



Project Name: Barton Murray, Magnolia, and North Beach CSO Facilities
Subject: Summary of CSO Control Approach Alternatives for Workshop No. 2
Alternative B1A/M1B: Provide Storage for Peak Flows at Fauntleroy School in the Barton Basin and Lowman Beach Park in the Murray Basin

APPROACH: STORE PEAK FLOWS FOR BARTON AND MURRAY BASINS

ALTERNATIVE DESCRIPTION

In this alternative, peak flows from both basins would be stored and pumped back into the collection system after the storm event has subsided. A 0.5 million gallon (MG) rectangular storage tank located at the Fauntleroy School is proposed for the Barton CSO Basin and a 1.3 MG rectangular storage tank at the Lowman Beach Park is proposed for the Murray CSO basin.

The 0.50 MG storage tank for the Barton CSO Basin would be approximately 80 feet long, 40 feet wide, with an assumed storage depth of 25 feet. The storage tank would include a flow control structure that would divert flows from the 24-inch interceptor along SW Director Street during rain events that cause flows in excess of the capacity of the Barton Pump Station. This flow control would be accomplished by measuring the depth within the Barton Pump Station wet well and the depth within the 24-inch interceptor along SW Director Street. If the wet well level exceeds the high water alarm at the Barton Pump Station, or the level of flow in the 24-inch interceptor along SW Director Street exceeds 80% of full depth in the pipe, flow will be diverted into the proposed 0.5 MG storage tank. Once the wet well level has returned to the level set-point (i.e. – normal operating conditions), the tank will re-introduce the stored volume back into the 24-inch interceptor along SW Director Street with a 0.5 million gallons per day (MGD) pump system designed to dewater the tank within 24 hours.

The 1.3 MG storage tank for the Murray CSO Basin would be approximately 120 feet long, 60 feet wide, with an assumed storage depth of 25 feet. The storage tank would be connected to the Murray Pump Station wet well and would be filled by gravity. Once the wet well level has returned to the level set-point (i.e. – normal operating conditions), the tank will re-introduce the stored volume back into the Murray Pump Station Wet Well with a 1.3 MGD pump system designed to dewater the tank within 24 hours.

ASSUMPTIONS

- There is sufficient flow in the existing 24-inch interceptor along SW Director Street to attenuate peak flows at the existing Barton Pump Station
- The 1.3 MG storage tank can be put in the Lowman Beach Park
- The 0.5 MG tank can be located at the Fauntleroy School?

PROPOSED IMPROVEMENTS

Pump Stations

- Pump Systems in the Barton and Murray Storage Tanks
 - 0.5 MGD Submersible Pump System for the Barton Tank
 - 1.3 MGD Submersible Pump System for the Murray Tank

Conveyance Pipelines

- N/A

Storage

- Storage Tanks in the Murray and Barton CSO Basins
 - 0.5 MG rectangular tank in the Barton CSO Basin
 - 1.3 MG rectangular tank in the Murray CSO Basin

Treatment Processes

- N/A

Demand Management

- N/A

POLICY IMPLICATIONS

- N/A

A schematic and map of the existing and proposed facilities are shown on the following page.





Project Name: Barton Murray, Magnolia, and North Beach CSO Facilities
Subject: Summary of CSO Control Approach Alternatives for Workshop No. 2
Alternative B1A/M2B: Provide Storage for Peak Flows at Fauntleroy School in the Barton Basin and Convey Peak Flows from the Murray Incremental Area and Additional Treatment Capacity at the Alki CSO Treatment Plant

APPROACH: STORE PEAK FLOWS FOR BARTON AND CONVEY PEAK FLOWS FROM THE MURRAY INCREMENTAL AREA

ALTERNATIVE DESCRIPTION

In this alternative, peak flows from the Barton Basin would be stored and pumped back into the collection system after the storm event has subsided, while the incremental peak flows from the Murray Basin would be conveyed downstream through the construction of a new wet weather pump station and force main. A 0.5 million gallon (MG) rectangular storage tank located at the Fauntleroy School is proposed for the Barton CSO Basin and a new 8.5 million gallon per day (MG) wet weather pump station at the Lowman Beach Park is proposed for the Murray CSO basin.

The 0.50 MG storage tank for the Barton CSO Basin would be approximately 80 feet long, 40 feet wide, with an assumed storage depth of 25 feet. The storage tank would include a flow control structure that would divert flows from the 24-inch interceptor along SW Director Street during rain events that cause flows in excess of the capacity of the Barton Pump Station. This flow control would be accomplished by measuring the depth within the Barton Pump Station wet well and the depth within the 24-inch interceptor along SW Director Street. If the wet well level exceeds the high water alarm at the Barton Pump Station, or the level of flow in the 24-inch interceptor along SW Director Street exceeds 80% of full depth in the pipe, flow will be diverted into the proposed 0.5 MG storage tank. Once the wet well level has returned to the level set-point (i.e. – normal operating conditions), the tank will re-introduce the stored volume back into the 24-inch interceptor along SW Director Street with a 0.5 million MGD pump system designed to dewater the tank within 24 hours.

The new 8.5 MGD wet weather pump station will convey flows through 13,500 feet of new 24-inch force main routed along Beach Drive SW and discharging to the existing 63rd Street Pump Station.

ASSUMPTIONS

- There is sufficient flow in the existing 24-inch interceptor along SW Director Street to attenuate peak flows at the existing Barton Pump Station.
- Providing 0.5 MG of storage within the Barton Basin will result in excess peak flows only from the Murray CSO Basin, which are estimated to be 8.5 MGD.
- There is not sufficient capacity in the existing Murray Pump Station and force main to accommodate the additional 8.5 MGD.
- There is adequate capacity in the 63rd St. Pump Station and force main to handle the additional 8.5 MGD conveyance to the Alki Treatment Plant.
- There is not sufficient capacity at the Alki CSO Treatment Plant to handle the additional 8.5 MGD. Upgrades will be required.
- The 8.5 MGD pump station can be located in the Lowman Beach Park

- The 0.5 MG tank can be located at the Fauntleroy School

PROPOSED IMPROVEMENTS

Pump Stations

- 0.5 MGD Pump System in the Barton Storage Tank
- 8.5 MGD Submersible Pump Station to convey Murray Peak Flows

Conveyance Pipelines

- 13,500 feet of 24-inch force main from Lowman Beach Park to the 63rd Street Pump Station to convey excess Murray Peak Flows

Storage

- 0.5 MG storage tank in the Barton CSO Basin

Treatment Processes

- Provide an additional 8.5 MGD treatment capacity at the Alki Treatment Plant

Demand Management

- N/A

POLICY IMPLICATIONS

- N/A

A schematic and map of the existing and proposed facilities are shown on the following page.





Project Name: Barton Murray, Magnolia, and North Beach CSO Facilities
Subject: Summary of CSO Control Approach Alternatives for Workshop No. 2
Alternative B1A/M3B: Provide Storage for Peak Flows at Fauntleroy School in the Barton Basin and Manage Demand in Murray Basin through Roof Drain Disconnections

APPROACH: STORE PEAK FLOWS FOR BARTON AND PROVIDE DEMAND MANAGEMENT IN THE MURRAY BASIN

ALTERNATIVE DESCRIPTION

In this alternative, peak flows from the Barton Basin would be stored and pumped back into the collection system after the storm event has subsided, while the incremental peak flows from the Murray Basin would be eliminated through roof drain disconnections within the Murray Basin. A 0.5 million gallon (MG) rectangular storage tank located at the Fauntleroy School is proposed for the Barton CSO Basin and 40 acres of roof drain disconnections are proposed for the Murray CSO basin.

The 0.50 MG storage tank for the Barton CSO Basin would be approximately 80 feet long, 40 feet wide, with an assumed storage depth of 25 feet. The storage tank would include a flow control structure that would divert flows from the 24-inch interceptor along SW Director Street during rain events that cause flows in excess of the capacity of the Barton Pump Station. This flow control would be accomplished by measuring the depth within the Barton Pump Station wet well and the depth within the 24-inch interceptor along SW Director Street. If the wet well level exceeds the high water alarm at the Barton Pump Station, or the level of flow in the 24-inch interceptor along SW Director Street exceeds 80% of full depth in the pipe, flow will be diverted into the proposed 0.5 MG storage tank. Once the wet well level has returned to the level set-point (i.e. normal operating conditions), the tank will re-introduce the stored volume back into the 24-inch interceptor along SW Director Street with a 0.5 million MGD pump system designed to dewater the tank within 24 hours.

40 acres of roof drainage in the Murray Basin would be disconnected as part of this alternative. All of the roof drain disconnections would be within 100 feet of an existing storm inlet or catch basin.

ASSUMPTIONS

- There is sufficient flow in the 24-inch interceptor along SW Director Street to attenuate peak flows at the existing Barton Pump Station
- Disconnecting 40 acres of roof drains within the Murray Basin will eliminate the excess peak flows from this area.
- The roof drains can be effectively disconnected within the Murray CSO Basin
- The 0.5 MG tank can be located at the Fauntleroy School

PROPOSED IMPROVEMENTS

Pump Stations

- 0.5 MGD Pump System in the Barton Storage Tank

Conveyance Pipelines

- N/A

Storage

- 0.5 MG storage tank in the Barton CSO Basin

Treatment Processes

- N/A

Demand Management

- 40 acres of roof drainage disconnected from the combined sewer in Murray CSO Basin

POLICY IMPLICATIONS

- N/A

A schematic and map of the existing and proposed facilities are shown on the following page.





Project Name: Barton Murray, Magnolia, and North Beach CSO Facilities
Subject: Summary of CSO Control Approach Alternatives for Workshop No. 2
Alternative B1A/M4B: Provide Storage for Peak Flows at Fauntleroy School in the Barton Basin and Treat Excess Peak Flows at Murray Basin

APPROACH: STORE PEAK FLOWS FOR BARTON AND TREAT EXCESS PEAK FLOWS FROM THE MURRAY INCREMENTAL AREA

ALTERNATIVE DESCRIPTION

In this alternative, peak flows from the Barton Basin would be stored and pumped back into the collection system after the storm event has subsided, while the incremental peak flows from the Murray Basin would be treated within the Murray Basin. A 0.5 million gallon (MG) rectangular storage tank located at the Fauntleroy School is proposed for the Barton CSO Basin and a 8.5 MGD treatment system is proposed for the excess peak flows from the Murray CSO basin.

The 0.50 MG storage tank for the Barton CSO Basin would be approximately 80 feet long, 40 feet wide, with an assumed storage depth of 25 feet. The storage tank would include a flow control structure that would divert flows from the 24-inch interceptor along SW Director Street during rain events that cause flows in excess of the capacity of the Barton Pump Station. This flow control would be accomplished by measuring the depth within the Barton Pump Station wet well and the depth within the 24-inch interceptor along SW Director Street. If the wet well level exceeds the high water alarm at the Barton Pump Station, or the level of flow in the 24-inch interceptor along SW Director Street exceeds 80% of full depth in the pipe, flow will be diverted into the proposed 0.5 MG storage tank. Once the wet well level has returned to the level set-point (i.e. normal operating conditions), the tank will re-introduce the stored volume back into the 24-inch interceptor along SW Director Street with a 0.5 million MGD pump system designed to dewater the tank within 24 hours.

An 8.5 MGD treatment system located in the Lowman Beach Park is proposed to provide end of the pipe treatment for the excess peak flows from the Murray CSO basin area.

ASSUMPTIONS

- There is sufficient flow in the 24-inch interceptor along SW Director Street to attenuate peak flows at the Barton Pump Station
- The treatment facility can be located in the Lowman Beach Park
- The 0.5 MG tank can be located at the Fauntleroy School

PROPOSED IMPROVEMENTS

Pump Stations

- 0.5 MGD Pump System in the Barton Storage Tank

Conveyance Pipelines

- N/A

Storage

- 0.5 MG storage tank in the Barton CSO Basin

Treatment Processes

- 8.5 MGD end of pipe treatment system for excess peak flows in the Murray Basin
- Demand Management**

- N/A

POLICY IMPLICATIONS

- N/A

A schematic and map of the existing and proposed facilities are shown on the following page.








37.2 acres of impervious
roof area within 100 feet of a storm
sewer inlet or catch basin
24.4 acres of impervious roadway connected
to the combined sewer.
69.2 acres of roof drain disconnections
required to eliminate storage



0 520 1,040 1,560 2,080
Feet

1 inch equals 800 feet

Legend

-  Barton
-  Buildings within 100 feet of Storm Sewer Inlets
-  Impervious Roadway Areas
-  Storm
-  Sanitary/Combined

Barton CSO Basin

Potential Sites for Roof
Drain Disconnections



Project Name: Barton Murray, Magnolia, and North Beach CSO Facilities
Subject: Summary of CSO Control Approach Alternatives for Workshop No. 2
Alternative B4A/M1B: Eliminate Excess Peak Flows within the Barton CSO Basin through Roof Drain Disconnections and Provide Storage for Peak Flows at the Lowman Beach Park in the Murray Basin

APPROACH: PROVIDE DEMAND MANAGEMENT IN BARTON BASIN AND STORE PEAK FLOWS FOR MURRAY BASIN

ALTERNATIVE DESCRIPTION

In this alternative, peak flows from the Barton Basin would be eliminated from the system through roof drain disconnections, while the peak flows from the Murray Basin would be stored and pumped back into the collection system after the storm event has subsided. Disconnection of 70 acres of impervious area is proposed for the Barton CSO Basin and a 1.3 MG rectangular storage tank at the Lowman Beach Park is proposed for the Murray CSO basin.

The roof drain disconnection analysis indicates that approximately 45 acres of roof drainage is within 150 feet of an existing storm inlet or catch basin. In addition, there is a large section of the Barton Basin located on the east side of the basin in which the pavement areas have not been disconnected from the combined sewer. This area is approximately 25 acres and combined with the 45 acres of roof drainage would satisfy the area requirements as indicated by King County to eliminate the excess Barton peak flows.

The 1.3 MG storage tank for the Murray CSO Basin would be approximately 120 feet long, 60 feet wide, with an assumed storage depth of 25 feet. The storage tank would be connected to the existing Murray Pump Station wet well and would be filled by gravity. Once the wet well level has returned to the level set-point, the tank will re-introduce the flows back into the Murray Pump Station Wet Well with a 1.3 MGD pump system designed to dewater the tank within 24 hours.

ASSUMPTIONS

- Disconnecting 70 acres of roof drainage from the Barton Basin will eliminate the excess peak flows in the basin.
- The 1.3 MG storage tank can be put in the Lowman Beach Park,
- The roof drains can be effectively disconnected within the Barton CSO Basin.

PROPOSED IMPROVEMENTS

Pump Stations

- 1.3 MGD Submersible Pump System inside the Murray Storage Tank

Conveyance Pipelines

- N/A

Storage

- 1.3 MG Storage in the Murray Basin at Lowman Beach Park

Treatment Processes

- N/A

Demand Management

- 70 acres of roof drainage disconnected from the combined sewer in the Barton Basin

POLICY IMPLICATIONS

- N/A

A schematic and map of the existing and proposed facilities are shown on the following page.





Project Name: Barton Murray, Magnolia, and North Beach CSO Facilities
Subject: Summary of CSO Control Approach Alternatives for Workshop No. 2
Alternative B4A/M2B: Eliminate Excess Peak Flows within the Barton CSO Basin through Roof Drain Disconnections and Convey Peak Flows from the Murray Incremental Area and Additional Treatment Capacity at the Alki Treatment Plant

APPROACH: PROVIDE DEMAND MANAGEMENT FOR THE BARTON BASIN AND CONVEY PEAK FLOWS FROM THE MURRAY INCREMENTAL AREA

ALTERNATIVE DESCRIPTION

In this alternative, peak flows from the Barton Basin would be eliminated from the system through roof drain disconnections, while the incremental peak flows from the Murray Basin would be conveyed downstream through the construction of the new pump station and force main. Disconnection of 70 acres of impervious area is proposed for the Barton CSO Basin and a new 8.5 million gallon per day (MGD) wet weather pump station at the Lowman Beach Park is proposed for the Murray CSO basin.

The roof drain disconnection analysis indicates that approximately 45 acres of roof drainage is within 150 feet of an existing storm inlet or catch basin. In addition, there is a large section of the Barton Basin located on the east side of the basin in which the pavement areas have not been disconnected from the combined sewer. This area is approximately 25 acres and combined with the 45 acres of roof drainage would satisfy the area requirements as indicated by King County to eliminate the excess Barton peak flows.

The new 8.5 MGD pump station will convey flow through 13,500 feet of 24-inch force main routed along Beach Drive SW and discharging to the existing 63rd Street Pump Station.

ASSUMPTIONS

- Flow Management at Barton CSO basin will result excess peak flows only from the Murray CSO Basin, which are approximately 8.5 MGD.
- There is not enough capacity in the Murray Pump Station and force main to handle the additional 8.5 MGD.
- There is enough capacity in the 63rd St. Pump Station and force main to handle the additional 8.5 MGD of conveyance to the Alki Treatment Plant.
- There is not enough capacity at the Alki CSO Treatment Plant to handle the additional 8.5 MGD. Upgrades will be required.
- Disconnecting 70 acres of roof drainage from the Barton Basin will eliminate the excess peak flows in the basin.
- The 8.5 MGD pump station can be located in the Lowman Beach Park
- The roof drains can be effectively disconnected within the Barton CSO Basin.

PROPOSED IMPROVEMENTS

Pump Stations

- 8.5 MGD Submersible Pump Station to convey Murray Peak Flows

Conveyance Pipelines

- 13,500 feet of 24-inch force main from Lowman Beach Park to the 63rd Street Pump Station to convey excess Murray Peak Flows

Storage

- N/A

Treatment Processes

- Provide an additional 8.5 MGD treatment capacity at the Alki Treatment Plant

Demand Management

- 70 acres of roof drainage disconnected from the combined sewer in the Barton Basin

POLICY IMPLICATIONS

- N/A

A schematic and map of the existing and proposed facilities are shown on the following page.





Project Name: Barton Murray, Magnolia, and North Beach CSO Facilities
Subject: Summary of CSO Control Approach Alternatives for Workshop No. 2
Alternative B4A/M3B: Manage Demand in Barton and Murray CSO Basins through Disconnection of Impervious Areas from the Combined Sewers

APPROACH: PROVIDE DEMAND MANAGEMENT FOR THE MURRAY AND BARTON CSO BASINS THROUGH DISCONNECTION OF IMPERVIOUS AREAS FROM THE COMBINED SEWER SYSTEM

ALTERNATIVE DESCRIPTION

In this alternative, peak flows from the Barton Basin would be eliminated from the system through roof drain disconnections, while the incremental peak flows from the Murray Basin would be eliminated through the roof drain disconnections within the Murray Basin. Disconnection of 70 acres of impervious area is proposed for the Barton CSO Basin and 40 acres of roof drain disconnections is proposed for the Murray CSO basin.

The roof drain disconnection analysis indicates that approximately 45 acres of roof drainage is within 150 feet of an existing storm inlet or catch basin. In addition, there is a large section of the Barton Basin located on the east side of the basin in which the pavement areas have not been disconnected from the combined sewer. This area is approximately 25 acres and combined with the 45 acres of roof drainage would satisfy the area requirements as indicated by King County to eliminate the excess Barton peak flows.

The roof drain disconnection analysis for the Murray CSO Basin indicates that 40 acres of roof drainage is within 100 feet of an existing storm sewer inlet or catch basin. These roof areas will be disconnected as part of this proposed alternative.

ASSUMPTIONS

- Disconnecting 70 acres of roof drainage from the Barton Basin will eliminate the excess peak flows in the basin.
- Disconnecting 40 acres of roof drains within the Murray Basin will eliminate the excess peak flows from this area.
- The roof drains can be effectively disconnected within the Barton and Murray CSO Basin

PROPOSED IMPROVEMENTS

Pump Stations

- N/A

Conveyance Pipelines

- N/A

Storage

- N/A

Treatment Processes

- N/A

Demand Management

- 40 acres of roof drainage disconnected from the combined sewer in the Murray Basin
- 70 acres of roof drainage disconnected from the combined sewer in the Barton Basin

POLICY IMPLICATIONS

- N/A

A schematic and map of the existing and proposed facilities are shown on the following page.





Project Name: Barton Murray, Magnolia, and North Beach CSO Facilities
Subject: Summary of CSO Control Approach Alternatives for Workshop No. 2
Alternative B4A/M4B: Provide Demand Management at Barton CSO Basin through Roof Drain Disconnections and Treat Excess Peak Flows at Murray Basin

APPROACH: PROVIDE DEMAND MANAGEMENT IN THE BARTON BASIN AND TREAT EXCESS PEAK FLOWS FROM THE MURRAY INCREMENTAL AREA

ALTERNATIVE DESCRIPTION

In this alternative, peak flows from the Barton Basin would be eliminated from the system through roof drain disconnections, while the incremental peak flows from the Murray Basin would be treated within the Murray Basin. Approximately 70 acres of roof drainage is proposed for disconnection in the Barton CSO Basin and an 8.5 MGD treatment system is proposed for end of pipe treatment for the excess peak flows from the Murray CSO basin.

The roof drain disconnection analysis indicates that approximately 45 acres of roof drainage is within 150 feet of an existing storm inlet or catch basin. In addition, there is a large section of the Barton Basin located on the east side of the basin in which the pavement areas have not been disconnected from the combined sewer. This area is approximately 25 acres and combined with the 45 acres of roof drainage would satisfy the area requirements as indicated by King County to eliminate the excess Barton Peak Flows.

An 8.5 MGD treatment system located in the Lowman Beach Park is proposed to provide end of the pipe treatment for the excess peak flows from the Murray CSO basin area.

ASSUMPTIONS

- Disconnecting 70 acres of roof drainage from the Barton Basin will eliminate the excess peak flows in the basin.
- A treatment facility can be located in the Lowman Beach Park
- Almost 70 acres of impervious area can be disconnected in the Barton Basin

PROPOSED IMPROVEMENTS

Pump Stations

- N/A

Conveyance Pipelines

- N/A

Storage

- N/A

Treatment Processes

- 8.5 MGD end of pipe treatment system for excess peak flows from the Murray Basin

Demand Management

- Disconnection of 70 acres of impervious area within the Barton Basin.

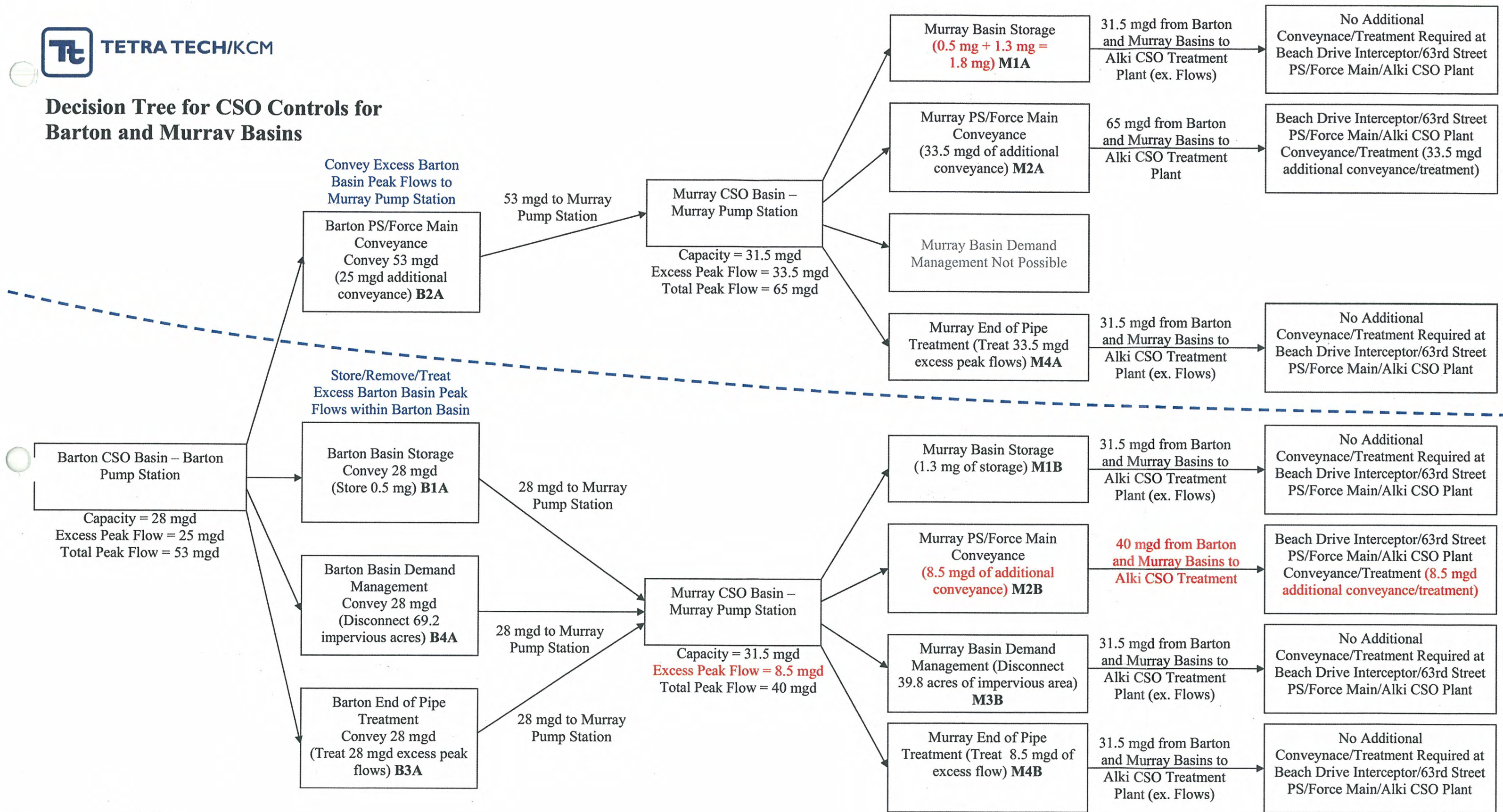
POLICY IMPLICATIONS

- N/A

A schematic and map of the existing and proposed facilities are shown on the following page.



Decision Tree for CSO Controls for Barton and Murray Basins



BARTON AND MURRAY BASINS
ALTERNATIVES EVALUATION - WORKSHOP 2

ALTERNATIVE		RELATIVE COST	SCREENING CRITERIA																												NOTES
ID	DESCRIPTION		COST EFFECTIVENESS				O & M				TECHNICAL FEASIBILITY / COMPATIBILITY				PUBLIC HEALTH & ENVIRONMENTAL BENEFIT				FLEXIBILITY				COMMUNITY				PROGRAM COMPATIBILITY				
			Group 1	Group 2	Group 3	Group 4	Group 1	Group 2	Group 3	Group 4	Group 1	Group 2	Group 3	Group 4	Group 1	Group 2	Group 3	Group 4	Group 1	Group 2	Group 3	Group 4	Group 1	Group 2	Group 3	Group 4	Group 1	Group 2	Group 3	Group 4	
B1A - M1B	0.5 MG storage at Fauntleroy and 1.3 MG storage at Murray	1.2	3	3	3	3	3	3	3	3	2	3	3	3	2	3	3	3	3	3	1	3	3	3	2	3	3	2	1		
B1A - M2B	0.5 MG storage at Fauntleroy and 8.5 mgd conveyance capacity at Murray	2.1	1	1	2	1	3	2	1	2	1	1	2	2	3	3	2	3	3	1	1	2	1	1	2	3	3	2	1		
B1A - M3B	0.5 MG storage at Fauntleroy and demand management at Murray		1	3	2	2	2	3	3	2	2	3	3	2	2	3	3	3	3	2	2	2	3	2	2	2	3	2	2		
B1A - M4B	0.5 MG storage at Fauntleroy and 8.5 mgd end of pipe treatment at Murray	1.0	3	3	2	2	2	2	1	1	3	3	2	2	2	3	3	3	3	2	2	2	3	1	2	2	2	3	2		
B4A - M1B	Demand management in Barton and 1.3 MG storage at Murray			2				2								3					2										
B4A - M2B	Demand management in Barton and 8.5 mgd conveyance capacity at Murray			1				2												1											
B4A - M3B	Demand management in both Barton and Murray			2				3								3								2							
B4A - M4B	Demand management in Barton and end of pipe treatment at Murray			2				2								3								2							

SUMMATION				
TOTAL	RED	YELLOW	GREEN	
67	5	4	18	
49	10	9	7	
64	2	16	10	
59	6	13	9	
16	1	3	3	
12	4	1	2	
18	0	3	4	
17	0	4	3	

SCREENING CRITERIA COMPONENTS						
Cost Effectiveness	Operations & Maintenance	Technical Feasibility/ Compatibility	Public Health & Environmental Benefit	Flexibility	Community	Program Compatibility
Capital Cost	Reliably meet CSO objectives	Compatible with Existing System	Meet CSO Requirements	Future Regulations	Neighborhood Equity	Seattle Parks, SPU, Transportation
Life Cycle Costs	WTD Automation	Technically Feasible	Minimizes Public Exposure	Climate Change	Cost Allocation	Sediment-Management-Plan
Use of Existing Facilities	Ease of Start-up / Shut-Down	Can be Permitted	Minimal Environmental Footprint	CSO-Program-Objectives	Minimal Shoreline Impacts	County-Planning-Policies
Grants/Loan Ranking	Ease of Maintenance	Land is Obtainable	Minimizes Environmental Risks	Implementation	Minimal Property Disruption	Stormwater Management Responsibilities
	No Adverse Impacts - County	Minimize Federal / State Permit Constraints	Endangered Species		Minimal Implementation Impacts	Conveyance-System-Improvement-Policies
	No Adverse Impacts - Seattle		Coordinates with Puget Sound Goals		Minimal Operations Impacts	WTD Productivity Initiative
	Ease of Regulatory Reporting				Minimal Disturbance of Archeological Areas	Puget-Sound-Restoration
						WTD-Balanced-Scorecard
						WTD-CSO-Program

BARTON AND MURRAY BASINS ALTERNATIVES EVALUATION - WORKSHOP 2

ALTERNATIVE		RELATIVE COST	NOTES
ID	DESCRIPTION		
B1A - M1B	0.5 MG storage at Fauntleroy and 1.3 MG storage at Murray	1.2	
B1A - M2B	0.5 MG storage at Fauntleroy and 8.5 mgd conveyance capacity at Murray	2.1	
B1A - M3B	0.5 MG storage at Fauntleroy and demand management at Murray		
B1A - M4B	0.5 MG storage at Fauntleroy and 8.5 mgd end of pipe treatment at Murray	1.0	
B4A - M1B	Demand management in Barton and 1.3 MG storage at Murray		
B4A - M2B	Demand management in Barton and 8.5 mgd conveyance capacity at Murray		
B4A - M3B	Demand managemetn in both Barton and Murray		
B4A - M4B	Demand management in Barton and end of pipe treatment at Murray		