

Seattle Art Museum *Olympic Sculpture Park Shoreline Design*



Presented to:
*Washington Coastal
Planners Group*

Presented by:
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Anchor Environmental, L.L.C.*

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Presentation Overview

1. Project Origin, Goals, and Evolution
2. Overall Project Design and Sustainability Elements
3. Shoreline Design Challenges and Considerations
4. Permitting and Environmental Review
5. Shoreline Habitat Design Components
6. Design Implementation
7. Parting Thoughts

Project Credits

- Seattle Art Museum (SAM) Capital Projects
Director: Chris Rogers
- Project Management: Barrientos, LLC
- Architect/Design Team Lead: Weiss/Manfredi
- Civil and Structural Engineering: Magnusson
Klemencic Associates
- Shoreline Design and Permitting: Anchor
Environmental, L.L.C.
- Geotechnical Engineering: Hart Crowser
- Environmental Cleanup: Aspect Consulting
- General Contractor: Sellen Construction

1. Project Origin, Goals, and Evolution



Site History



1999

- SAM, in collaboration with the Trust for Public Land, raised \$16.5 million in private funding for the purchase of the UNOCAL site
- Jon and Mary Shirley have pledged to endow the parks' operation to ensure the park is open and free to everyone



2001

- Out of 52 designers from around the world, Weiss/Manfredi Architects of New York is selected as Architect for the park

2002

- Weiss/Manfredi unveil the design and model for the park on May 14

2004

- 92,986 cubic yards of dirt was removed from the SAM/WAMU construction project downtown and was transported to OSP and used as recycled fill



2005

- In the summer, groundbreaking kicks off and construction begins

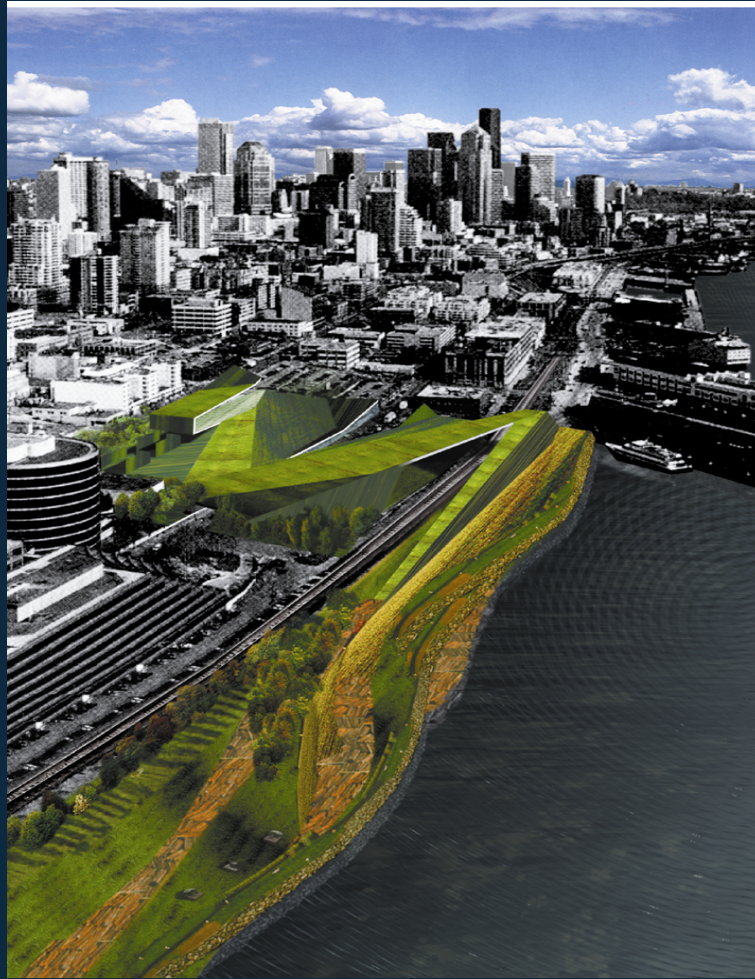
2006

- Park construction and art installation substantially completed

2007

- OSP opens to the public in January!







2. Overall Project Design & Sustainability Elements



Sustainability Features of Project

- Downtown Waterfront Brownfield Redevelopment
- Restoration of Native Habitat/Vegetation
- Educational Programs and Partnerships
- Stormwater Management
- Nearshore and Salmon Habitat
- Site Management and Public Use
- Ecology Based Art

Project Recognition and Public Use

- 15 local, state, and national awards
- 500,000 visitors per year
- Major visitor/tourist destination

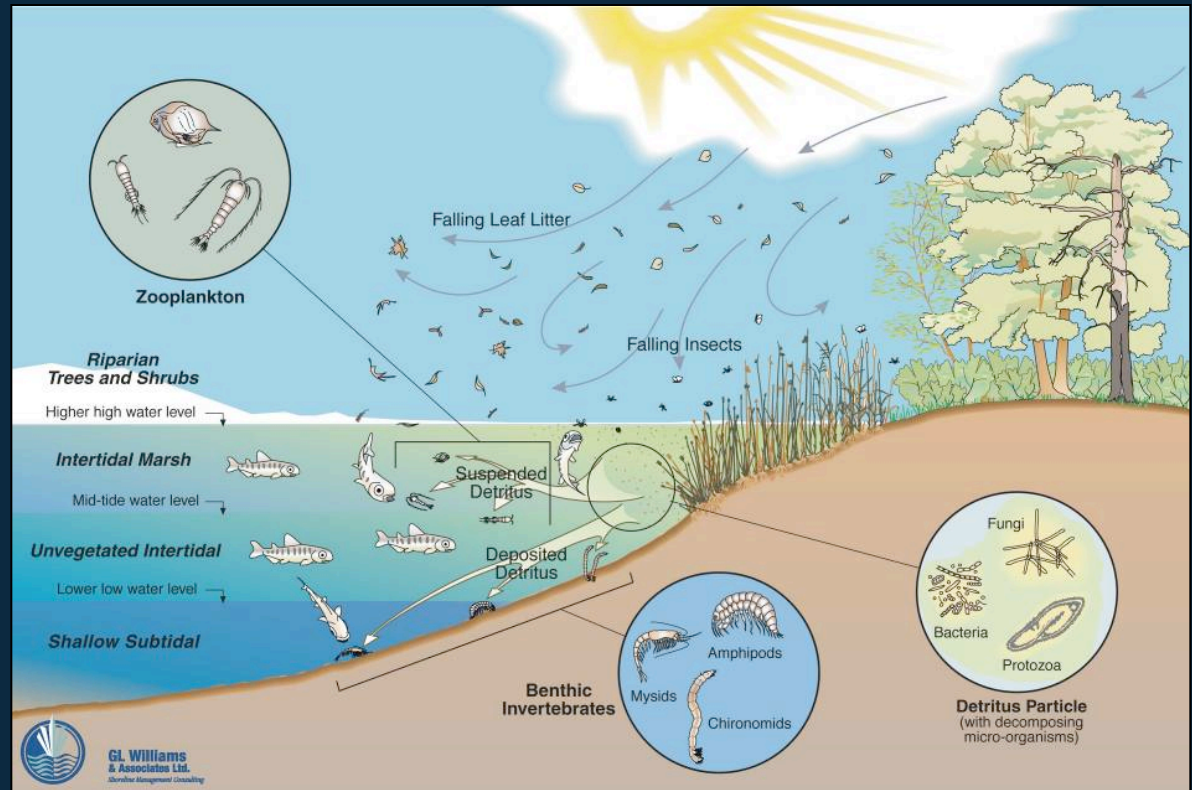
Shoreline Design Goals

- Restore Habitat for Juvenile Salmon
- Provide Site Appropriate Examples of Puget Sound Nearshore Habitats
- Design the Shoreline to Accommodate Large Numbers of Visitors
- Provide Water Contact: “Toes in Puget Sound”
- Ease of Shoreline Permitting
- Cost-effective Seawall Stabilization
- Maximize Sustainability and Reduce Maintenance

3. Shoreline Design Challenges and Considerations

Essential Functions of Nearshore Habitat for Juvenile Salmon

- Food Production
- Predator Refuge
- Physiological Refuge
- High-energy Refuge
- Migratory Corridor

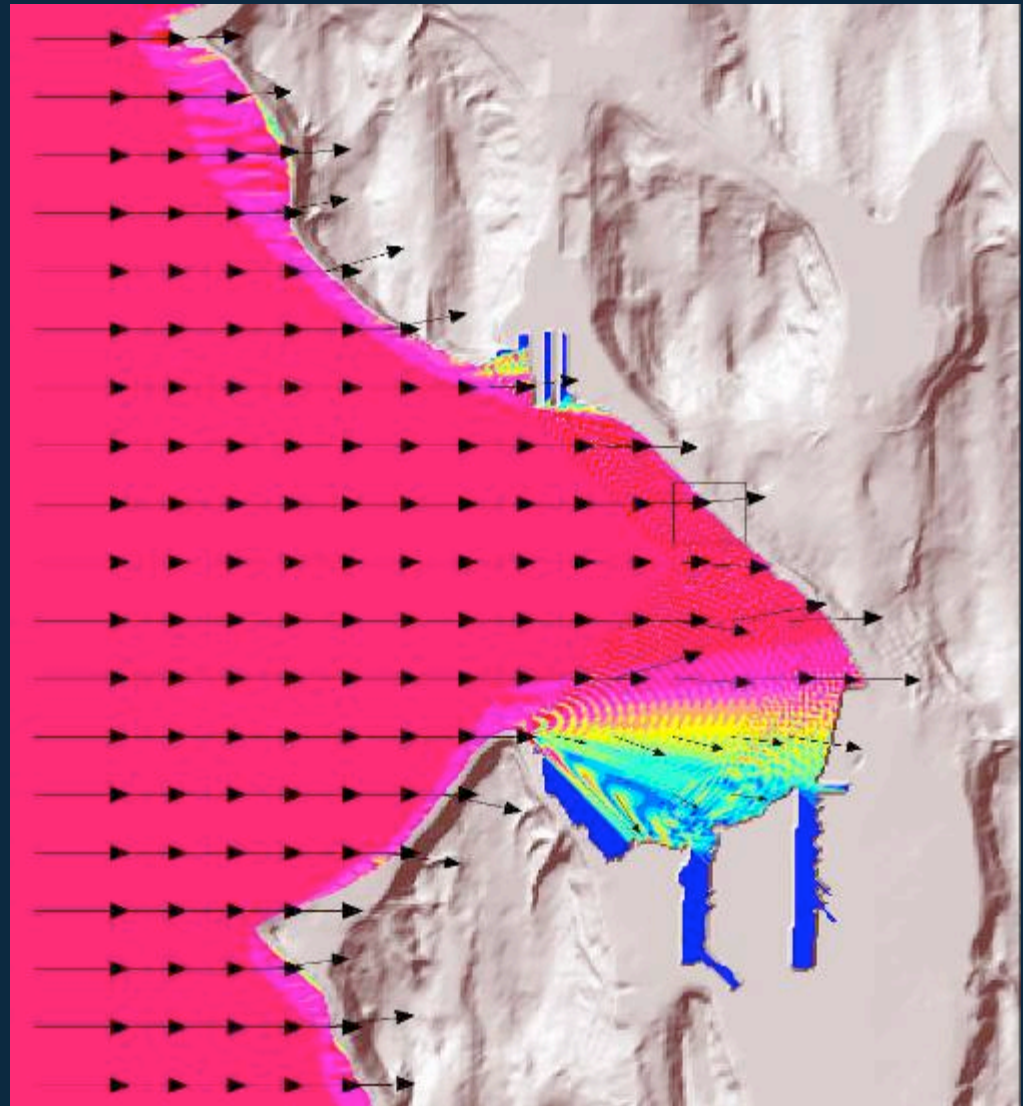


Elliott Bay Specific Challenges

- Lack of Shallow Water Habitat
- Lack of Sediment Supply
- Lack of Riparian Vegetation
- Significant Economic Activity
- First Marine Shoreline for Out-migrating Salmon



Wind Wave Modeling



Source: Coast & Harbor Engineers



Existing Conditions: Pre-project



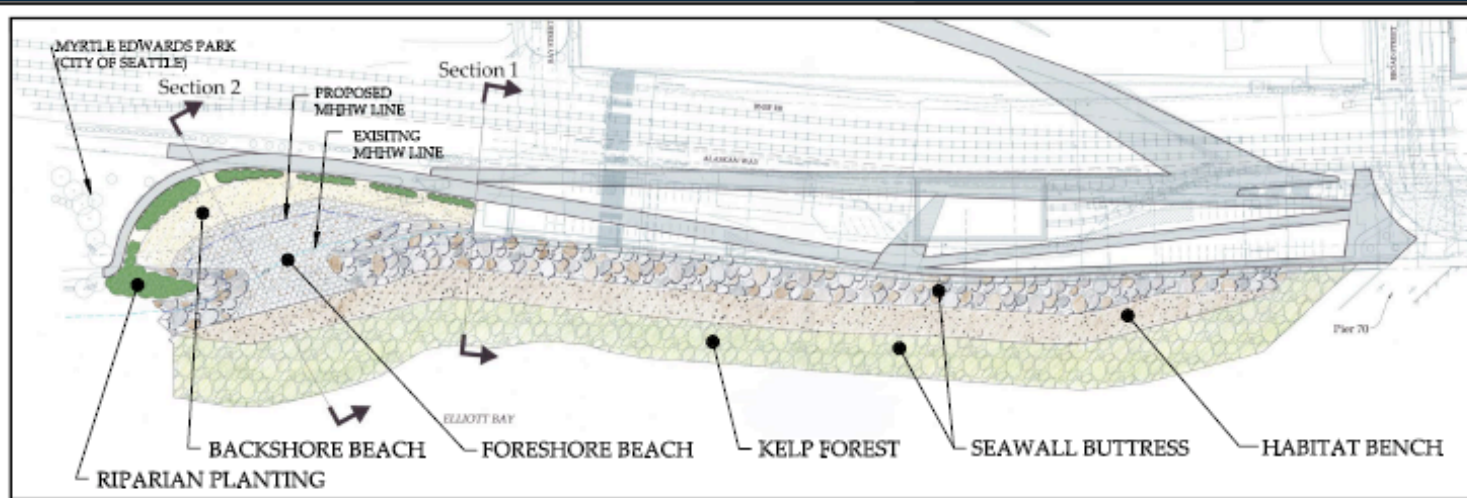


4. Permitting and Environmental Review

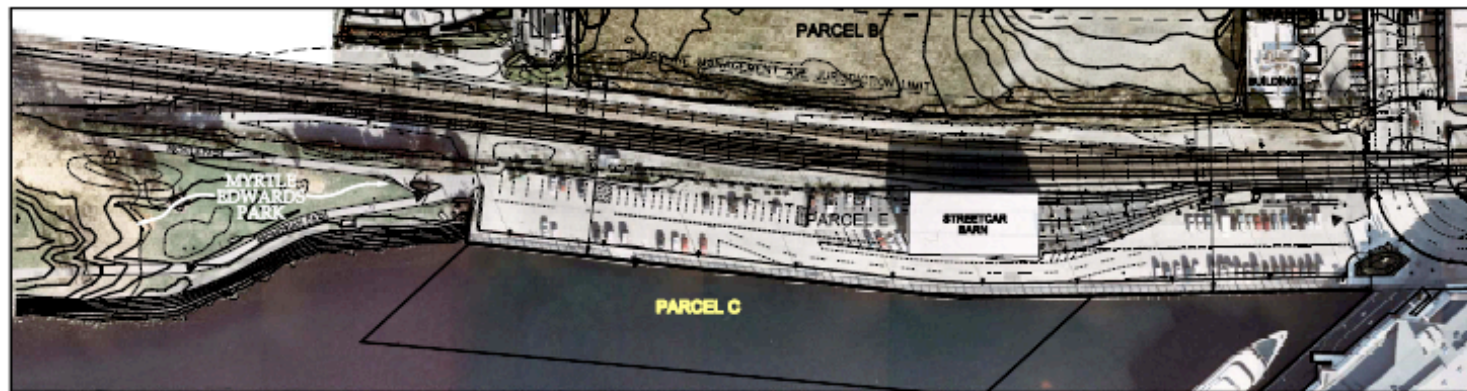
- Client Goals
- Assessment of Earlier Shoreline Design
- Documentation of Existing Habitat
- Project Schedule
- Restoration Features-Nationwide 27 Permit
- Gain of Intertidal Area and Section 404
- Water Quality Monitoring
- Pre and Post Construction Monitoring

5. Shoreline Habitat Design Components





Proposed Materials Layout

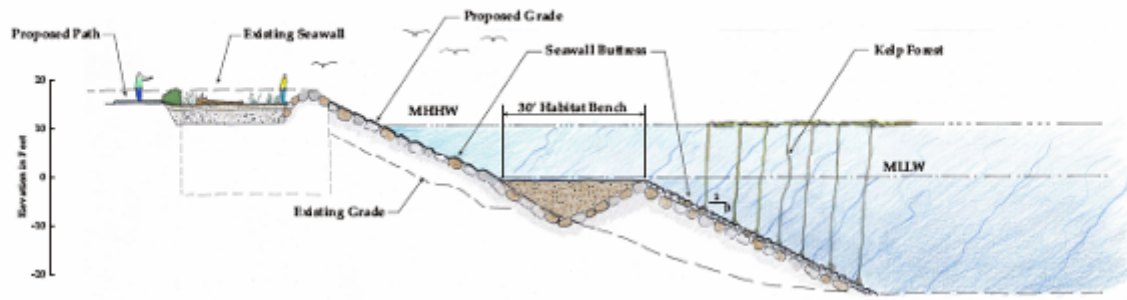


Existing Conditions Plan

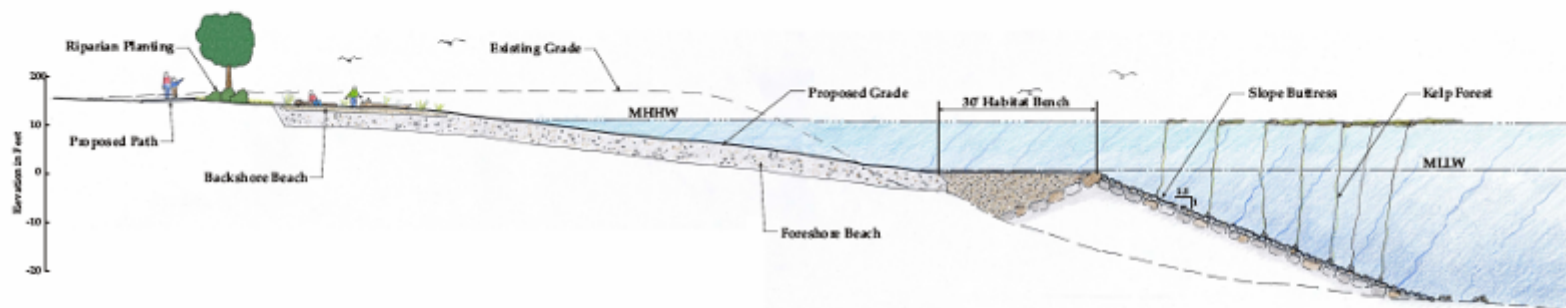
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Olympic Sculpture Park





Section 1



Section 2



Cross Sections

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6. Shoreline Design Implementation









THE SHORE

The Shore is one of the Olympic Sculpture Park's four native plant areas, with specimens selected for the waterfront that are tolerant of high wind and saltwater. Shore pine, alder, beach grass, Nootka rose and beach strawberry are found in the natural coastal environment of the Puget Sound basin. The creation of a new beach and offshore subtidal habitat is important for the recovery of native fish species, particularly juvenile salmon that occupy more shallow zones.

Dxw?ilgwil – “place of the saltwater”

With deep and enduring ties to this area that is named for their leader, Chief Sealth, the Duwamish people have adapted to myriad changes that have occurred along the shores and rivers of this region and continue to be stewards of these resources. The saying “when the tide is out, the table is set” reflects the bounty of the sea in providing fish, shellfish, waterfowl and marine plants, acknowledged in Native language, oral traditions and rituals.













7. Parting Thoughts

- Demonstrates Possibilities to Create a More Sustainable Downtown Waterfront
- Wonderful Education and Research/Monitoring Opportunity
- SAM Made Urban Habitat Restoration a Priority
- Habitat Improvements Can Also Work for People Along Downtown Waterfronts
- Shoreline Design Met Project Goals

Thank You!



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