



Barton CSO control

Green stormwater infrastructure

Completed – Fall 2015

Planning Design Construction **Operations**

King County is responsible for regular maintenance of the roadside rain gardens year round. You can expect to see crews onsite at least monthly performing regular maintenance. Expect more frequent visits before and after large storms, and during the summer growing season.

Learn more by visiting the [operations page](#) for the Barton CSO control facility (roadside rain gardens).

24-hour emergency and odor reporting:

Contact West Point Treatment Plant at ☐ 206-263-3801

Thank you RainWise participants!

There are now 188 RainWise installations across the Barton basin. The RainWise rebate program provides up to 100 percent of the cost to install rain gardens and/or cisterns on private property. Thanks to participating neighbors, 228,808 square feet of rooftop no longer sends rainwater to the combined sewer system. While the Barton and Fairway neighborhoods are no longer open for our rebates, if you have friends and family members in other parts of Seattle, please let them know about our program. Information is available at www.rainwise.seattle.gov.



RainWise at Peace Lutheran Church

The Peace Lutheran Church, located in the Fairway/Gatewood neighborhood, now directs 100% of the rain that falls on its roof into cisterns and rain gardens. The project was completed in 2016. A \$22,099 RainWise rebate covered the cost of the project. Members of the congregation were engaged throughout the decision-making and design process. They helped plant and now maintain the new garden and cistern installations. The site now serves as a demonstration for further "Big Roof" RainWise projects.

“In 2014, our Church joined Earth Ministry and became a greening our properties, advancing environmental stewardship within the religious community. We came up with a mission statement and formed a "Green Team." When we saw the RainWise flyer and got the call from King County, we were ready to say yes to the project.” -Roster 2014 members



Barton Roadside Rain Garden

Photo Gallery: Before and after roadside rain gardens.



[Final project newsletter](#) ☐, October 2017

King County has installed curb markers on every block with information on how to contact the County with questions or concerns about the rain gardens. Please call 206-263-3801 if you see:

- Ponding water that lasts longer than 24 hours after it has stopped raining
- Vandalism
- Spills or contamination
- Other major concerns

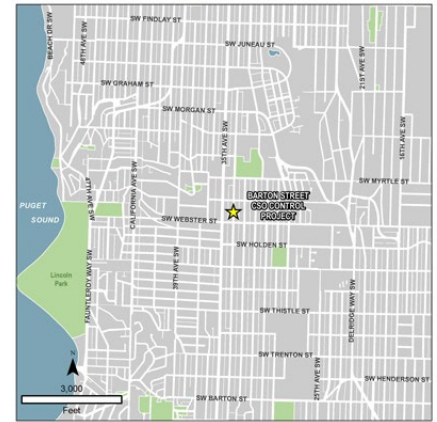


Project location

Project description

King County constructed 91 roadside rain gardens, a type of [green stormwater infrastructure](#), on 15 blocks in the Sunrise Heights and Westwood neighborhoods in West Seattle. Located in the planter strip between the curb and sidewalk, these roadside rain gardens divert stormwater runoff away from the combined sewer system. When it rains, stormwater filters through the rain

garden soil to a drain pipe, which takes the water to a deep well for slow infiltration underground. Keeping stormwater out of the sewer system will reduce CSOs of raw sewage and untreated stormwater into Puget Sound near the recently upgraded Barton pump station and Fauntleroy ferry dock.



Last Steps

The green protective fencing is down. Trow tests are underway to make sure water flows into and out of drains. After completing the tests and doing the final construction check, crews will remove the sandbags at the curb cuts and down off the upstream storm drains to allow water to flow into the roadside rain gardens.

Roadside rain garden maintenance: what can you expect?

King County is responsible for regular maintenance of roadside rain gardens year round. You can expect to see crews onsite at least monthly performing regular maintenance. Expect more frequent visits before and after large storms, and during the summer growing season.

Here is what crews will be doing:

- Monitoring plant health
- Removing weeds
- Monitoring drainage
- Removing debris and trash
- Cleaning curb inlets and gutters
- Caring for the pipes and deep wells
- Gathering ongoing information on the performance of roadside rain gardens

King County will install curb markers on every block with information on how to contact the County with questions or concerns about the rain gardens.

Since the construction hotline will no longer be in use, please call the number listed on the facility marker if you see:

- Ponding water that lasts longer than 24 hours after it has stopped raining
- Splits or contamination
- Other major concerns
- Vandalism

King County CSO Control Facility
24-hour maintenance hotline
206-263-3801

Protecting Our Water

OUTREACH BY THE NUMBERS (DURING CONSTRUCTION)

479 INDIVIDUAL COMMUNICATIONS WITH PROJECT AREA NEIGHBORS

39 WEEKLY WEB UPDATES

66 FIELD WORK NOTIFICATION DOOR HANGERS

56 RAIN GARDENS INSTALLED ON PRIVATE PROPERTY THROUGHOUT THE BARTON BASIN

33 CISTERNS PUT ON PRIVATE PROPERTY IN THROUGHOUT THE BARTON BASIN

4 SCHOOL OUTREACH ACTIVITIES

CONSTRUCTION BY THE NUMBERS

1,550 CUBIC YARDS OF CONCRETE RECYCLED (FROM STREETS AND SIDEWALKS)

91 INDIVIDUAL ROADSIDE RAIN GARDENS

15 BLOCKS WITH ROADSIDE RAIN GARDENS AND DEEP WELLS

36,600 TOTAL SQUARE FOOTAGE OF ALL ROADSIDE RAIN GARDENS

96 NEW TREES PLANTED

25 NUMBER OF TREES TRANSPLANTED TO HOMEOWNERS OR TO A DIFFERENT PLANTER STRIP

Transforming our streets...

From grass to a hard-working stormwater management system, these blocks have been transformed over the past two years.

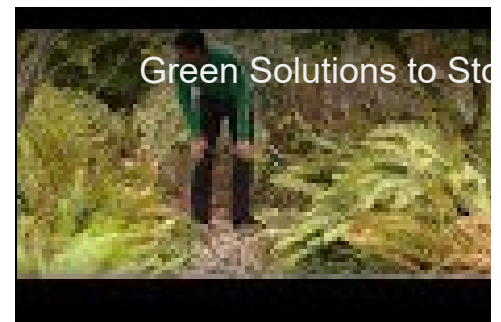
34th Ave SW: SW Cloverdale to SW Thistle

31st Ave SW: SW Webster to SW Holden

BARTON BASIN AREA MAP

Learn more: view the Summer 2015 project newsletter □

If you see a piece of trash, pick it up. Thank you for your ongoing care of the roadside rain gardens in your neighborhood. You are doing your part to protect the health of Puget Sound!



The Barton CSO Control Project is featured in a video about rain gardens and green stormwater infrastructure (GSI) by Sightline Institute □

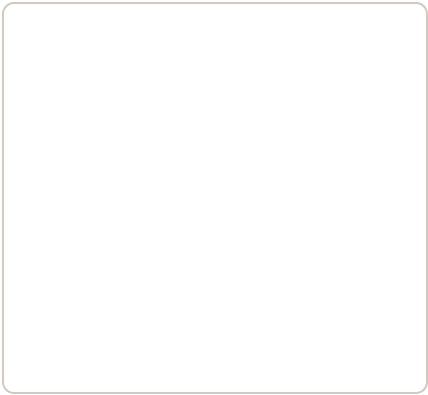
Find out if a CSO is occurring in Barton

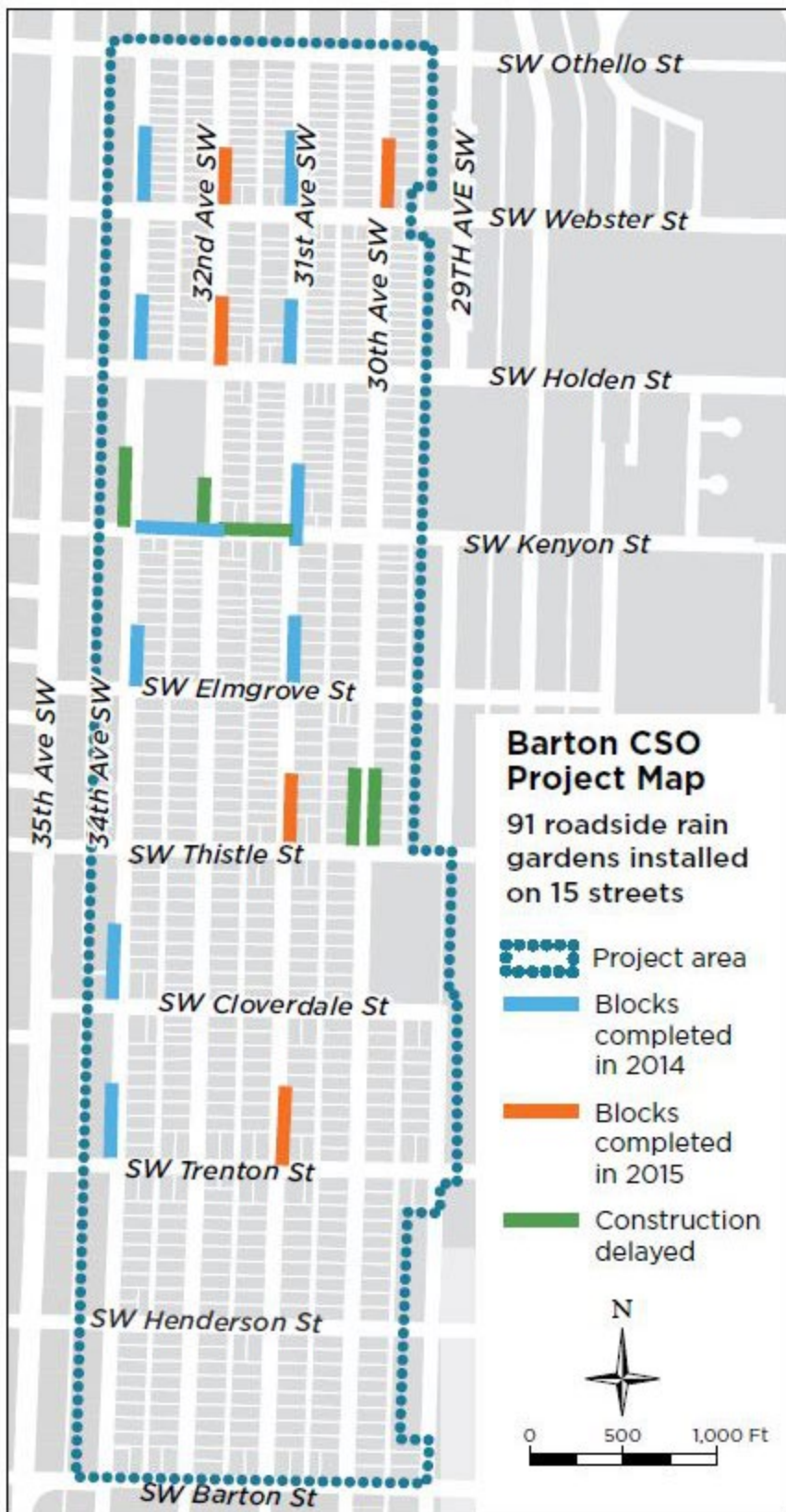
King County maintains a real-time notification page so people can see whether CSO discharges are occurring.

Related content

Protecting our waters (Combined Sewer Overflow Control Program), King County

BARTON BASIN AREA MAP





Source: [summer 2015 newsletter](#) □

Library

You can download and view documents (PDF files) using a [PDF Reader](#).

[Project updates](#)

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- [Roadside rain garden construction complete](#), Summer 2015 newsletter, August 2015
- [2015 construction season to begin first week of March](#), February 10, 2015
- [2014 construction season complete; expect shorter season next year](#), Fall 2014 newsletter, November 2014
- [Tree removal on designated blocks begins in early February](#), January 27, 2014
- [Major construction to begin late winter](#), Winter 2014 newsletter, January 2014
- [Tree transplanting to begin Wednesday, November 6](#), November 4, 2013
- [Final design of bioretention swales reflects community input and technical requirements](#), Summer 2013
- [Define refinements and first steps toward construction](#), March 2013

- [Fall 2012 project update](#), October 2012
- [Project update](#), December 2011
 - [Barton CSO control project area map](#) (Sunrise Heights and Westwood neighborhoods), November 2011
- [Field work notification](#), November 2011
- [Project update](#) (letter to project area neighbors) and [map](#), September 2011
- A State Environmental Policy Act (SEPA) Determination of Nonsignificance (DNS) was issued on May 12, 2011 for this project. Comments were accepted through May 31, 2011. The SEPA DNS and environmental checklist can be [viewed here](#).
- [Field work notification flier](#), March 2011.
Field work will include soil sampling, installation of groundwater monitoring wells to learn more about seasonal groundwater levels and archaeological surveys.

Fact sheets

- [Benefits of bioretention systems](#), October 2012, Sally Brown, PhD, University of Washington
- [Fast facts about Barton](#), June 21, 2012
- [Project overview fact sheet](#), March 13, 2012

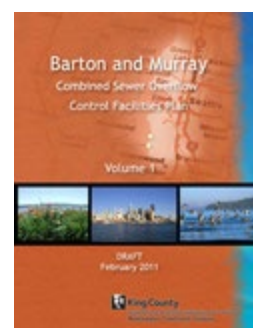
Design development documentation

- [A summary of improvements, along with information on plant palettes and trees](#), January 2014 (18MB)
- [Existing tree summary and legend](#), May 29, 2013
- [Tree assessment report](#), April 26, 2013
- [Geotechnical design report executive summary and figures](#), June 12, 2012

Alternatives selection phase (2007 to 2010) documentation

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 [West Point Treatment Plant National Pollutant Discharge Elimination System Permit](#) (refer to page 53 of permit).

Final Facility Plan, September 2011

- [Table of contents](#) □
- [Volume 1. Report](#) □ (46MB)
- [Volume 2. Appendix A](#) □ (15MB)
- [Volume 3. Appendix B-G](#) □ (15MB)

Draft Facilities Plan, February 2011

- [Title Page, Table of Contents](#) □
- [Volume 1](#) □ (50.1MB)

- [Chapter 1. Executive Summary](#) □ (3.2MB)
- [Chapter 2. Introduction](#) □ (3.2MB)
- [Chapter 3. Existing Conditions](#) □ (6.5MB)
- [Chapter 4. Basis of Planning](#) □
- [Chapter 5. Methodology for Developing and Evaluating Alternatives](#) □
- [Chapter 6. Preliminary Alternatives](#) □ (26.5MB)
- [Chapter 7. Alternatives Evaluation and Selection](#) □ (5.2MB)
- [Chapter 8. Proposed Alternative](#) □ (3.7MB)
- [Chapter 9. Financial Analysis](#) □
- [Chapter 10. Implementation Plan](#) □
- [Chapter 11. Miscellaneous Requirements](#) □
- [Volume 2](#) □ (14.5MB)
 - Appendix A. Flow Modeling and Calibration Documentation
- [Volume 3](#) □ (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.”

[News releases](#) □

- Jan. 21, 2014 – [Construction starts soon on Barton pollution control project in West Seattle](#)
- Nov. 27, 2013 – King County awards contract for pollution control project in West Seattle
- Aug. 9, 2013 – Learn about rain gardens at the Delridge Day Festival Green Zone, Aug. 17
- May 30, 2013 – "Yards in the Hood" event sheds light on rain garden beauty and benefits, June 1
- April 11, 2013 – Contractor open house to provide information on green stormwater project, May 6
- Oct. 3, 2012 – Neighbors' input, technical review guide Barton CSO project design updates
- June 20, 2012 – Curbside meetings take Barton CSO project info to West Seattle neighbors, June 23 & 24
- Feb. 1, 2012 – Meeting provides green stormwater infrastructure project updates, Feb. 8

[Green stormwater infrastructure \(GSI\) links](#) □

Links to other green stormwater infrastructure (GSI) projects and resources locally, regionally and around the country.

Local

- King County
 - [Protecting our waters](#) (CSO control program)
 - [Green Stormwater Infrastructure \(GSI\)](#)
 - [Rain barrel information and resources](#)
- Seattle Public Utilities □
 - [Green stormwater infrastructure](#)
 - [Residential RainWise program](#)
- [Sustainable West Seattle](#) □

Regional □

- [Case studies](#), Portland Bureau of Environmental Services, Oregon

National



- [Managing wet weather with green infrastructure](#), U.S. Environmental Protection Agency
- [Using rainwater to grow livable communities; sustainable stormwater Best Management Practices \(BMPs\)](#), Water Environment Research Foundation (WERF)

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