



KING COUNTY

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

Signature Report

September 17, 2012

Ordinance 17413

Proposed No. 2012-0235.2

Sponsors Phillips

1 AN ORDINANCE approving an amendment to the
2 county's long-term combined sewer overflow control plan
3 and authorizing the King County executive to prepare a
4 water quality assessment and monitoring study to provide
5 information for the next combined sewer overflow control
6 program review in 2018.

7 STATEMENT OF FACTS:

8 1. King County has had a long-term combined sewer overflow ("CSO")
9 control plan since 1979. The long-term CSO control plan was last
10 amended in 1999 as part of the regional wastewater services plan that was
11 approved through Ordinance 13680.
12 2. The county has a total of forty-two CSO outfalls (four CSO outfalls
13 associated with satellite CSO treatment plants and thirty-eight CSO
14 outfalls not associated with satellite CSO treatment plants). The thirty-
15 eight CSO outfalls not associated with satellite CSO treatment plants are
16 required to meet the requirements of WAC 173-245-020(22). Based on
17 available measured data, sixteen of King County's thirty-eight CSO outfall
18 locations not associated with satellite CSO treatment plants are now
19 controlled to the Washington state Department of Ecology's ("Ecology")

20 standard while the remaining twenty-two CSO outfall locations are not
21 controlled to Ecology's standard. Eight of these twenty-two CSO outfall
22 locations not associated with satellite CSO treatment plants currently have
23 projects underway or are early action projects. Three of the eight CSO
24 outfall locations (CSO outfalls 009, 027a and 037) are being adjusted for
25 full control. Of the twenty-two CSO outfall locations that are not
26 controlled to Ecology's standard, the remaining fourteen CSO outfall
27 locations require future capital projects and are the subject of the King
28 County's long-term CSO control plan amendment.

29 3. K.C.C. 28.86.080 provides policies to guide the county's long-term
30 CSO control plan. CSOCP-8 directs the executive to submit a CSO
31 program review to the council and the regional water quality committee
32 prior to submitting a required long-term CSO control plan update for
33 review and approval by the Washington state Department of Ecology and
34 the United States Environmental Protection Agency ("EPA"). WAC 173-
35 245-090 requires an update or amendment to King County's CSO control
36 plan in conjunction with the renewal of the West Point treatment plant's
37 National Pollutant Discharge Elimination System ("NPDES") permit,
38 which occurs approximately every five to seven years. The West Point
39 treatment plant's current NPDES permit expires in June 2014.

40 4. The wastewater treatment division of the department of natural
41 resources and parks ("WTD") began a comprehensive review of the
42 county's long-term CSO control plan in 2009. The review and technical

43 analyses confirmed control status of the county's controlled CSOs and
44 assessed population and wastewater flow, scientific studies, new
45 technologies, regulations, land costs and public priorities to determine if
46 there have been any changes to these conditions since the last major
47 amendment to the county's long-term CSO control plan in 1999. The
48 results of the review and technical analyses are summarized in the 2012
49 CSO Control Program Review, which provides the documentation for the
50 plan amendment recommendations.

51 5. The review of the county's long-term CSO control plan included
52 meetings and discussions with affected stakeholders. In October 2011,
53 WTD issued its recommended plan to control the remaining fourteen
54 uncontrolled CSOs for public comment. Public comment and stakeholder
55 feedback: confirmed that CSO control is important; showed that there is
56 support to next control the CSOs within the area of the Lower Duwamish
57 Waterway Superfund Site; indicated an expectation for the city of Seattle
58 and King County to collaborate on CSO control; showed interest for
59 incorporating green stormwater infrastructure where it proves to be cost-
60 effective; raised concerns about costs and rate impacts; and questioned
61 whether CSO control is the best investment for improved water quality.

62 6. The King County executive considered technical analyses associated
63 with the comprehensive review of the county's long-term CSO control
64 plan and stakeholder feedback on WTD's recommended plan. The major
65 elements of the executive's recommended plan include implementing nine

66 projects to control the remaining fourteen CSOs to Ecology's standard by
67 2030, including joint projects with the city of Seattle when it benefits King
68 County ratepayers. Green stormwater infrastructure projects will also be
69 incorporated if they can be designed to suit the soil, terrain and hydrologic
70 conditions of a community and are cost-effective. The planning-level
71 project cost estimate to implement these projects is seven hundred eleven
72 million dollars in 2010 dollars, though as noted in the plan the total costs
73 may range from three hundred fifty-five million to one billion, four
74 hundred twenty-two million dollars in 2010 dollars.

75 7. The comprehensive review of the county's long-term CSO control plan
76 included reassessing the order of projects based on new information that
77 became available since development of the 1999 CSO control plan.

78 Accordingly, the summary of the amended long-term CSO control plan
79 outlined in Attachment A to this ordinance reflects a change in the order
80 of projects outlined in the 1999 plan. This change prioritizes proceeding
81 to control the CSOs within the areas of the Lower Duwamish Waterway
82 and East Waterway Superfund Sites so they coincide with the anticipated
83 clean up schedules that will be directed by EPA through a Record of
84 Decision before controlling the University and Montlake CSOs along the
85 east side of the Lake Washington Ship Canal. This prioritization is based
86 on stakeholder input and new water and sediment quality information for
87 receiving waters.

88 8. The EPA has issued draft guidance on integrated planning approaches
89 to municipal wastewater and stormwater management. The city of
90 Seattle's consent decree to achieve control of the city's uncontrolled CSOs
91 includes this planning framework, as well as adherence to existing federal
92 and state water quality standards under the Clean Water Act and CSO
93 control regulations in Chapter 173-245 WAC.

94 9. The region is facing more diverse water quality challenges since the
95 county's CSO control plan was last comprehensively amended in 1999.
96 Conducting a water quality assessment and monitoring study with ongoing
97 value engineering can provide a comprehensive view of water quality in
98 the sub-watersheds where County CSO discharges occur, and may help
99 identify strategies to lower implementation costs. A study can analyze and
100 synthesize findings of previous water quality studies and, if necessary, fill
101 data gaps identified during the analysis. A study may identify a potential
102 range of additional actions, including enhanced CSO control, to address
103 the priority water quality problems in these areas. A study should use the
104 EPA's new integrated planning framework to help guide the work program
105 and meet objectives established by the EPA and Ecology. The findings
106 and recommendations of the water quality assessment and monitoring
107 study with value engineering will inform actions to improve water quality
108 and the next CSO Plan update to refine implementation of the CSO
109 program and ensure timely completion of projects. The results of the
110 study cannot alter King County's legal obligations to comply with current

111 water quality standards under the Clean Water Act and to complete all
112 CSO projects by December 31, 2030.

113 10. Any future updates or amendments to the county's long-term CSO
114 control plan are subject to EPA and Ecology approvals.

115 BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

116 SECTION 1. A. The amendment to the county's long-term CSO control plan as
117 summarized in Attachment A to this ordinance is hereby approved and incorporated into
118 the Regional Wastewater Services Plan.

119 B. The 2012 Combined Sewer Overflow (CSO) Control Program Review Report,
120 Attachment B to this ordinance, and the supporting documents listed in subsection C.1.
121 through 9. of this section, on file with the clerk of the council, and referenced in the
122 Review Report are hereby approved.

123 C. The executive is directed to submit the amendment to the county's long-term
124 CSO control plan along with all required supporting documents referenced herein to the
125 Environmental Protection Agency and Washington State Department of Ecology to
126 comply with federal and state requirements. This documentation includes Attachment B,
127 the 2012 CSO Control Program Review Report, and the appropriate technical
128 memorandums ("TM") referenced in the Review Report including:

- 129 1. TM: Habitat Project Opportunities, August 2010;
- 130 2. TM 540: Environmental and Habitat Priorities, November 2010;
- 131 3. TM 620; Cost Estimating Methodology for CSO Control Facilities, May
132 2011;
- 133 4. TM 700: Treatment Technology Selection, June 2011;

134 5. TM 750: Sediment Deposition and Contamination Potential from Treated
135 CSO Discharges, January 2012;

136 6. TM 810: Green Stormwater Infrastructure Feasibility Evaluation, October
137 2011;

138 7. TM 970: CSO Control Alternatives Development, October 2011;

139 8. TM 1100: Project Sequence, October 2011; and

140 9. Public and Regulatory Agency Participation Plan, updated June 2012.

141 D. The wastewater treatment division or its successor is responsible to implement
142 the amended long-term CSO control plan according to the schedule in Attachment A to
143 this ordinance.

144 E. The King County executive will propose legislation to revise policies for the
145 Regional Wastewater Services Plan to be consistent with the amended long-term CSO
146 control plan within six months following the adoption of this ordinance.

147 SECTION 2. A. The King County executive is hereby authorized to implement a
148 water quality assessment and monitoring study, consistent with applicable legal
149 requirements, including analysis and value engineering of planned projects to inform
150 EPA's integrated planning approach and future CSO control program review with regard
151 to sequencing and prioritization of CSO projects while meeting the county's state and
152 federal legal obligations to complete required CSO control projects by 2030 and to
153 conform to CSO control regulations in chapter 173-245 WAC.

154 B. The study should utilize the new EPA integrated planning approach
155 framework to allow integration and sequencing of projects to ensure that investments in
156 CSO control projects are well-planned and timed to optimize water quality improvements

157 in the sub-basins to which King County's CSOs discharge. Furthermore, the study should
158 emphasize and support value-engineering efforts to refine projects and reduce the costs of
159 constructing CSO infrastructure. This should include opportunities to pursue
160 complementary or combined projects with the city of Seattle or other entities, if it is cost-
161 effective for King County ratepayers.

162 C. The study shall include:

- 163 1. Analyzing and synthesizing findings from existing studies;
- 164 2. Collecting new information and filling data gaps through additional
165 monitoring and sampling where identified as necessary;
- 166 3. Assessing factors affecting water quality in the sub-basins and water bodies
167 where King County CSOs discharge; and
- 168 4. Recommending integration and sequencing of projects to meet current federal
169 and state water quality standards and improve water quality.

170 D. The regional water quality committee shall provide policy guidance and
171 specific questions for analysis in the study scope of work.

172 E. The King County executive shall transmit legislation for approval of a scope
173 of work for the study and its cost, consistent with the direction of this ordinance,
174 including a transparent and inclusive stakeholder process. Where appropriate,
175 participation by federal, state, tribal and regional environmental leaders shall be arranged
176 through executive appointment and confirmation by the King County council.

177 F. The regional water quality committee shall review the recommendations that
178 emerge from the analysis and study.

179 SECTION 3. The King County executive is requested to consider future
180 proposed modifications to the long term CSO control plan for the purpose of revising the
181 priority and sequencing of CSO control measures when new information is available
182 from studies, audits or other analyses, if the wastewater treatment division demonstrates
183 that the requested modification reflects good engineering practice, is required to
184 coordinate with other infrastructure projects and particularly city of Seattle CSO
185 infrastructure projects, is necessary to attain cost effective and technically sound CSO

186 control measures and will not change, modify, or extend in any way King County's
187 completion of CSO control projects by December 31, 2030.
188

Ordinance 17413 was introduced on 7/9/2012 and passed by the Metropolitan King County Council on 9/17/2012, by the following vote:

Yes: 9 - Mr. Phillips, Mr. von Reichbauer, Mr. Gossett, Ms. Hague,
Ms. Patterson, Ms. Lambert, Mr. Ferguson, Mr. Dunn and Mr.
McDermott
No: 0
Excused: 0

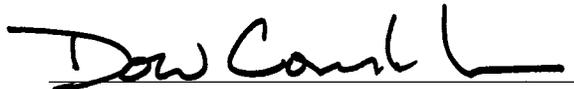
KING COUNTY COUNCIL
KING COUNTY, WASHINGTON


Larry Gossett, Chair

ATTEST:


Anne Noris, Clerk of the Council

APPROVED this 28 day of SEPTEMBER 2012.


Dow Constantine, County Executive

RECEIVED
2012 SEP 28 PM 3:22
KING COUNTY COUNCIL CLERK

Attachments: A. Summary of the Proposed 2012 Amendment to King County's Long-Term Combined Sewer Overflow (CSO) Control Plan, 8/1/12, B. 2012 Combined Sewer Overflow (CSO) Control Program Review Report, 8/1/12

August 1, 2012 - 17413

**Summary of Proposed 2012 Amendment
to King County's Long-Term Combined Sewer Overflow (CSO) Control Plan**

CSO Control Project and Discharge Serial Number (DSN)	Control Measure(s)	Description	Design Criteria	Performance Criteria in a Typical Year	Critical Milestones ^{ii, iii}	Estimated Project Cost Million Dollars 2010 ^{iv}
2012 King County Executive's Recommended Projects to Control the County's Remaining 14 Uncontrolled CSOs						
<i>Duwamish Waterway</i>						
Hanford #1 (DSN 03)	Increased conveyance & storage tank	Increased conveyance to the Bayview Tunnel and storage tank near Rainier Avenue	Up to 0.34 million gallons (MG) of peak CSO storage with conveyance	Reduce untreated overflow events to 1 per year on a 20-year moving average	1. Complete Facilities Plan—2014 2. Completion of Bidding—2016 3. Construction Completion—2019	\$19.2
Brandon St/ S Michigan (DSN 039, 041)	CSO treatment	High rate clarification treatment to control CSOs along the East Waterway	Up to 66 million gallons per day (MGD) treatment facility and new conveyance system	Treat peak CSO flows to state standard of 50% total suspended solids (TSS) removal and disinfection, meet state water quality standards	1. Complete Facilities Plan—2015 2. Completion of Bidding—2017 3. Construction Completion—2022	\$139.7
W Michigan/ Terminal 115 (DSN 038, 042)	Storage pipe	Storage pipe along West Marginal Way & Green Stormwater Infrastructure (GSI)	Up to 0.32 MG storage pipe. Mitigate up to 24% of the impervious area with RainWise and green streets	Reduce untreated overflow events to 1 per year on a 20-year moving average	1. Complete Facilities Plan—2020 2. Completion of Bidding—2022 3. Construction Completion—2025	\$14.8

CSO Control Project and Discharge ⁱ Serial Number (DSN)	Control Measure(s)	Description	Design Criteria	Performance Criteria in a Typical Year	Critical Milestones ^{ii, iii}	Estimated Project Cost Million Dollars 2010 ^{iv}
Chelan Ave (DSN 036)	Storage tank	Storage tank near West Duwamish Waterway	Up to 3.85 MG storage tank on West Duwamish Waterway near Chelan Avenue	Reduce untreated overflow events to 1 per year on a 20-year moving average	1. Complete Facilities Plan—2018 2. Completion of Bidding—2020 3. Construction Completion—2023	\$51.7
Hanford #2/ Lander/ King St/ Kingdome (DSN 028, 029, 030, 032)	CSO treatment	High rate clarification treatment facility in South Seattle neighborhood	Up to 151 MGD treatment facility and modifications to existing conveyance system	Treat peak CSO flows to state standard of 50% TSS removal and disinfection; meet state water quality standards	1. Complete Facilities Plan—2024 2. Completion of Bidding—2026 3. Construction Completion—2030	\$270.8
Ship Canal						
3rd Ave West (DSN 008)	1. Joint City-County storage tank ^v OR 2. Independent County storage tank	1. Storage tank on north side of Ship Canal OR 2. Storage tank near Seattle Pacific University (\$56.4 million)	1. Up to 7.23 MG of peak CSO storage OR 2. Up to 4.18 MG of peak CSO storage	Reduce overflow event at 1 County and multiple Seattle sites to 1 per year on 20-year moving average	1. Complete Facilities Plan—2018 2. Completion of Bidding—2020 3. Construction Completion—2023	\$51
University (DSN 015)	1. Joint City-County storage tank	1. Storage tank near University of Washington campus & GSI	1. Up to 7.87 MG of peak CSO storage	Reduce overflow event at 1 County and multiple Seattle sites to 1 per	1. Complete Facilities Plan—2023 2. Completion of Bidding—2025 3. Construction Completion—2028	\$45.2

CSO Control Project and Discharge ^I Serial Number (DSN)	Control Measure(s)	Description	Design Criteria	Performance Criteria in a Typical Year	Critical Milestones ^{II, III}	Estimated Project Cost Million Dollars 2010 ^{IV}
	OR 2. Independent County storage tank	OR 2. Storage tank near University of Washington campus & GSI (\$50.4 million)	OR 2. Up to 2.94 MG of peak CSO storage Mitigate up to 24% of impervious area with RainWise and green streets	year on a 20-year moving average		
Montlake (DSN 014)	1. Joint City-County storage tank OR 2. Independent County storage tank	1. Storage tank on south side of Montlake Cut & GSI OR 2. Storage tank on south side of Montlake Cut & GSI (\$102.8 million)	1. Up to 7.87 MG of peak CSO storage. OR 2. Up to 6.6 MG of peak CSO storage. Mitigate up to 19% of impervious area with RainWise and green streets	Reduce overflow event at 1 County and multiple Seattle sites to 1 per year on 20-year moving average	1. Complete Facilities Plan—2023 2. Completion of Bidding—2025 3. Construction Completion—2028	\$95.4
11th Ave NW (DSN 004)	Increased conveyance	Increased conveyance to Ballard Siphon & GSI	Combination of up to 3,200 feet of 84-inch diameter pipe	Reduce untreated overflow events to 1 per year on	1. Complete Facilities Plan—2026 2. Completion of Bidding—2028 3. Construction Completion—2030	\$23.7

CSO Control Project and Discharge ⁱ Serial Number (DSN)	Control Measure(s)	Description	Design Criteria	Performance Criteria in a Typical Year	Critical Milestones ^{ii, iii}	Estimated Project Cost Million Dollars 2010 ^{iv}
			conveyance. Mitigate up to 26% of the impervious area with RainWise and green streets	a 20-year moving average		

ⁱ Each CSO outfall is assigned a Discharge Serial Number or "DSN."

ⁱⁱ "Completion of the Bidding" means WTD has (1) appropriately allocated funds for a specific CSO control project (or portion thereto); (2) accepted and awarded the bid for construction of the specific CSO control project; and (3) issued a notice to proceed with construction that remains in effect for the specific CSO control project.

ⁱⁱⁱ "Construction Completion" means completion of construction and installation of equipment or infrastructure such that equipment or infrastructure has been placed in operation, and is expected to both function and perform as designed, as well as completion of in-situ modified operations and maintenance manuals. This specifically includes all control systems and instrumentation necessary for normal operations and all residual handling systems. For those specified CSO control projects consisting of separate components, "Construction Completion" shall be achieved when the last component is completed.

^{iv} The estimated cost of each recommended CSO control project uses conceptual design information. The project cost estimates are planning-level only, for use in developing long-range capital schedules and budgets. The accuracy of planning-level estimates is -50 to +100 percent. The accuracy will increase as the Wastewater Treatment Division gains more site-specific information during project design and then a project budget will be set.

^v The County will consider a joint project with the City of Seattle when it benefits the community or ratepayers. At this time, the County is proposing a joint and independent project until the City of Seattle completes its long-term control plan and project recommendations in 2014.