

RWSP Cost Estimates for 2013

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Introduction

The Regional Wastewater Services Plan (RWSP) reporting policies call for an update of the RWSP cost estimates to be provided annually for the capital projects associated with implementing the RWSP. This document presents the 2013 RWSP cost estimates from 1999 through 2030. The cost estimates range in accuracy from planning level to final construction level because they are for projects that have been completed or are in various stages of development, including planning, predesign, final design, and construction.

The accuracy of cost estimates for projects in planning or development increases as they become more defined and are specified in greater detail. Often the scopes of work and estimated costs for projects in the planning phase will change significantly as more detailed information becomes available.¹

Table 1 compares 2012 and 2013 RWSP cost estimates. A challenge to providing a comparison of costs is that the RWSP is an ongoing plan that includes expenditures incurred in the past plus expenditures planned for the future. In presenting the comparison shown in Table 1, expenditures that have occurred through 2013 are included at their original value and future expenditures, planned for 2014 to 2030, are adjusted for inflation to a base year of 2013. Tables 2 through 4 present cost estimates by three categories: (1) completed RWSP projects; (2) RWSP projects in design or construction; and (3) RWSP projects planned for the future. Presenting costs this way provides a means to track incurred, current, and future costs separately.

Comparison of 2012 and 2013 RWSP Cost Estimates

Table 1 compares the 2012 and 2013 RWSP cost estimates. The 2013 estimate for implementing the projects and programs associated with the RWSP from 1999 through 2030 is approximately \$4.0 billion in 2013 dollars, a decrease of \$119 million from the 2012 RWSP cost estimate of \$4.1 billion in 2012 dollars. The decrease is largely attributed to the updated forecast of treatment plant needs, which indicated a full expansion at South Treatment Plant is unlikely to be needed by 2030, as previously projected.²

¹Accuracy of cost estimates for projects in planning can range from -50 to +100 percent.

² Chapter 4 of the RWSP 2013 Comprehensive Review provides more information on the update of treatment plant needs. The report is available at <http://www.kingcounty.gov/environment/wtd/Construction/planning/rwsp/Library/CompReview.aspx>.

Table 1. Comparison of 2012 and 2013 RWSP Cost Estimates, 1999–2030 (million dollars)

RWSP Element	2012 RWSP Estimates (2012\$)	2012 RWSP Estimates (2013\$)	2013 RWSP Estimates (2013\$)	Cost Change (2013\$)
Total RWSP	\$4,106	\$4,155	\$4,036	(\$119)
Total Brightwater Treatment System (completed)	\$1,862	\$1,862	\$1,862	--
Brightwater Treatment Plant	\$677	\$677	\$677	--
Brightwater Conveyance	\$931	\$931	\$931	--
Land and Right-of-Way	\$105	\$105	\$105	--
Mitigation	\$148	\$148	\$148	--
Total Treatment & Odor Control Improvements^a	\$199	\$202	\$72	(\$130)
Phase I & II Odor Control at South Plant (completed)	\$8	\$8	\$8	--
West Point Odor Control (completed)	\$1	\$1	\$1	--
West Point Digestion Improvements (completed)	\$8	\$8	\$8	--
King Street Regulator Odor Control (completed)	\$7	\$7	\$7	--
South Plant Expansion	\$127	\$130	--	(\$130)
Vashon Treatment Plant Upgrade (completed)	\$23	\$23	\$23	--
Carnation Treatment Plant (completed)	\$21	\$21	\$21	--
Chinook Wetlands Enhancement (completed)	\$3	\$3	\$3	--
Total Conveyance System Improvements (CSI)^b	\$954	\$972	\$979	\$7
Completed CSI projects, acquisitions, and planning	\$296	\$296	\$311	\$15
CSI projects in design or construction	\$226	\$231	\$265	\$34
Planned CSI projects, acquisitions, and planning	\$432	\$446	\$403	(\$43)
Total Infiltration/Inflow (I/I) Reduction^c	\$42	\$42	\$42	--
Total Combined Sewer Overflow (CSO) Control^d	\$981	\$1,008	\$1,013	\$4
Planned CSO Control Projects	\$755	\$777	\$604	(\$174)
CSO Planning and Updates	\$22	\$22	\$21	(\$1)
CSO control projects in design or construction	\$132	\$135	\$312	\$177
Water Quality Assessment/Monitoring Study	--	--	\$5	\$5
Sediment Management/Lower Duwamish Superfund	\$72	\$73	\$71	(\$3)
Total Reclaimed Water	\$42	\$42	\$42	--
Technology Demonstration (completed)	\$1	\$1	\$1	--
Existing Reclaimed Water Program (RWSP portion)	\$7	\$8	\$8	--
Water Reuse Satellite Facility (canceled)	\$5	\$5	\$5	--
Brightwater Reclaimed Water Pipeline (completed)	\$24	\$24	\$24	--
RWSP Water/Wastewater Conservation (completed)	\$1	\$1	\$1	--
Reclaimed Water Comprehensive Plan (completed)	\$3	\$3	\$3	--
Water Quality Protection: Freshwater Assessment Program and Reporting (completed)	\$16	\$16	\$16	--
Habitat Conservation Plan (HCP)/ Programmatic Biological Assessment (completed)	\$8	\$8	\$8	--
RWSP Planning and Reporting	\$3	\$3	\$3	--

Notes: Totals may not add because of rounding to the nearest million.

^a The cost change reflects that the updated forecast of treatment plant needs indicate that a full expansion of South Plant is unlikely to be needed by 2030 as previously projected.

^b The cost change reflects the net results of (1) a decrease in the final costs of the Bellevue Influent Trunk Improvement project that had reached substantial completion in 2012, (2) projects transferred from planning to design and more developed scopes of work of those projects, and (3) more developed scopes of work of projects that began design in 2012.

^c Costs for the Skyway Initial I/I reduction project are funded by the CSI program in accordance with the recommended I/I program approved by the King County Council in 2006.

^d The cost change reflects the net results of (1) projects transferred from planning to design and more developed scopes of work of those projects, (2) the addition of the cost estimates associated with the water quality assessment/monitoring study, and (3) a decrease in the cost estimates for implementing the Sediment Management Plan.

Completed RWSP Projects

Table 2 summarizes the expenditures associated with completed RWSP projects through December 31, 2013 as compared to expenditures associated with projects completed through December 31, 2012. Expenditures for the Brightwater Treatment System, Kent-Auburn Conveyance System Phase A Improvements, and the West Point Digestion Improvements project were added to Table 2 in 2013. In previous RWSP annual reports, the costs for these projects were shown in the RWSP projects in design or construction table (Table 3). The majority of the change of \$1.885 billion from 2012 reflects moving the costs from the projects in design or construction table associated with these projects to completed RWSP projects table.

Table 2. Expenditures for Completed RWSP Projects (million dollars)

	Expenditures Through Dec. 31, 2012	Expenditures Through Dec. 31, 2013	Change from 2012
Total completed projects	\$458	\$2,343	\$1,885
CSI projects, acquisitions, planning	\$296	\$311	\$15
Treatment and odor control projects	\$64	\$72	\$8
Reclaimed water projects	\$34	\$34	--
I/I pilot study projects/program	\$40	\$40	--
Water Quality Protection: Freshwater Assessment Program and Reporting	\$16	\$16	--
Habitat Conservation Plan (HCP)/ Programmatic Biological Assessment	\$8	8	--
Brightwater Treatment System		\$1,862	\$1,862

Note: Totals may not add because of rounding to the nearest million. For recently completed projects, the costs reflect the costs estimated at substantial completion. It is possible for changes to occur during project closeout, and any changes will be reflected in future RWSP cost estimates.

RWSP Projects in Design or Construction

Table 3 shows the cost estimates of RWSP projects in design or construction as of the end of 2012 and the end of 2013. These projects were included as part of the 2013 and 2014 King County adopted budgets, respectively. The cost estimates are shown in inflated dollars for projected costs. The expenditures are included at their original value.

The cost estimate for projects in design or construction in 2013 is \$751 million, an increase of \$248 million from the 2012 estimate of \$503 million. This is the net result of moving costs of projects that were completed in 2013 to the completed projects table (Table 2), moving costs of projects that began design in 2013 from the projects planned for the future table (Table 4), and updated cost estimates of some of the projects in design or construction.

Table 3. RWSP Projects in Design or Construction (million dollars, inflated)

	2012 Cost Estimates ^a	2013 Cost Estimates ^b	Change from 2012
Total Costs for RWSP Projects in Design/Construction	\$2,365	\$751	(\$1,614)
Brightwater Treatment System^c	\$1,862	--	(\$1,862)
Total Conveyance Projects	\$245	\$290	\$45
Kent-Auburn Conveyance System Improvements (Phase A)	\$22	--	(\$22)
Kent-Auburn Conveyance System Improvements (Phase B)	\$33	\$33	--
North Creek Pipeline ^d	\$32	\$32	--
North Creek Interceptor ^d	\$56	\$56	--
Sunset/Heathfield Pump Station Replacement and Force Main Replacement	\$81	\$78	(\$3)
North Lake Sammamish Flow Diversion	\$21	\$26	\$5
North Mercer and Enatai Interceptors	--	\$65	\$65
Total Treatment and Odor Control	\$8	--	(\$8)
West Point Digestion Improvements	\$8	--	(\$8)
Total I/I^e	\$2	\$2	--
Total CSO Control Program	\$237	\$448	\$211
Sediment Management/Lower Duwamish Superfund	\$75	\$74	(\$1)
CSO Planning and Updates	\$23	\$23	--
Murray CSO Control Project	\$50	\$50	--
Barton CSO Control Project	\$22	\$22	--
South Magnolia CSO Control Project	\$46	\$46	--
North Beach CSO Control Project	\$21	\$21	--
Rainier Valley Wet Weather Storage		\$27	\$27
Georgetown Wet Weather Treatment Station		\$180	\$180
Water Quality Assessment/Monitoring Study		\$5	\$5
Reclaimed Water	\$8	\$8	--
Existing Reclaimed Water Program (RWSP related)	\$8	\$8	--
RWSP Planning and Reporting	\$3	\$3	--

Note: Totals may not add because of rounding to the nearest million.

^a This column lists project costs reported in the 2013–2018 WTD Capital Improvement Plan (CIP) budget submittal (June 2012).

^b Project costs in this column reflect costs reported in the 2014–2019 WTD CIP budget submittal (June 2013).

^c In previous RWSP reports, Brightwater Treatment System costs were presented in a separate table that reflected information from the annual Brightwater Cost Update report. Because Brightwater has been completed, there is no cost update report for 2013. Brightwater expenditures are now included in the RWSP completed projects table (Table 2).

^d North Creek Pipeline costs reflect costs associated with closing out of past construction contracts; North Creek Interceptor costs reflect the costs associated with completing the project.

^e These costs reflect projected costs related to flow monitoring for the initial I/I reduction project; ongoing modeling, cost-benefit analysis, planning, and reporting; public education; and regional I/I clearinghouse and other program related costs.

RWSP Projects Planned for the Future

Table 4 shows 2012 and 2013 planning-level cost estimates for RWSP projects planned for the future. The costs are presented in constant dollars. The change in costs reflect CSI and CSO control projects that moved from planning into design in 2013, and the updated forecast of treatment plant needs indicated that a full expansion at South Treatment Plant is unlikely to be needed by 2030 as previously projected.

Table 4. RWSP Projects Planned for the Future (million dollars)

	2012 Cost Estimate (2012\$)	2012 Cost Estimate (2013\$)	2013 Cost Estimate (2013\$)	Cost Change (2013\$)
Total Planned Projects	\$1,314	\$1,353	\$1,007	(\$346)
CSI projects ^a	\$432	\$446	\$403	(\$43)
CSO control projects ^b	\$755	\$777	\$604	(\$173)
South Plant expansion ^c	\$127	\$130	--	(\$130)

^aCSI project costs reflect the planning-level cost estimates that were developed as part of the 2007 CSI Program Update and adjusted for inflation to 2013 dollars, using the 3 percent per year assumption.

^bThe 2012 estimate for the planned CSO control projects reflect the 2012 CSO Control Program review planning-level estimate, which were in 2010 dollars, adjusted for inflation to 2013 dollars, using the 3 percent per year assumption.

^cSouth Plant expansion cost estimate reflects the 1998 planning-level estimate adjusted for inflation to 2013 dollars, using the 3 percent per year assumption.