

Murray Wet Weather Facility

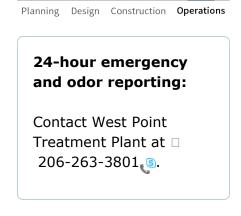
#### **Completed Spring 2017**

#### Community celebration and facility tours -- June 10th

Thanks for joining the King County WTD to celebrate the completion of the Murray CSO Control Project on June 10! We would like to thank community members and project neighbors for their patience and understanding during construction.







#### **Facility address**

7018 Beach Dr. S.W., Seattle

### Project location



Back to the <u>capital projects</u> overview map 
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See how public art at KCWTD facilities connects community to our system and the environment.



The public staircase provides access between Beach Drive SW and Lincoln Park Way SW.

# **Project description**

King County built a million-gallon underground storage tank across the street from Seattle's Lowman Beach Park to reduce combined sewer overflows (CSOs). The tank stores excess stormwater and wastewater that would otherwise overflow into Puget Sound when the Murray Pump Station exceeds maximum capacity. Learn more <u>about this project</u>.

# **Project schedule**

The Murray Wet Weather Facility began operating in November 2016. Project restoration was completed in spring 2017.

### Photos



Murray CSO Control Facility - view photos on flickr

### Learn more

Why did we need this project?

### Protect public health

#### **Related information**

<u>Protecting Our Waters</u> (Combined Sewer Overflow Control Program), King County

Find out if a CSO is occurring at Murray. King County maintains a <u>real-</u> <u>time notification page</u> so people can see whether CSO discharges are occurring.

This project is funded in part by:



Like many cities around the country, the older parts of King County's wastewater system uses a single set of pipes to carry untreated sewage and stormwater to a treatment plant. To prevent sewer backups into homes and streets, the system includes safety valves called "combined sewer overflows" that route excess sewage and polluted stormwater flow directly into Puget Sound during storms. Although CSOs reduce potential exposure to untreated sewage, they pose significant public health concerns.

### Clean up Puget Sound

The Murray Wet Weather Facility was built to reduce CSOs into Puget Sound. State regulations require no more than one untreated discharge per year on a long-term average. Prior to construction of the Murray Wet Weather Facility, the Murray Pump Station averaged five untreated CSO events per year, discharging 5 million gallons into Puget Sound off of Lowman Beach Park.



Source: Spring 2017 newsletter

What are the features and elements of the wet weather facility?



*Murray CSO Control Facility Site Plan* —*slide 3 from the <u>Final Facility Design Presentation</u>, December 11, 2012* 

The new facility features the following elements.

- Property acquisition
- An underground diversion structure located in Beach Drive Southwest
- A pipe connecting the diversion structure to the storage tank to convey peak flows during a wet weather event
- An approximately 6,000 square foot underground storage tank across from Lowman Beach Park
- Retaining wall to protect the existing hillside along the northeast, east, and south edges of the storage tank site
- One story equipment facility including mechanical and electrical facilities, located above the storage tank
- Landscape restoration in Lowman Beach Park and above ground at the storage tank site
- A green roof with viewing areas
- Public walkway through the site with rain garden
- 3,500 square foot public use space north of facility

# **Public Walkway and Rain Garden**





# **Viewing Areas and Green Roof**



# **Interpretive signs**

There are three interpretive signs located on top of the wet weather facility.



View high-resolution version



View high-resolution version 
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#### How did the community shape the facility design?

Between October 2011 and December 2012, Lowman Beach Park neighbors and park users worked with local designers, environmentalists and community advocates to help the King County project team design a facility that fits in with the community. These discussions produced "common themes" for the design that reflected the community's values for a safe, reliable facility. The common themes were:

- Minimize the "industrial facility" feel
- Encourage views of Puget Sound
- Discourage through traffic on Beach Drive
- Enhance continuous space between Lowman Beach park and the facility site

### Public meetings

June 10, 2017 - Community celebration & facility tours

Saturday, June 10, 2017 10 a.m. to noon Murray Wet Weather Facility 7018 Beach Dr. SW, Seattle

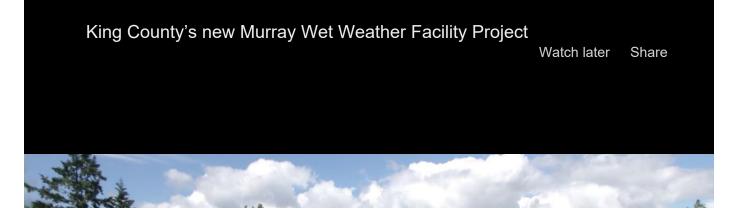
#### **Community celebration & facility tours**

King County is hosting a community event to celebrate the completion of the Murray CSO Control Project and to thank you for your continued patience during construction. King County speakers will address the community during a short program 10:30 a.m. View <u>news release</u>.

Stop by the celebration to:

- Take a tour. We'll have guided tours of the site every half hour, including the control room inside the facility building (tours inside the building are limited to those ages nine and up)
- Learn about how the facility and underground storage tank protect water quality and public health
- Share your feedback about the project and construction process

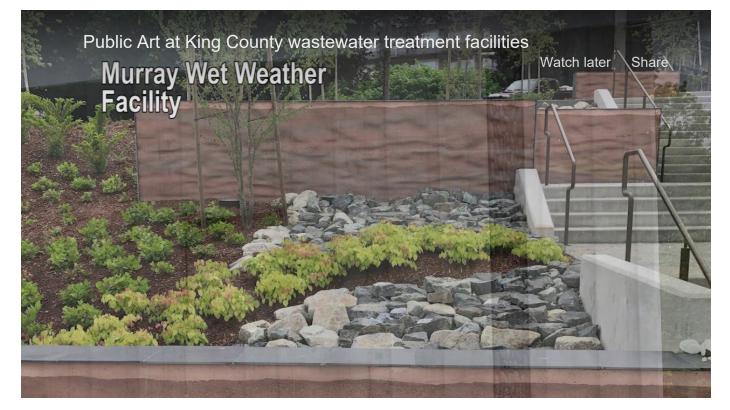
Guided tours will begin at 10 a.m., 11a.m. and 11:30 a.m.





Handouts:

- Event postcard
- <u>Spring 2017 newsletter</u>
- <u>Celebration guide</u>
- <u>Murray Wet Weather Facility map</u>



#### October 11, 2014 - Project information session

Saturday, October 11, 2014 10 a.m. to 2 p.m. Lowman Beach Park

#### **Murray CSO Control Project information session**

You are invited to stop by Lowman Beach Park on Saturday October 11 to talk with a project team member about the latest on the Murray CSO Control Project. You can ask questions about the project and learn about what we've done so far as well as next steps for construction, including excavation, concrete pouring, and final restoration.

#### November 6, 2013 - Pre-construction public meeting

Wednesday, November 6, 2013 6:30–8:30 pm Fauntleroy Church 9140 California Ave. S.W. Seattle, WA

#### Pre-construction public meeting

Join us to take this opportunity to:

- Meet and share concerns with the project team
- Understand how the project protects public health and safeguards Puget Sound

- Review the project schedule
- · Learn more about the project's potential impacts to neighbors and park users
- Discuss how the county project team will work with the community to reduce disruptions

Handouts/presentations and additional information

- Meeting postcard
- Presentation
- Fact sheet
- <u>Construction phase FAQs</u>

#### December 11, 2012 - Design advisory group (DAG) meeting

Tuesday, December 11, 2012 6:30–8:30 pm Fauntleroy Church 9140 California Ave. S.W. Seattle, WA

#### Design advisory group (DAG) meeting

Meeting goals:

- Review 90% landscape and facility design
- Discuss interpretative signage locations and content
- Preview project's next steps

#### Handouts/presentations and additional information

- <u>Agenda</u>
- <u>Presentation</u>
- <u>Meeting summary</u>
- Renderings of public space
  - Northern open space
  - Intersection of Beach Drive & Lincoln Park Way
- <u>Draft interpretive sign locations</u>

#### September 27, 2012 - Design advisory group (DAG) meeting

Thursday, September 27, 2012 6:30–8:30 pm Fauntleroy Church 9140 California Ave. S.W. Seattle, WA

#### Design advisory group (DAG) meeting

The group will be discussing site security, lighting, fencing, location of the facility's odor control stack and learning more about potential impacts to the community during construction. DAG meetings are open to the public.

Handouts/presentations and additional information

- <u>Meeting agenda</u>
- <u>Meeting summary</u>
- Site plan
- Right-of-way improvements
  - Beach Drive Southwest
  - Lincoln Parkway Southwest
  - Murray Avenue Southwest

#### August 18, 2012 - Fence art paint party—for the project site

Saturday, August 18, 2012 10 a.m.-3:30 p.m. Lowman Beach Park 7071 Beach Drive Southwest Seattle, WA

#### Fence art paint party-for the project site

You are invited to help paint the mural that will cover the Murray Combined Sewer Overflow (CSO) Control Facility construction site fence for at least the next year. The Nature Consortium's teaching artist will be onsite to explain mural design and help painters get started. Materials and templates will be provided, but wear your painting clothes!

Handouts/presentations and additional information

• Dressing up the neighborhood

#### July 17, 2012 - Design advisory group (DAG) meeting

Tuesday, July 17, 2012 6:30–8:30 p.m. Fauntleroy Church 9140 California Ave. S.W. Seattle, WA

#### Design advisory group (DAG) meeting

Meeting goals:

- Review SDOT 60% design concept and remaining decisions
- Discuss landscape and architecture design options
- Meet the project artist and review art concepts
- Discuss site fencing and art

#### Handouts/presentations and additional information

- Meeting agenda
- Site and architectural design
- <u>Meeting summary</u>

#### May 10, 2012 - Design advisory group (DAG) meeting

Thursday, May 10, 2012 6:30–8:30 p.m. Fauntleroy Church 9140 California Ave. S.W. Seattle, WA

#### Design advisory group (DAG) meeting

Agenda items include:

- Review of SDOT meetings
- Discussion on revised design concept
- Public art process
- Site security/building deconstruction

Handouts/presentations and additional information

- <u>Meeting agenda</u>
- <u>Meeting summary</u>
- <u>Project timeline</u> with milestones and public involvement opportunities through December 2012
- <u>Preliminary design feedback summary</u>

#### March 20, 2012 - Design advisory group (DAG) meeting

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6:30-8:30 p.m. Fauntleroy Church 9140 California Ave. S.W. Seattle, WA

#### Design advisory group (DAG) meeting

The group will be previewing the public art process, discussing the preliminary design to be shared with the City of Seattle Department of Transportation and reviewing the facility's green building opportunities.

- Meeting agenda
- <u>Meeting summary</u>

Handouts/presentations 

and additional information

- Landscape plan—30% design (March 2012)
- <u>Community feedback on refined preliminary facility design concepts</u>
- Green building strategies

#### February 13, 2012 - Design advisory group (DAG) meeting

Monday, February 13, 2012 6:30–8:30 pm Fauntleroy Church 9140 California Ave. S.W. Seattle, WA

#### Design advisory group (DAG) meeting

The group will be reviewing refined design concepts and discussing the public art process.

- <u>Meeting agenda</u>
- <u>Meeting summary</u>

Handouts/presentations and additional information

- <u>Community feedback on preliminary design concept</u>
- Site and technical constraints update
- Refined facility design concepts, Feb. 16, 2012
- <u>Project milestones</u>

#### January 12, 2012 - Design advisory group (DAG) meeting

Thursday, January 12, 2012 6:30–8:30 pm Fauntleroy Church 9140 California Ave. S.W. Seattle, WA

#### Design advisory group (DAG) meeting

The purpose of this meeting is to explain the design concept and how it reflects the community's input, and to get initial feedback from the DAG about the refining the concept. The project team wants to get the DAG's initial input now so that it can be incorporated into the larger revision effort that will also incorporate interior design work as well as feedback from WTD's Operations staff and SDOT.

- Meeting agenda
- Meeting summary

Handouts/presentations and additional information

- Traffic calming survey results
- Preliminary design concept drawings

#### December 12, 2011 - Design advisory group (DAG) meeting

Tuesday, December 13, 2011 6:30–8:30 p.m. The Hall at Fauntleroy 9131 California Ave. S.W. Seattle, WA

#### Design advisory group (DAG) meeting

You are invited to join members of the King County project team and the Murray CSO DAG for the first working meeting.

The DAG will provide input and advice regarding proposed site layout, facility layout, postconstruction site use, landscaping and aesthetics to share with the broader public and WTD. The group will review technical analyses in order to understand proposed layouts, and provide input about design options to inform the County's decision-making. The DAG acts as a sounding board for the project technical team, and a project liaison to the public, helping ensure the County project team receives a broad community perspective. Topics for the December 13 DAG meeting include:

- Working with the Seattle Department of Transportation on design elements
- Site geotechnical conditions
- Odor control needs and potential locations
- Electrical equipment needs and potential locations
- View <u>meeting flier</u>
- Meeting agenda
- <u>Meeting summary</u>

#### Handouts/presentations and additional information

- Common themes from Oct. 20, 2011 design workshop
- <u>Geotechnical overview</u>
- Odor control technical memo summary
   Odor control technical memo (draft)
- <u>Electrical needs technical memo summary</u>
  - Standby generator technical memo (draft)
- <u>Conceptual drawings of the facility rooms</u> necessary for this project

#### November 14, 2011 - Open house

Monday, November 14, 2011 6:30–8:00 p.m. Fauntleroy Church 9140 California Ave. S.W. Seattle, WA

#### **Open house**

Join your neighbors and the King County project team on November 14 to:

- Learn about the common design themes developed by the community at the October 29 workshop
- Review the conceptual facility drawings created at the workshop
- Share your thoughts and ideas on the design concepts and other ways to make the facility an asset to the community

Handouts/presentations and additional information

- View meeting flier and news release
- Conceptual design drawings

#### October 29, 2011 - Facility design meeting

Saturday, October 29, 2011 9:30 a.m.-3 p.m. Gatewood Elementary School 4320 Southwest Myrtle Street Seattle, WA

#### Facility design meeting

Join King County's project team to:

- share your views and values to help inform facility design
- learn how the facility will safely and reliably protect public health and the environment
- work in small groups with the project team to brainstorm ways to make a facility an asset to the community
- View meeting flier
- <u>Meeting summary</u>

Handouts/presentations& and additional information

- <u>Presentation</u>
- <u>Common themes</u>
- <u>Photos</u>

#### October 20, 2011 - Community meeting

Thursday, October 20, 2011 6:30–8:30 p.m. Fauntleroy Church Fellowship Hall 9140 California Ave. S.W. Seattle, WA

Join the Murray CSO Control Project design team at a community meeting to:

- meet the design team
- review the facility design process and project schedule
- learn how you can help King County design a facility that fits the community
- View meeting flier and news release.
- <u>Agenda</u>
- Meeting summary

Handouts/presentations and additional information

- <u>Presentation</u>
- Design phase public participation timeline
- <u>Murray drainage basin</u>

### Project library

#### Project updates

- Spring 2017 newsletter, May 2017
  - Construction is complete
  - $\circ~$  A look back at the progress made
  - Outreach by the numbers
  - About the Murray Wet Weather Facility
- Join us for a community celebration and facility tours on June 10th! May 25, 2017
- <u>Restoration is complete!</u> Fencing around the facility site to come down during the first week of May, April 28, 2017
- <u>Contractor expected to finish work in April, King County will raise safety railing in May to</u> protect public safety, March 29, 2017
- Landscaping on King County site nearly complete as restoration continues in Lowman <u>Beach Park</u>, February 13, 2017
- Landscaping and restoration begins at Lowman Beach Park, December 22, 2016

- <u>Underground storage tank now working! Restoration of nearby streets and sidewalks</u> <u>continues</u>, November 16, 2016
- Expect delays and variable roadway conditions as restoration continues on Beach Dr. S.W., October 18, 2016
- <u>Underground tank and sewer system now connected! System testing and road restoration</u> <u>continue</u>, October 5, 2016
- <u>Restoration begins. Connection between sewer lines and underground storage tank nearing</u> <u>completion</u>, September 13, 2016
- <u>Permanent odor control system coming online!</u> Shoring removal in Lowman Beach Park to <u>begin this week</u>. September 6, 2016
- <u>5-foot-wide sewer line installation complete! Connection to underground tank and local</u> <u>sewer line to begin this month</u>, July 22, 2016
- <u>Tide gate work begins this week, increased noise and vibration expected during shoring</u> <u>installation</u>, July 6, 2016
- <u>Increased noise and activity expected through Friday, July 1 during pump station power</u> <u>upgrade</u>, June 28, 2016
- <u>To keep the project on schedule, King County's contractor will begin working regularly on</u> <u>Saturdays</u>, May 20, 2016
- Lane closure on 7000 block of Beach Drive Southwest tomorrow–May 11–while crews set standby generator inside facility, May 11, 2016
- Join us for a spring information session! April 26, 2016
- Parking restrictions, intermittent lane and sidewalk closures on Lincoln Park Way Southwest expected as backfilling begins, March 10, 2016
- Red crane replacement scheduled to begin Saturday, Feb. 13, Feb. 11, 2016
- Facility building and street work will continue in 2016, December 22, 2015
- Work begins on Murray CSO facility building, October 7, 2015
- <u>Crews working Saturday, Aug. 22; pump station connection work underway</u>, August 21, 2015
- <u>Bike safe on Beach Drive!</u> August 10, 2015
- <u>Utility work in Beach Drive Southwest begins in early August-expect lane closures and delays</u>, August 3, 2015
- Emergency repair work at Murray CSO Control Project site July 18–19, July 17, 2015
- <u>New water pipe to be installed under Beach Drive Southwest in early July</u>, June 30, 2015
- <u>Road work begins Monday, June 15. Expect parking restrictions, traffic delays</u>, June 11, 2015
- Beach Drive Southwest parking restrictions and traffic delays start Friday, May 15, 2015
- Crews finish tank floor and outer wall, begin constructing inner walls, April 3, 2015
- Smaller weekly concrete pours to begin in February, January 30, 2015
- Maintenance work scheduled for Saturday, January 17, January 16, 2015
- What to expect during concrete pours, Winter 2015
- Winter 2015 project newsletter, January 2015
  - Closer to a clean Puget Sound for Lowman Beach Park and you
  - Murray CSO project on target for 2016 completion
  - Looking back at a year of progress
  - What's happening in 2015
- Smaller concrete pours to begin January 5, December 29, 2014
- Smaller concrete pours begin Dec. 30, Saturday work planned, December 23, 2014
- <u>Saturday work, smaller concrete pours through the end of December; No work on holidays,</u> December 12, 2014
- Concrete pours start Dec. 5. Expect parking restrictions, traffic delays, December 4, 2014
- Excavation complete! Crews prepare to pour tank base, November 17, 2014
- No parking, traffic delays on Beach Drive Southwest on Monday, Oct. 27, October 23, 2014
- Night work planned for Friday, October 10, October 9, 2014
- <u>Saturday work begins October 4</u>, October 1, 2014
- Storage tank excavation begins Thursday, September 18, September 17, 2014
- Crews finish storage tank outer wall, begin preparing site for excavation, August 14, 2014
- <u>Maintenance/repair work at Murray CSO Control Project site scheduled for Saturday, July</u> <u>12</u>, July 8, 2014
- Secant pile installation continues, site activity increases, May 29, 2014
- Crews to begin building storage tank wall during week of May 19, May 16, 2014
- Contractor finishes soil nail wall, getting ready to begin shoring, April 28, 2014
- Soil nail wall testing, installation begins week of March 17, March 14, 2014

- <u>Crews continue removing foundations, standby generator at Murray Pump Station on Feb. 4</u>, January 31, 2014
- <u>Crews continue survey work, begin clearing the project site during the week of January 27</u>, January 22, 2014
- Fall 2013 project newsletter, November 2013
  - Construction starts soon! Do you have the information you need?
  - Construction schedule
  - How will the facility be built?
  - What to expect
  - How will the facility fit into the neighborhood?
- Building deconstruction complete! Project site now ready for construction, October 4, 2013
- Building deconstruction begins in August at Murray CSO Control Project site, July 29, 2013
- Spring 2013 project newsletter, April 2013
  - Coming to your neighborhood: a cleaner Puget Sound
  - Creating a community asset
  - Coming up next...
  - 2013 project schedule
- Meet the facility that will bring a cleaner Puget Sound to your community, June 2012
- Geotechnical assessments begin October 17, 2011, Oct. 10, 2011
- Preliminary survey work, Sept. 16, 2011
- A State Environmental Policy Act (SEPA) determination of nonsignificance (DNS) was issued on April 28, 2011 for this project. View the <u>SEPA DNS and environmental checklist</u>.

#### Fact sheets

- Haul routes, February 2014
- Murray CSO Control Facility site plan, September 2012
- Project sign, June 12, 2012
- View project design drawings on the project area and elements page

#### News releases

- June 7, 2017 Celebrate completion of King County's Murray CSO project, June 10
- Oct. 29, 2014 Lowman Beach reopened following storm-related wastewater overflows
- Oct. 9, 2014 Overnight sewer utility work scheduled at Lowman Beach Park on Oct. 10
- More <u>WTD news releases</u>

#### Environmental documents

SEPA environmental checklist, issued April 28, 2011

Facilities plan

### Barton and Murray (West Seattle) CSO Control Facilities Plan

King County has developed proposals to control combined sewer overflows (CSOs) at two locations in West Seattle—the Barton and Murray CSO basins. One project is the construction of a new 1.0-million-gallon storage tank on the east side of Beach Drive SW near Lowman Beach Park to control CSOs in the Murray CSO basin. The other is the installation of rain gardens in the right-of-way along 32 to 64 half-blocks in the Sunrise Heights and Westwood neighborhoods east of 35th Avenue SW to control overflows in the Barton CSO basin.



The Barton and Murray Combined Sewer Overflow Control Facilities Plan describes the reasons for these projects, the processes used to develop and evaluate alternatives, and the selection of proposed alternatives to advance for further environmental review. These projects are necessary to control CSOs in compliance with RCW 90.48.480 and WAC 173-245-020 (22).

This plan is submitted in compliance with the first of three compliance schedule dates noted in Section S18 of the <u>West Point Treatment Plant National Pollutant Discharge Elimination System</u> <u>Permit</u> (refer to page 53 of permit).

#### Final Facility Plan, September 2011

- Table of contents
- Volume 1. Report 
  (46MB)
- <u>Volume 2. Appendix A</u> 
  (15MB)
- <u>Volume 3. Appendix B-G</u> □ (15MB)

#### **Draft Facilities Plan, February 2011**

- Title Page, Table of Contents
- <u>Volume 1</u> □ (50.1MB)
  - Chapter 1. Executive Summary 
    (3.2MB)
  - <u>Chapter 2. Introduction</u> 
    (3.2MB)
  - <u>Chapter 3. Existing Conditions</u> □ (6.5MB)
  - <u>Chapter 4. Basis of Planning</u> □
  - Chapter 5. Methodology for Developing and Evaluating Alternatives  $\hfill\square$
  - <u>Chapter 6. Preliminary Alternatives</u> 
    [] (26.5MB)
  - <u>Chapter 7. Alternatives Evaluation and Selection</u> □ (5.2MB)
  - <u>Chapter 8. Proposed Alternative</u> (3.7MB)
  - Chapter 9. Financial Analysis
  - Chapter 10. Implementation Plan
- <u>Volume 2</u> □ (14.5MB)
  - Appendix A. Flow Modeling and Calibration Documentation
- <u>Volume 3</u> □ (19.8MB)
  - Appendix B. Alternative Evaluation Summary Documentation
  - Appendix C. Public Involvement Documentation
  - Appendix D. State Environmental Policy Act (SEPA) Documentation
  - Appendix E. Preliminary Geotechnical/Environmental Documentation
  - Appendix F. Cost Data
  - Appendix G. Alternative Risk Registers

This project was initiated to address the following:

- **Revised Code of Washington (RCW) 90.48.480:** This law requires "the greatest reasonable reduction of combined sewer overflows."
- Washington Administrative Code (WAC) 173-245-020 (22): "The greatest reasonable reduction' means control of each CSO in such a way that an average of one untreated discharge may occur per year."

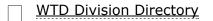
# Wastewater Treatment Division

King Street Center 201 S. Jackson St., Suite 500 Seattle, WA 98104

Get directions

#### Contact us

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Murray Wet Weather Facility - King County