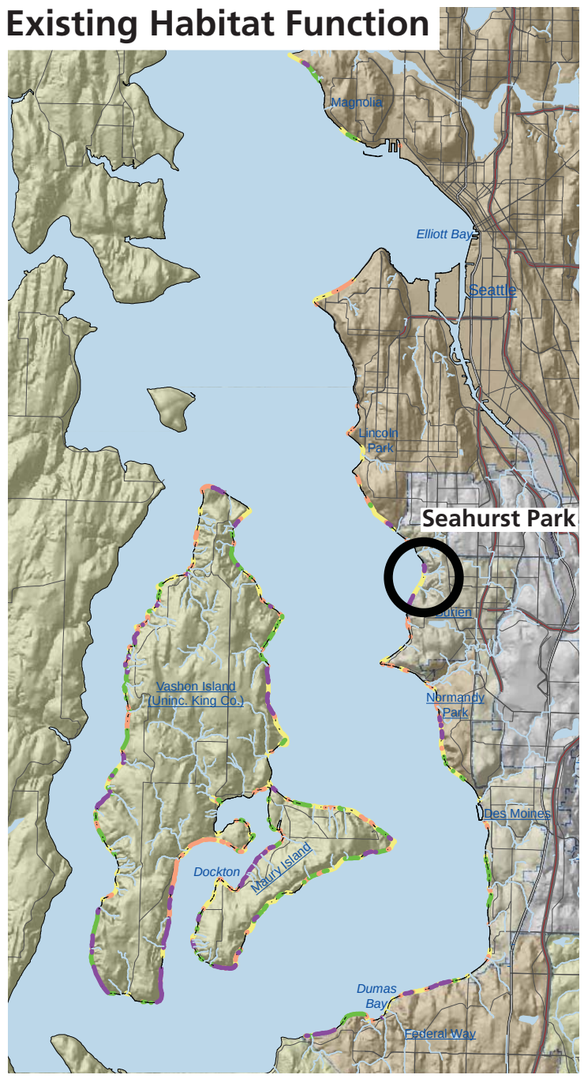
Study Area Drift Cells



Reach

- Magnolia
- Elliott Bay
- Burien to West Seattle
- Burien to Des Moines
- Des Moines to Federal Way
- East Maury
- East Vashon
- North Vashon
- West Vashon
- West Quartermaster
- Inner Quartermaster
- East Quartermaster
- Net Shore Drift
  Adapted from
  Johannessen (2005)

Existing Habitat Function

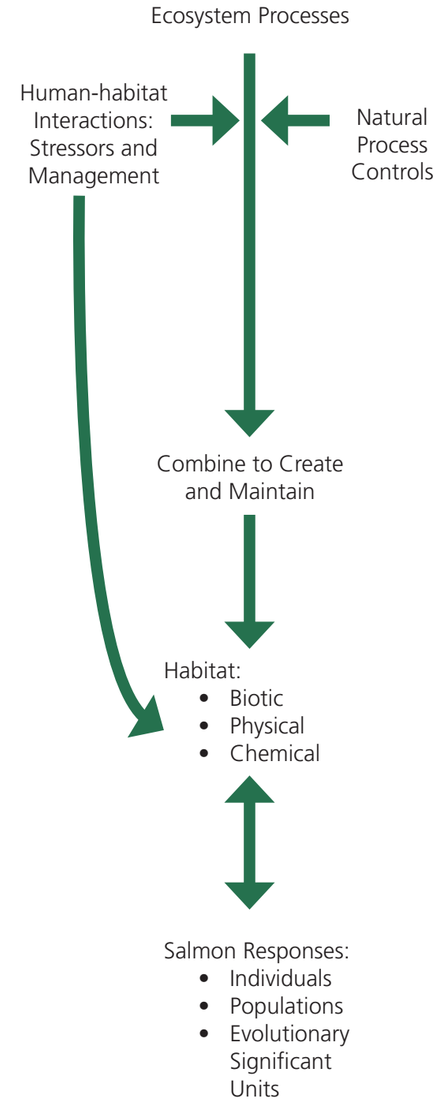


Current Function

Percentile of Shoreline Length

- 90% - 100% High Function
- 80% - 90%
- 60% - 80%
- 40% - 60%
- 0% - 40% Low Function

Conceptual Model of Ecological Processes and Salmon Responses

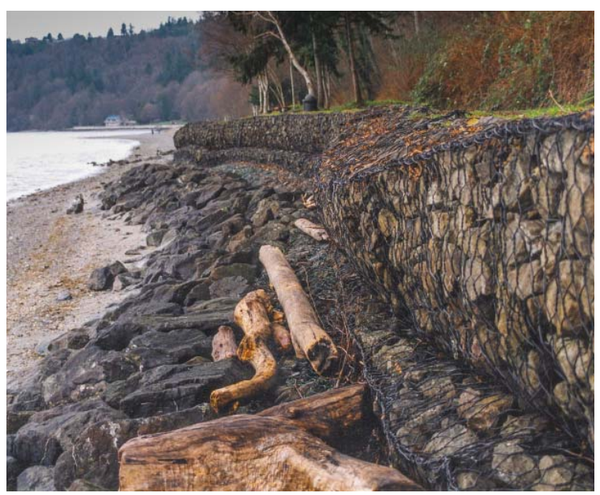


Project landscape architects played a key role in a regional shoreline restoration and conservation prioritization, a scientific analysis focusing on 90 miles of Puget Sound shoreline. Seahurst Park emerged as a key site for potential salmon habitat conservation and restoration.

Park amenities were in vulnerable places, armor degraded habitat and limited beach access.

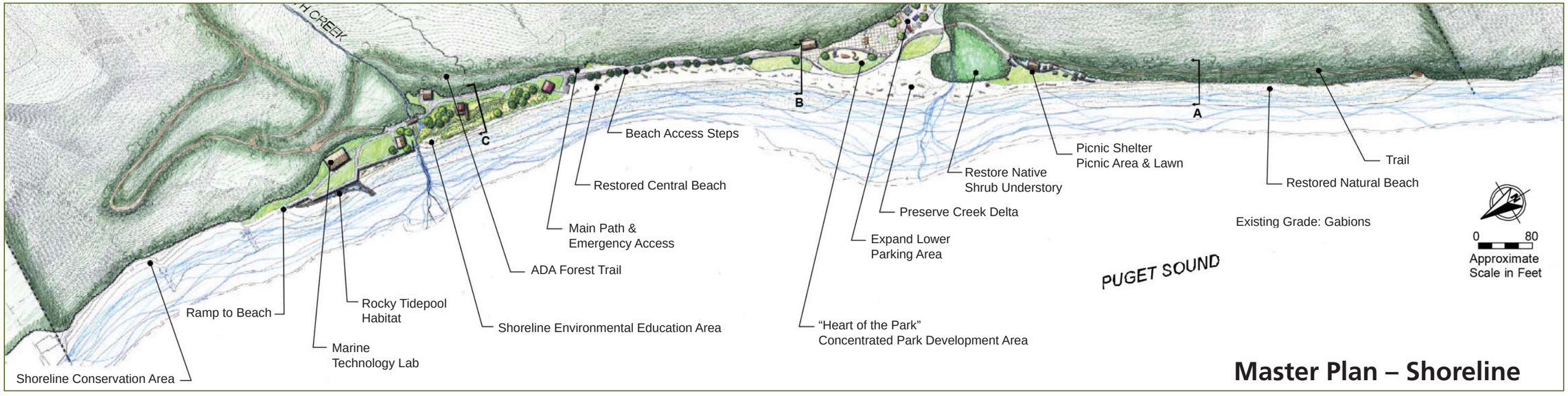
Natural landslides/sediment supply were cut off from the beach, lowering it 3–4 feet over 30 years.

Armoring increases wave reflectivity and erosion, leading to more armor.

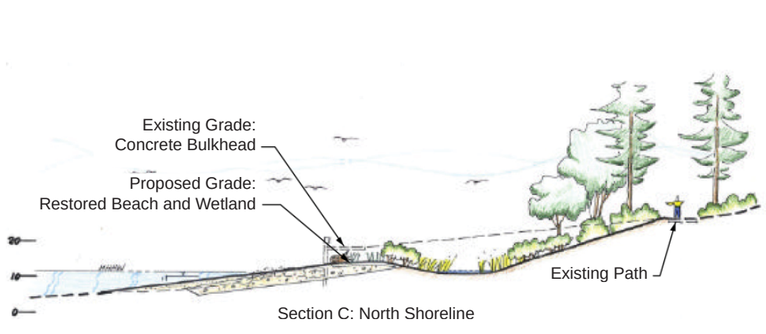


Master Plan – Overall Park

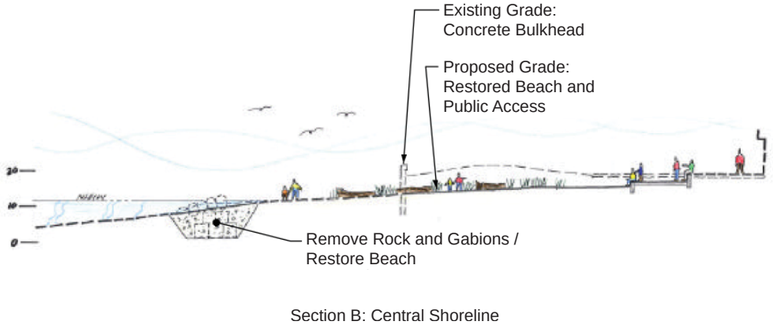
Project landscape architects led the master planning team that analyzed, designed, and executed a multi-objective project focused on balancing ecosystem restoration, recreation, environmental education, and coastal resiliency with significant stakeholder and community outreach.



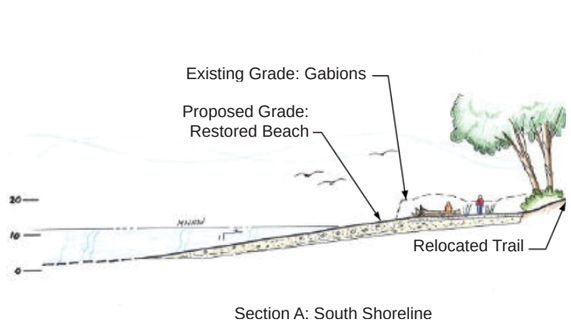
Master Plan – Shoreline



Section C: North Shoreline

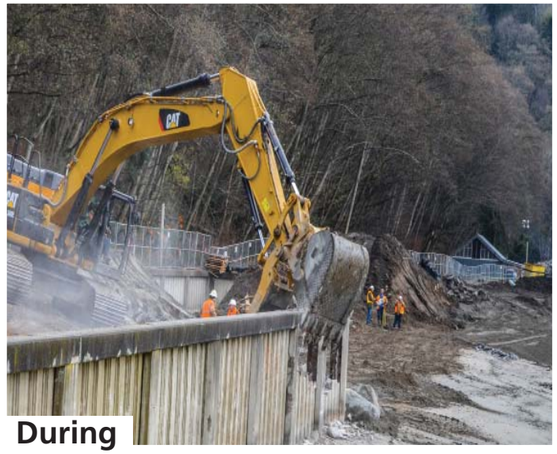


Section B: Central Shoreline



Section A: South Shoreline

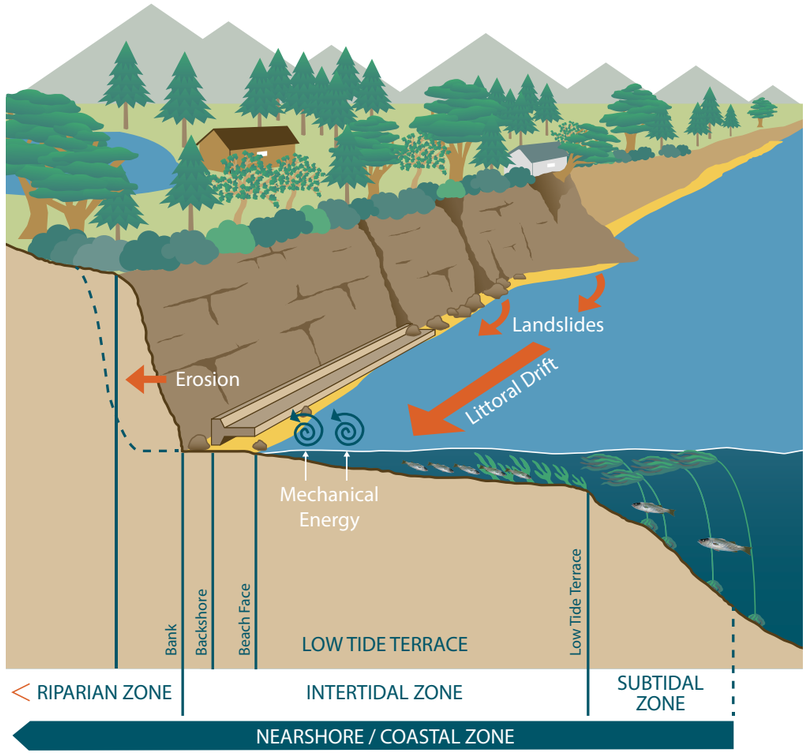
Before



During

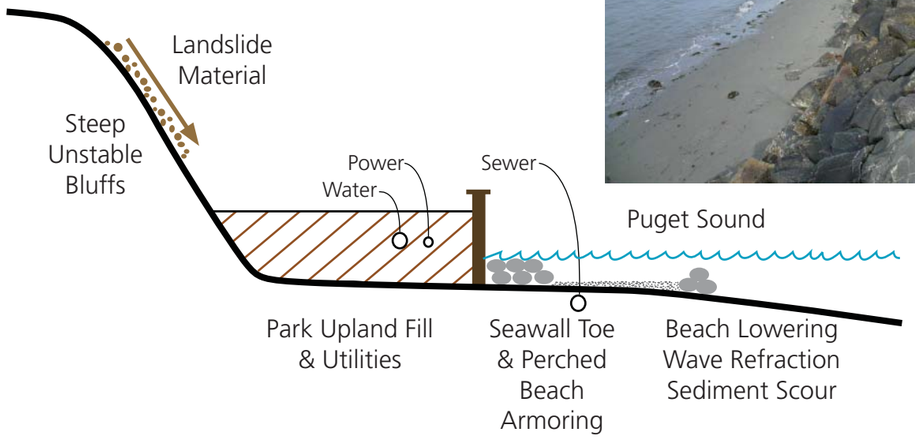
After

To restore ESA-listed salmon habitat, improve recreation access and educational uses, and improve infrastructure resilience to sea level rise, shoreline armor was removed, facilities and infrastructure were relocated, and a softer, more flexible beach was designed.

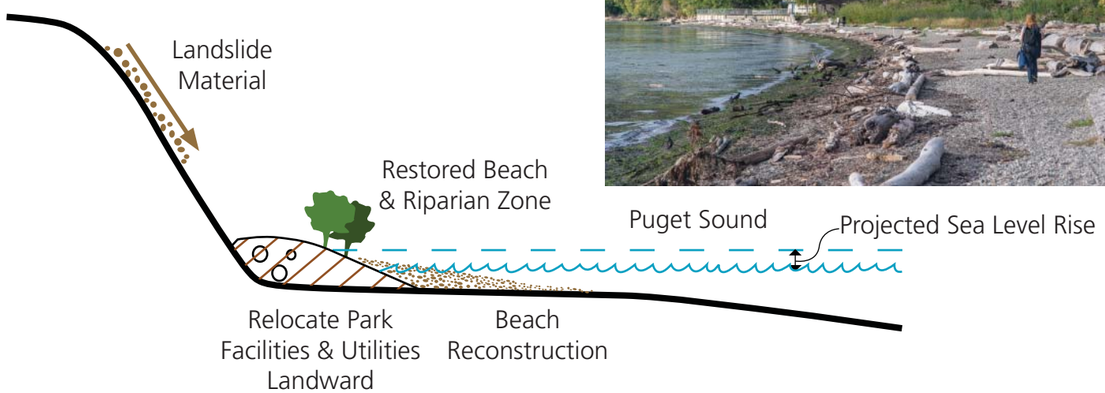


Courtesy of King County. Used with permission

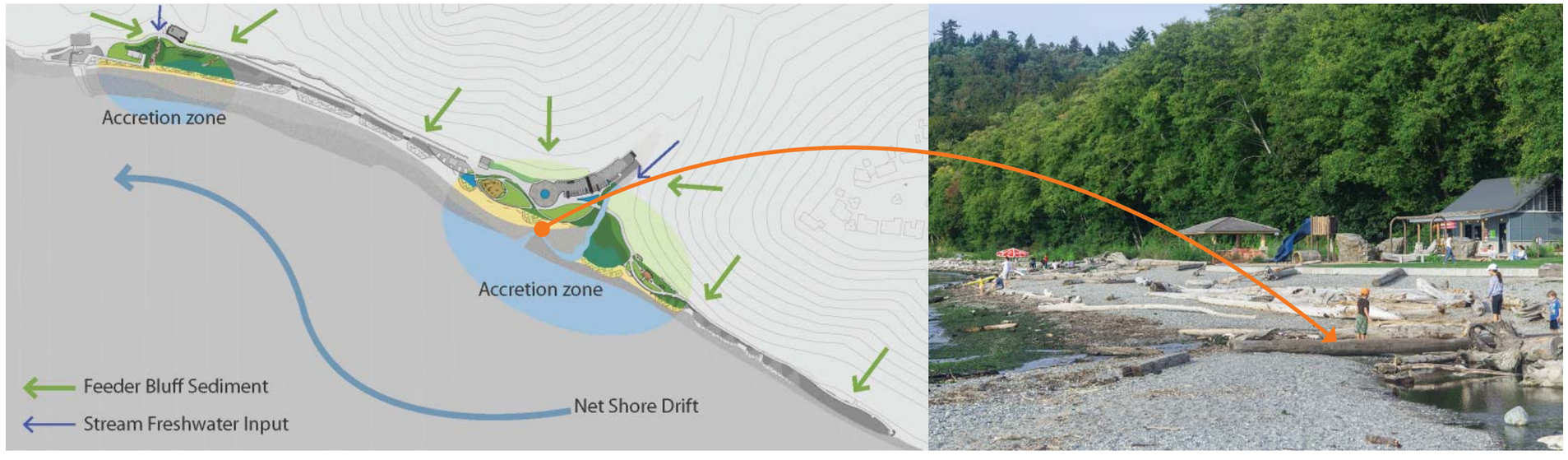
Before Project



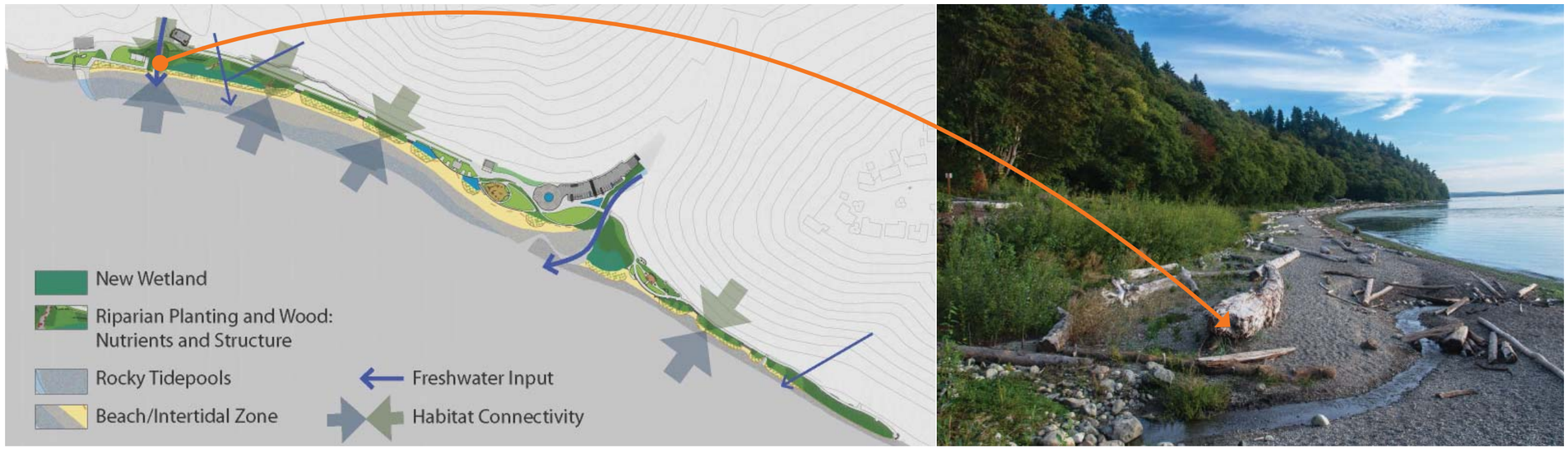
After Project

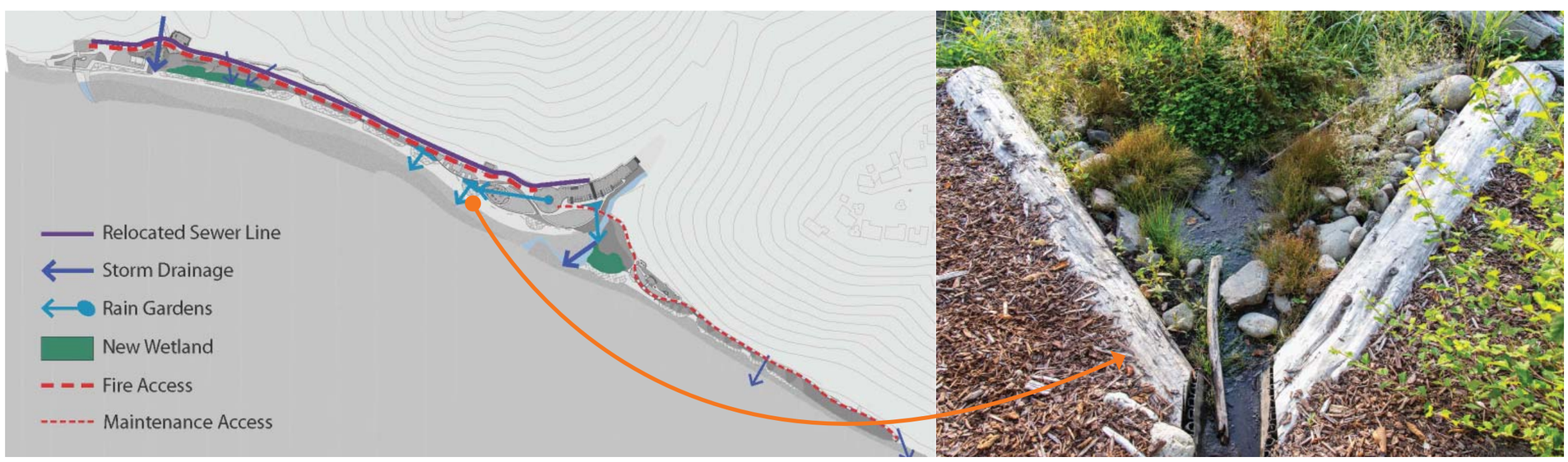


The restoration approach reconnected the bluff-to-beach sediment supply. Softening and rebuilding the beach also decreased erosion, which is exacerbated by the increased wave reflection and scour that results from shoreline armor.



Natural and designed sediment accretion zones (areas that catch and hold sediment) could support upland recreation and education facilities without hard armoring. Ecological processes and site uses informed a sustainable, restorative design strategy.





The project restores habitat from the intertidal zone, through wetlands, and up into the overhanging riparian vegetation layer; this restoration with improved water quality, will benefit a wide variety of species, including salmonids and the species they rely upon.

The project team engaged with education programs, including the Seattle Aquarium Beach Naturalist Program, Highline School District's Marine Technology Lab, and the Environmental Science Center to ensure new park features would add lasting value to their missions.

The restored, daylighted stream near the Environmental Science Center building provides 30 cubic yards of natural beach-material delivery each year. This material, formerly a maintenance problem that was trucked off site, now adds to the long-term sustainability of the project.

Seahurst Park provides opportunities to touch nature in a culturally and economically-diverse community. The beach and five daylighted streams are popular with children and families from Burien and the wider Seattle-Tacoma region.

The project removed 90% of the park's shoreline armor, leaving in place only a small vestige to protect one of the site's two educational buildings. The beach was restored throughout the park and in front of this remaining bulkhead.

Focused beach access points were entirely reconstructed, and an ADA-accessible trail and emergency access route to serve environmental education buildings runs the length of the project.

Seahurst Park seamlessly integrates recreation access, educational facilities, and restored habitats including beachgrass-planted backshore areas, emergent ahd shrub-planted wetlands, and multi-layered riparian zones.

A combination of planning and analysis, design, and community involvement transformed the park, from armored and unsustainable to more natural, flexible, resilient, and ecologically sound.