

# The Alaskan Way Viaduct & Seawall Replacement Program



## Central Waterfront

**Alaskan Way Viaduct  
Stakeholder Advisory Committee**

**Scenario Evaluation Results – Health of the Environment – Measure 3  
September 25, 2008**

## Guiding Principles

1. Improve public safety.
2. Provide efficient movement of people and goods now and in the future.
3. Maintain or improve downtown Seattle, regional, the port and state economies.
4. Enhance Seattle's waterfront, downtown and adjacent neighborhoods as a place for people.
5. Create solutions that are fiscally responsible.
6. **Improve the health of the environment.**

# Scenario Evaluation Measures for Guiding Principle 6

1. Assess changes in air quality.
2. Assess changes in carbon footprint.
3. Estimate change in pollutants from storm water runoff into water bodies.
4. Assess opportunities to improve near-shore habitat.

## Change in Pollutants from Stormwater

- Qualitatively assess improvements in stormwater quality.
- Scenarios compared based on changes in pollutant generating impervious surfaces.
- Existing drainage system:
  - Combined sewer
  - Separated stormwater
  - Direct discharge

## Key Findings

- All scenarios would improve stormwater quality.
  - Eliminate direct discharge without treatment.
  - Meet current water quality treatment requirements.
- Scenarios with more open space and fewer lanes may have more opportunity for natural drainage (surface street scenarios, cut & cover tunnel and lidded trench).
- Improvements to water quality is a matter of stormwater management approach and independent of the scenarios.

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# Potential Low-Impact Development Practices

Type of Low Impact Development	Description	Limitations	Application
<b>Reduce Pollutant Generating Surface</b>	Reduce lane widths and parking.	Create areas with soil and native vegetation.	All scenarios.
<b>Rain Garden (Bioretention)</b>	A landscape amenity located at or above grade.	Requires soil and an under drain and maintenance of vegetation.	All at grade or elevated sections of road.
<b>Tree Box Filters</b>	Street tree planting, at grade with an enlarged planting pit.	Requires an underdrain, maintenance of vegetation, and a storm flow inlet from street or sidewalk.	All at grade or elevated sections of road.
<b>Permeable Pavement</b>	A permeable pavement, at-grade, designed to accommodate pedestrians, bicycles, and vehicle traffic while allowing infiltration, treatment, and storage of stormwater.	Requires an underdrain. Maximum base depths vary between 18-36 inches.	All at grade sections of road.
<b>Reverse Slope Sidewalk</b>	A sidewalk (open space) sloped away from the road and/or drainage collection system.	Adjacent uses and activities.	Open space areas adjacent to Elliott Bay. 6

## What Did We Learn?

- All scenarios will improve stormwater quality.
- Seattle and King County's stormwater/combined sewer systems are integral to stormwater improvements.
- Opportunities for low impact development can be integrated into stormwater and roadway design.