

## TECHNICAL MEMORANDUM 203.1

**Project Name:** Barton, Murray, Magnolia, and North Beach CSO Projects **Date:** August 1, 2007  
**Client:** King County Department of Natural Resources and Parks **Project Number:** 7562A.10  
**Subject:** Barton, Murray, South Magnolia, and North Beach CSO Facility Selection Criteria

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### BACKGROUND AND PURPOSE

To evaluate the CSO control approaches and associated alternatives for the Barton, Murray, Magnolia, and North Beach CSO basins, a list of screening criteria were developed. These criteria were presented and discussed as part of Workshop No. 1, held March 20, 2007, and were subsequently reviewed by the King County Department of Natural Resources and Parks (County) staff.

The main categories of evaluation criteria, as developed and agreed upon by the project team, are as follows:

- Cost Effectiveness
- Ease of Operations and Maintenance
- Technical Feasibility and Compatibility
- Public Health and Environmental Benefit
- Flexibility
- Community Considerations
- Compatibility with Other Programs and Initiatives

The specific evaluation criteria are presented in Table 1, on the following pages.

These criteria were used to evaluate the proposed CSO alternatives for each basin as part of Workshop No. 2, held May 30, 2007. The project team ranked each alternative with respect to the criteria to develop a short-list of preferred CSO alternatives for each basin. The preferred alternatives are presented in Technical Memorandum 202.1 "CSO Control Approach and Planning Boundaries."

These criteria will be further refined as part of the Alternatives Development phase of this project, which will lead to the selection of one preferred CSO control alternative for each of the four basins. Once the preferred alternative for each basin has been more fully developed, additional tasks will be conducted, including those relating to environmental services, public involvement, geotechnical evaluations and land surveys for easement or property acquisition, and development of costs for the preferred alternative.

**Table 1      Screening Criteria  
CSO Control Approach and Planning Boundaries  
Barton, Murray, Magnolia, and North Beach CSO Projects**

**Cost Effectiveness**

- Capital cost is optimal for level of CSO control.
- Life-cycle cost is optimal for CSO control results.
- Optimizes use of existing facilities (RWSP goal.)
- Maximizes ranking for grants and loans.

**Ease of Operation and Maintenance**

- Reliably and consistently able to meet CSO control objectives.
- Aligns with WTD automation and remote operations goals.
- Easy to start up and shut down.
- Easily accessible for maintenance on a regular basis.
- Causes no adverse impacts on other County facilities.
- Causes no adverse impacts on Seattle facilities.
- Minimizes complexity of regulatory reporting.

**Technical Feasibility and Compatibility**

- Is compatible with existing wastewater system, King County design standards, operation and management (e.g. treatment, storage, pumping processes, equipment, configurations.)
- Is technically feasible to build (e.g. site, geology, water, utilities, construction methods and materials.)
- Can be reasonably permitted within existing constraints, e.g. shorelines, critical areas.
- Land is reasonably available.
- Constraints imposed by federal and state permits are minimized.

**Public Health & Environmental Benefit**

- Meets CSO control requirements.
- Minimizes public exposure to pathogens and sediment contamination
- Design optimizes raw materials consumption, materials recycling, existing built environment usage, and reduces carbon footprint.
- Minimizes environmental degradation risks resulting from presence of hazardous wastes, and impacts on wetlands, critical areas, landslide and steep slope areas, or estuaries.
- Promotes recovery of endangered species.
- Coordinates with Puget Sound Partnership goals and plans.

**Flexibility**

- Has flexibility to be modified to satisfy uncertain future regulations.
- Has flexibility to respond to climate change.
- Has implementation flexibility, e.g. phasing, expansion in future, alternative delivery methods.

**Community Considerations**

- Balances neighborhood equity issues (e.g. compatibility of approach with existing land use, number and type of properties potentially impacted by approach during construction or operation).
- Allocation of costs amongst participating agencies has best benefit/cost result for the public.
- Shorelines impacts are minimized.
- Property disruption, including acquisition is minimized.
- Short-term construction and implementation impacts to the community are minimized (e.g. traffic, noise, odor, dust, impacts on land uses).
- Operational and long-term impacts to the community from system operation are minimized (e.g. operational access, noise, odor).
- Minimizes disturbance of areas of archaeological significance.

**Compatibility with Other Programs and Initiatives**

- Coordinates with plans of Seattle Parks, Public Utilities, Transportation departments.
- Sediment Management Plan
- County-wide planning policies
- Current agency urban stormwater management responsibilities.
- Conveyance System Improvement policies
- WTD Productivity Initiative
- WTD CSO Program