



King County

Metropolitan King County Council
King County Auditor's Office
Cheryle A. Broom, *King County Auditor*
King County Courthouse
516 Third Avenue, Room W1033
Seattle, WA 98104-3272
206.296.1655 Fax 206.296.0159
Email: KCAO@kingcounty.gov
TTY 296-1024
www.kingcounty.gov/auditor

MEMORANDUM

DATE: July 14, 2011

TO: Metropolitan King County Council

FROM: Cheryle Broom, County Auditor

SUBJECT: Oversight Monitoring Consultant Report - Review of *Brightwater Cost Update, Current Conditions and Trends, January 2011* (2011 Trend Report)

Please find the attached Oversight Monitoring Consultant (OMC) review of the Wastewater Treatment Division's (WTD) annual Brightwater Program cost update – the 2011 Trend Report. The OMC's review independently forecasts the Brightwater Program total project cost to be \$1,852 million for the undisputed portions of the project. The OMC and WTD total project cost estimates are very similar. The OMC's estimate is higher than WTD's primarily due to the inclusion of an additional \$3 million in contingencies. OMC's current estimate for the total remaining expenditures for the Brightwater Project is approximately \$153 million.

On April 19, WTD transmitted the Trend Report to the County Council. It shows a revised cost estimate of the non-disputed portions of the project of \$1,849 million, representing a \$33.4 million (or 1.8 percent) increase over the low end of the previous year's estimate range. This also represents a \$59.3 million (or 3.3 percent) increase over the baseline budget established in 2004 assuming five percent inflation. Not included in this estimate are the disputed costs, some of which were included in WTD and OMC 2010 trend estimates.

The 2011 WTD and OMC reports also estimate known disputed costs that the county has incurred or will incur to complete the project. OMC estimates these costs to be approximately \$129 million. The county will seek reimbursement of these costs. The reports also identify \$95.4 million in claims filed by the central tunnel contractor against the county. The county denies obligation to pay for these costs. While the final set of disputed costs and the final amount of disputed costs will change over time, the responsibility for the disputed costs is not likely to be resolved for some time.

The OMC identifies a few items, for which there are no cost estimates yet available, that could potentially increase disputed costs and cash flow demand further. These include the construction of the connection of the BT-3 tunnel segments between the two different boring machines and the completion of the West Tunnel. WTD is developing cost estimates for these two items, and plans to provide a comprehensive cost estimate for completion of the conveyance system in approximately one month. The OMC will review this information and discuss it in their next report.

The OMC report provides a detailed review of the 2011 Trend Report validating, for the most part, WTD's available estimates of project cost elements. In addition, the report includes an assessment of the remaining contingencies. The OMC forecasts that the remaining \$45 million in construction contingency should be adequate to cover the remaining risks on the non-disputed portions of the project, and continues to show an additional \$3 million in contingencies to cover unanticipated non-construction costs.

As noted above, the OMC estimates that the remaining project expenditures are approximately \$153 million and lists the areas of remaining cost uncertainty. Further, the OMC identifies five factors that could decrease the project costs, most notably resolution of the disputed costs in the county's favor. Other factors identified include the completion of the BT-3C tunnel ahead of schedule; meeting currently projected schedules for interim and full commissioning; managing non-construction costs; and completion of remaining work without using the full amount of the remaining contingency.

A presentation of this attached report is scheduled for the July 19 Government Accountability and Oversight Committee meeting. It was prepared by SAIC (formerly R.W. Beck) who is under contract with the auditor's office to provide oversight consulting services on the Brightwater Program. We want to acknowledge the Prosecuting Attorney's Office, council staff, Brightwater Program staff, and WTD and DNRP management for their cooperation and assistance during the development of the report. Should you have questions or comments on the report, please contact Tina Rogers, the Capital Projects Oversight Manager, or me.

CB:TR:jl

Attachment: *Oversight Monitoring Consultant Report - Review of Brightwater Cost Update, Current Conditions and Trends, January 2011*

cc: Dow Constantine, King County Executive, King County Executive Office (KCEO)
Fred Jarrett, Deputy County Executive, KCEO
Dan Satterberg, Prosecuting Attorney, Prosecuting Attorney Office, (PAO)
Rhonda Berry, Assistant Deputy County Executive, KCEO
Christie True, Director, Department of Natural Resources and Parks (DNRP)
Grover Cleveland, Business Manager, DNRP
Pam Elardo, Division Director, Wastewater Treatment Division (WTD), DNRP
Gunars Sreibers, Brightwater Project Manager, WTD, DNRP
Dwight Dively, Director, Office of Performance, Strategy and Budget, KCEO
Tom Kuffel, Senior Deputy Prosecuting Attorney, PAO
Mark Melroy, Council Policy Staff
Beth Mountsier, Council Policy Staff
Jenny Giambatista, Council Policy Staff
Clifton Curry, Council Policy Staff
Art Griffith, SAIC
Tom Jacobs, SAIC

Oversight Monitoring Consultant Report - Review of Brightwater Cost Update, Current Conditions and Trends, January 2011

King County
Brightwater Project Oversight Services
Contract No. P43024P

July 2011

SAIC[®]

In association with:



Oversight Monitoring Consultant Report - Review of Brightwater Cost Update, Current Conditions and Trends, January 2011

King County
Brightwater Project Oversight Services
Contract No. P43024P

July 2011

SAIC[®]

In association with:

Helmes&Co



Hatch Mott
MacDonald

This report has been prepared for the use of the client for the specific purposes identified in the report. The conclusions, observations and recommendations contained herein attributed to SAIC constitute the opinions of SAIC. To the extent that statements, information and opinions provided by the client or others have been used in the preparation of this report, SAIC has relied upon the same to be accurate, and for which no assurances are intended and no representations or warranties are made. SAIC makes no certification and gives no assurances except as explicitly set forth in this report.

© 2011 SAIC
All rights reserved.

Oversight Monitoring Consultant Report Review of Brightwater Cost Update, Current Conditions and Trends, January 2011

Table of Contents

Executive Summary	1
Review of Brightwater Cost Update, Current Conditions and Trends, January 2011	3
Introduction	3
Key 2011 Trend Report Assumptions	3
Changes from WTD's 2010 Trend Report	4
Revised OMC Estimate	5
Known Disputed Costs	7
Remaining Cost Uncertainty	8
Contingency Assessment.....	8
Remaining Project Expenditures	11
List of Tables	
Table 1 Summary of Revised OMC Cost Estimate, \$M.....	1
Table 2 Conveyance Cost Comparisons, \$M.....	5
Table 3 Treatment Plant Cost Comparisons, \$M.....	6
Table 4 Summary of Known Disputed Costs, \$M.....	7
Table 5 Remaining Contingency as of 3/31/11	10
Table 6 Potential Demands on Remaining Contingency (Excluding Known Disputed Costs).....	11
Table 7 Conveyance Costs Remaining to be Incurred / Paid.....	12
Table 8 Treatment Plant Costs Remaining to be Incurred / Paid.....	13

Executive Summary

This report is the Brightwater Oversight Monitoring Consultant (OMC) review of the Wastewater Treatment Division (WTD) 2011 Trend Report¹, including an updated OMC cost estimate.

WTD's revised total lifetime Brightwater Program cost estimate is \$1,849.2 million. This is near the upper end of the range reported by WTD in the 2010 Trend Report.

The biggest change in the 2011 Trend Report is that the total lifetime Brightwater Program cost estimate excludes Known Disputed Costs that are related to the delay in performance of the Central Tunnel contract. WTD's compilation of Known Disputed Costs includes approximately \$111 million for which King County will seek reimbursement, and approximately \$95 million for which King County denies the obligation to pay.

The 2011 Trend Report also reflects continued construction progress made during 2010 and the settlement between WTD and the State of Washington related to Machinery & Equipment (M & E) sales tax exemption. This settlement resulted in the project being eligible for a \$9.55 million exemption, which is in the lower end of the \$0 to \$41 million range reported in the 2010 Trend Report.

OMC's revised lifetime Brightwater Program cost estimate is \$1,852.6 million. Like WTD's estimate, this also excludes Known Disputed Costs. The \$3.4 million difference between OMC's estimate and WTD's estimate is smaller than in recent years, primarily because the cost risk of the project is decreasing as construction nears completion.

Table 1
Summary of Revised OMC Cost Estimate, \$M

Project Component	WTD Baseline	WTD 2010	WTD 2011	OMC 2010	OMC 2011
	Budget				
	3% Infl. - 5% Infl				
Conveyance	\$1,020.6 - \$1,105.5	\$931.6 - \$963.3	\$964.1	\$919.3 - \$951.1	\$966.5
Treatment Plant	\$639.6 - \$684.4	\$884.2 - \$893.5	\$885.1	\$895.2 - \$904.5	\$886.1
Subtotal	\$1,660.2 - \$1,789.9	\$1,815.8 - \$1,856.8	\$1,849.2	\$1,814.6 - \$1,855.6	\$1,852.6

In this report, OMC updates the Known Disputed Costs for which King County will seek reimbursement to slightly more than \$128 million. OMC also includes an assessment of WTD's 2011 Trend Report contingencies. This OMC review concludes that with approximately \$45 million remaining, the construction contingency will likely be sufficient to cover risks in non-disputed portions of the Brightwater project. OMC's estimate continues to carry an additional \$3 million contingency to cover continued non-construction cost risk.

OMC estimates that the total remaining project expenditures for the Brightwater Project are approximately \$153 million. While the majority of this amount is

¹ Full name of report is Brightwater Cost Update, Current Conditions and Trends, January 2011.

contractually obligated under existing lump sum contracts, there continue to be opportunities for WTD to reduce project costs.

Oversight Monitoring Consultant Report, Review of Brightwater Cost Update, Current Conditions and Trends, January 2011

Introduction

This report is the Brightwater Oversight Monitoring Consultant (OMC) review of the Wastewater Treatment Division's (WTD) 2011 Trend Report. WTD published its 2011 Trend Report on April 19, 2011, at which time the OMC began its review. The OMC also received considerable assistance from WTD in responding to questions and requests for backup data.

This report describes key 2011 Trend Report assumptions and changes from the 2010 Trend Report, and presents a revised OMC estimate of Brightwater project costs. There are a number of terms in this report that have been defined in previous OMC reports². This background information is not repeated here, and previous reports should be referred to for any clarification that may be needed.

Key 2011 Trend Report Assumptions

- The 2011 Trend Report is based on project progress through December 31, 2010. Project developments since that time are not incorporated (with one exception described below).
- WTD has separately identified Known Disputed Costs associated with the delay in the performance of the Central Tunnel contract. These Known Disputed Costs are those that were known as of December 31, 2010.
- The 2011 Trend Report makes no projection of the outcome of the Central Tunnel dispute.
- The 2011 Trend Report is based on Interim Commissioning commencing in August 2011 and Full Commissioning commencing July 31, 2012. These dates represent the projected schedule as of December 31, 2010.

Correspondingly, major project developments occurring since then, though noted, are not specifically included in the 2011 Trend Report, but are reflected in this OMC review. These developments include:

- Construction progress since December 31, 2010 through March 31, 2011.
- Change orders that have been executed since December 31, 2010 through March 31, 2011. These include (a) an extension of the treatment plant contractors'

² Previous reports containing background information and definitions of terms include Oversight Monitoring Consultant, Review of Brightwater Cost Update – Current Conditions and Trends, January 2010, prepared by RW Beck.

services to cover delays in commissioning and (b) Interim Commissioning change orders.

- Known costs for the BT-3C project that have been incurred since December 31, 2010 through April 30, 2011.
- BT-3C change order for ground freezing.

Changes from WTD's 2010 Trend Report

Costs. The largest change from WTD's 2010 Trend Report is the separate reporting of Known Disputed Costs, as first presented in the 2010 OMC Review.

The next largest change is the incorporation of the M&E sales tax exemption settlement. In 2010, WTD reported a range of \$0 to \$41 million of exempted sales tax related to machinery and equipment. The settlement was for \$9.55 million, and WTD has included this in its 2011 Trend Report. Additionally, per the settlement, this sales tax exemption will occur entirely in the treatment plant; in the 2010 Trend Report, it was assumed that the majority of the sales tax exemption would be in the conveyance system.

Many of the other changes from the 2010 Trend Report consist of accounting for continued construction progress and offsetting known cost changes by a reduction in the contingency. As a change order is executed, the construction cost increases by the amount of the change order, with a concurrent reduction in the owner's contingency. As a result, the total project cost estimate remains constant.

In addition to the above, WTD has made the following adjustments to its 2010 cost estimates:

- Several costs were reclassified to more accurately report expenditures in each cost category, but do not change the overall project cost.
- There is a transfer of \$4.5M of contingency from the solids contract to the liquids contract. This is a reallocation of contingency that doesn't change the overall level of contingency associated with the treatment plant.
- There is an increase in instrumentation and control costs of approximately \$1.5 million corresponding to increased needs during treatment plant testing and startup compared with what was previously anticipated.
- Costs for engineering, planning, and management services are not substantively changed from the 2010 Trend Report. There have been additional non-construction costs that are associated with the delay in performance of the Central Tunnel contract. These are included in the discussion of Known Disputed Costs below.

Schedule. Some of WTD's schedule assumptions in the 2011 Trend Report have changed from the 2010 Trend Report. The major change from the 2010 Trend Report is the phased commissioning approach necessitated by the delay in performance of the Central Tunnel contract. In the 2010 Trend Report, initiation of wastewater treatment was scheduled for August 15, 2011. Due to the Central Tunnel contract delay, WTD developed a two-phase commissioning approach, with Interim Commissioning

beginning on August 22, 2011 and Full Commissioning scheduled for July 31, 2012. The total non-construction cost in the 2011 Trend Report does not differ substantially from the 2010 Trend Report. However, it is difficult to directly compare the totals, because the previous Trend Report estimate included costs which are now considered disputed.

Revised OMC Estimate

Revised Lifetime Cost Estimate

OMC's revised estimate of non-disputed costs is summarized in Table 2 for conveyance and Table 3 for the treatment plant. This estimate shows previously reported project costs and a revised estimate of non-disputed project costs.

The end of Table 3 combines the conveyance and treatment plant costs. The range shown in the 2010 Trend Report and OMC's 2010 estimate corresponds to the M&E sales tax exemption, which had not yet been determined at the time of the 2010 report.

Table 2
Conveyance Cost Comparisons, \$M

Conveyance Component	Baseline Budget 3% Infl. - 5% Infl.	WTD 2010 Trend Report	WTD 2011 Trend Report	OMC 2010 Estimate	OMC 2011 Estimate
Construction					
Construction Contracts	\$580.4 - \$630.5	\$588.9	\$612.4	\$583.9	\$607.9
Construction Mitigation Contracts	\$4.8 - \$5.2	\$3.8	\$3.3	\$3.8	\$3.6
Judgments/Claims	\$0.0	\$1.6	\$1.7	\$2.1	\$1.7
Owner Controlled Insurance	\$0.0	\$17.0	\$17.0	\$17.0	\$17.0
Construction Contingency (1)	\$61.9 - \$70.2	\$55.1	\$34.0	\$46.9	\$37.6
Sales Tax (2)	\$57.5 - \$62.8	\$27.7 - \$59.4	\$59.3	\$26.1 - \$57.8	\$59.9
Owner Furnished Equipment and Materials	\$0.1 - \$0.1	\$1.1	\$1.3	\$1.1	\$1.3
Outside Agency Implementation/Const.	\$0.0	\$5.3	\$4.3	\$5.3	\$4.3
Other Capital Charges	\$0.0	\$0.3	\$0.3	\$0.3	\$0.3
Construction Subtotal	\$704.8 - \$768.7	\$700.9 - \$732.6	\$733.7	\$686.6 - \$718.3	\$733.6
Non-Construction					
Engineering Services	\$87.3 - \$91.3	\$80.5	\$83.6	\$80.5	\$83.6
Planning and Management Services	\$60.5 - \$63.3	\$80.0	\$76.3	\$80.0	\$76.3
Permitting and Other Agency Support	\$22.1 - \$22.8	\$1.2	\$1.4	\$1.2	\$1.4
Right-of-Way	\$21.2 - \$21.5	\$31.0	\$30.3	\$31.0	\$31.2
Miscellaneous Services and Materials	\$4.8 - \$5.0	\$4.7	\$5.6	\$4.7	\$5.6
Staff Labor	\$30.4 - \$31.8	\$33.3	\$33.3	\$33.3	\$32.9
Non-Construction Subtotal	\$226.3 - \$235.6	\$230.8	\$230.4	\$230.8	\$230.9
Project Contingency	\$89.5 - \$101.1	\$0.0	\$0.0	\$2.0	\$2.0
CONVEYANCE SUBTOTAL	\$1,020.6 - \$1,105.5	\$931.6 - \$963.3	\$964.1	\$919.3 - \$951.1	\$966.5

Notes:

(1) OMC's assessment of the adequacy of the construction contingency is discussed later in this report.

(2) Range of sales tax in the 2010 reports was a result of whether the County would receive the full amount of the machinery and equipment tax exemption.

This OMC 2011 Estimate is the estimated lifetime cost of the Conveyance System, and excludes Known Disputed Costs.

**Table 3
Treatment Plant Cost Comparisons, \$M**

Treatment Plant Component	Baseline Budget 3% Infl. - 5% Infl.	WTD 2010 Trend Report	WTD 2011 Trend Report	OMC 2010 Estimate	OMC 2011 Estimate
Construction					
Construction Contracts	\$296.5 - \$323.4	\$432.6	\$437.8	\$437.7	\$442.2
Construction Mitigation Contracts	\$31.1 - \$33	\$25.8	\$25.9	\$25.8	\$25.9
Judgments/Claims	\$0.0	\$0.2	\$0.1	\$0.2	\$0.1
Owner Controlled Insurance	\$0.0	\$9.3	\$9.3	\$9.3	\$9.3
Construction Contingency (1)	\$31.6 - \$35.7	\$19.0	\$11.8	\$17.8	\$7.4
Sales Tax (2)	\$24.9 - \$27.2	\$30.2 - \$39.5	\$29.8	\$29.9 - \$39.2	\$29.8
Owner Furnished Equipment and Materials	\$0.0	\$28.5	\$30.5	\$29.4	\$30.5
Outside Agency Implementation/Const.	\$0.0	\$5.9	\$5.9	\$5.9	\$5.9
Other Capital Charges	\$0.0	\$2.9	\$2.1	\$2.9	\$2.1
Construction Subtotal	\$384.1 - \$419.4	\$554.4 - \$563.7	\$553.3	\$558.7 - \$568.0	\$553.3
Non-Construction					
Engineering Services	\$50.3 - \$54.5	\$76.6	\$77.3	\$76.6	\$77.3
Planning and Management Services	\$23.4 - \$24.1	\$32.0	\$32.7	\$32.0	\$32.7
Permitting and Other Agency Support	\$24.7 - \$25.6	\$7.1	\$6.8	\$7.1	\$6.8
Right-of-Way	\$103.3 - \$104.5	\$181.8	\$182.1	\$181.8	\$182.1
Miscellaneous Services and Materials	\$4.7 - \$4.9	\$5.5	\$6.1	\$5.5	\$6.1
Staff Labor	\$25.9 - \$27.3	\$30.0	\$30.0	\$30.0	\$30.0
Non-Construction Subtotal	\$235 - \$240.9	\$333.0	\$334.9	\$333.0	\$334.9
Project Contingency	\$31.2 - \$35.3	\$0.0	\$0.0	\$3.5	\$1.0
Credits and Revenues	(\$10.8) - (\$11.3)	(\$3.1)	(\$3.1)	(\$3.1)	(\$3.1)
TREATMENT PLANT SUBTOTAL	\$639.6 - \$684.4	\$884.2 - \$893.5	\$885.1	\$895.2 - \$904.5	\$886.1
PROJECT TOTAL	\$1,660.2 - \$1,789.9	\$1,815.8 - \$1,856.8	\$1,849.2	\$1,814.6 - \$1,855.6	\$1,852.6

Notes:

(1) OMC's assessment of the adequacy of the construction contingency is discussed later in this report.

(2) Range of sales tax in the 2010 reports was a result of whether the County would receive the full amount of the machinery and equipment tax exemption.

There are some differences between OMC's lifetime estimate and the 2011 Trend Report estimate. The differences are smaller than in previous years, as construction has progressed and the cost uncertainty has decreased. The key difference is:

This OMC 2011 Estimate is the estimated lifetime cost of the Treatment Plant, and excludes Known Disputed Costs.

- OMC's estimate includes events that have happened since December 31, 2010. This results in higher construction costs and lower contingencies as change orders are executed.
- OMC's estimate includes an additional \$3 million in contingency to cover non-construction cost risk.

Other differences are:

- OMC’s estimate updates some construction and local agency mitigation costs which were included in different categories. These cost categorization adjustments resulted in a difference in the sales tax estimate.
- Other minor cost categorization adjustments.

Known Disputed Costs

Table 4 summarizes Known Disputed Costs related to delay in the performance of the Central Tunnel contract as reported by WTD in the 2011 Trend Report, and adjusted by OMC as noted.

**Table 4
Summary of Known Disputed Costs, \$M**

Disputed Cost	Estimated Trend	OMC Adjustments		Total
	Report Cost	Amount	Note	
King County Seeks Reimbursement for the Following Costs				
Construction Cost - Paid by WTD	\$46.9	\$31.7	1	\$78.6
Construction Cost - Contractual Obligation to Pay in Future	\$38.1	(\$13.5)	2	\$24.6
Non-Construction Costs	\$26.1	\$0.0	3	\$26.1
King County Claims - Total	\$111.1			\$129.3
King County Denies Obligation to Pay the Following Costs				
VPFK Counterclaim - Total	\$95.4	\$0.0		\$95.4

Notes:

- (1) OMC Adjustment accounts for the deductive change order that removed West Tunnel Scope from JCT, and adds amount paid to JDC between 11/28/10 and 4/30/11, including incentives and change orders.
- (2) Reduced to reflect BT-3C construction progress from 11/28/10 to 4/30/11. This is included in the \$31.7M above.
- (3) Includes costs Paid by WTD and costs which WTD has a Contractual Obligation to Pay in Future.
- (4) The OMC adjusted amount was developed from publically available data and is not based on consultation with any outside expert retained by legal counsel representing the County in the pending Central Tunnel litigation.

The Known Disputed Costs will continue to change over time. The above summary does not include the following:

- **West Tunnel Completion.** WTD’s decision to use JDC as the contractor to complete the BT-3C mining changed the construction schedule of the West Tunnel. The lining of the BT-4 tunnel and construction of an effluent sampling station remain to be completed. WTD issued a deductive change order for this work in the amount of \$10.9 million to the West Tunnel Contractor (JCT), and proceeded to close out the contract. WTD is now negotiating a change order with JDC to complete this work. Any West Tunnel Completion costs related to the delay in the performance of the Central Tunnel contract would be considered disputed.
- **BT-3C incentives that have not yet been earned.** JDC has the potential to earn up to another \$3.2 million in incentives if future milestones are met.
- **All costs associated with the connection between the BT-3C and BT-3 tunnel boring machines,** including ground freezing costs beyond the \$3.9 million change order executed in February 2011 (this \$3.9 million change order is

included in Table 4). Originally estimated by WTD as approximately \$9 million, no estimate of the final cost is currently available.

The Known Disputed Costs (in Table 4) and the lifetime cost estimate (in Tables 1, and Tables 2 and 3) are not additive. Because they are by definition "disputed", the final set of costs, final amount, and determination of responsibility has not been established.

Remaining Cost Uncertainty

The uncertainty in the lifetime cost has decreased substantially in the past year, because of the following developments:

- Settlement of the dispute between the County and the State of Washington Department of Revenue regarding the M & E sales tax exemption.
- Continued progress on construction, particularly at the Influent Pump Station and the Treatment Plant.
- The interim commissioning schedule is more certain. Therefore, the commissioning costs can be predicted with greater certainty.

In addition, there is increasing certainty as to the magnitude of disputed costs. This is primarily because:

- BT-3C mining is approximately 80 percent complete, and the uncertainty regarding the BT-3C cost is decreasing as construction progresses.
- The construction activities needed to complete the West Tunnel are more defined, although the estimated cost of this work is not yet included in the compilation of Known Disputed Costs, as a change order for this work has yet to be executed.

There are five factors that will decrease the project cost, as follows:

1. The most important factor, by far, in minimizing the project cost is success in the dispute related to delay in performance of the Central Tunnel contract.
2. Successful completion of the remaining BT-3C contract mining at a cost less than originally estimated by WTD. BT-3C is considered a disputed cost.
3. Meeting the currently projected schedules for interim and full commissioning.
4. Managing non-construction costs.
5. Completing the remaining work without using the full amount of remaining contingency.

Contingency Assessment

In WTD's baseline budget, there were two types of contingencies for the Brightwater Project: Construction Contingency and Project Contingency. The Construction Contingency was intended to cover additional costs paid to construction contractors

for items such as change orders and claims. The Project Contingency was primarily intended to cover non-construction cost risks, for items such as engineering, construction management, administration, and land purchases. In its 2010 Trend Report, WTD reduced the Project Contingency to \$0. OMC has retained a Project Contingency of \$2.0 million for Conveyance the Treatment Plant. These amounts reflect OMC's assessment of a reduced but continuing uncertainty in the Brightwater Project's remaining non-construction expenditures.

Remaining Construction Contingency

As a construction change order is executed, the cost is transferred from Construction Contingency to construction cost. OMC has updated the remaining contingency reported by WTD in the 2011 Trend Report to reflect costs since December 31, 2010. Excluding Known Disputed Costs, the risk of future change orders is decreasing but still exists. Table 5 shows remaining construction contingency shown in the 2011 Trend Report, after subtraction of executed and pending change orders since December 31, 2010.

Table 5
Remaining Contingency as of 3/31/11

Conveyance	
Conveyance Contingency in 2011 Trend Report (1)	\$33,974,511
Less Developments Since 12/31/10	
Central Tunnel (Executed Change Orders)	(\$42,208)
Central Tunnel (Pending Change Orders as of 3/31/11) (2)	\$86,552
IPS (Executed Change Orders)	(\$698,330)
IPS (Pending Change Orders as of 3/31/11)	(\$1,137,892)
Plus Adjustment (3)	<u>\$5,372,387</u>
Remaining Conveyance Contingency	\$37,555,020
Treatment Plant	
Treatment Plant Contingency in 2011 Trend Report (1)	\$11,812,794
Less Developments Since 12/31/10	
Liquids (Executed Change Orders)	(\$823,364)
Liquids (Pending Change Orders as of 3/31/11)	(\$101,580)
Liquids (Use of MACC Contingency)	(\$1,327,341)
Liquids (Pending Use of MACC Contingency as of 3/31/11)	(\$1,168,036)
Solids (Executed Change Orders)	(\$417,224)
Solids (Pending as of 3/31/11)	<u>(\$204,998)</u>
Remaining Treatment Plant Contingency	\$7,770,251
Total Remaining Contingency	\$45,325,271

Note:

(1) Excludes Known Disputed Costs

(2) Positive value indicates deductive change order.

(3) WTD reported certain change orders as disputed, which were also inadvertently subtracted from WTD's contingency in the 2011 Trend Report. OMC has added this amount back to the contingency.

OMC also adjusted the Conveyance Contingency by \$5.4 million associated with certain change orders that are disputed, but were inadvertently subtracted from the conveyance contingency in the 2011 Trend Report. This adjustment does not change the total lifetime Brightwater Program cost estimate, because the adjustment to contingency is offset by a corresponding reduction in construction cost.

To keep construction costs within WTD's 2011 Trend Report estimate (excluding Known Disputed Costs), this remaining \$45 million in WTD's contingency needs to cover the items shown in Table 6.

Table 6
Potential Demands on Remaining Contingency
(Excluding Known Disputed Costs)

Conveyance

- West Tunnel Completion: any future change orders related to the original scope deleted via \$10.9M deductive change order with JCT.
- Central Tunnel: any future change orders associated with the remaining work (including BT-2 and BT-3 lining) that isn't considered disputed.
- Influent Pump Station (IPS): resolution of pending requests for change orders and requested cost proposals, where WTD is awaiting the contractor's price proposal. As of 4/30/11, these items totaled approximately \$1.7M.
- IPS: any future change orders associated with the remaining work.
- Marine Outfall: bid risk and any future change orders associated with diffuser cap removal.
- Ancillary Facilities: bid risk and any future change orders associated with North Kenmore Portal and Ballinger Way Portal Odor Control facilities.
- Construction and non-construction cost risk associated with schedule delay that is not related to the delay in performance of the Central Tunnel contract.

Treatment Plant

- Liquids: resolution of the \$2.0M in existing potential change orders.
 - Liquids: future change orders associated with the remaining work to be completed.
 - Liquids: any use of buyout savings after 3/31/11.
 - Liquids: any use of the MACC contingency after 3/31/11.
 - Solids: resolution of the \$0.77M in existing potential change orders.
 - Solids: future change orders associated with the remaining work to be completed.
 - Construction and non-construction cost risk associated with schedule delay that is not related to the delay in performance of the Central Tunnel contract.
-

OMC believes that WTD's remaining contingency should be sufficient to cover these potential demands, given that there is \$45 million of remaining contingency, which is 45% of the \$97 million of remaining construction cost identified below in Tables 7 and 8. As of 4/30/11, executed change orders for the life of the project were 7% of the total construction cost earned through that date.

Future change orders are reflected as an increase in the construction cost. There are two future deductive change orders that will decrease the construction cost and partially mitigate the effect of future change orders:

- \$0.9M deductive change order for unearned costs on the West Tunnel contract.
- A future deductive change order for unused General Conditions of the liquids contract.

Remaining Project Expenditures

Tables 7 and 8 show the OMC estimate of the remaining Brightwater Project expenditures. This information is provided because it can help focus attention to the remaining portions of the project. Tables 7 and 8 also indicate which types of costs are disputed; in many cases, certain future costs in a given construction contract will

be partially disputed. For example, some of the remaining BT-3 construction work is not anticipated to be disputed and some of it is.

The total remaining expenditures for the Brightwater Project are approximately \$153 million, excluding some costs that aren't yet known, such as the BT-3 connection costs. WTD's remaining ability to affect project costs will occur within the areas shown in Tables 7 and 8.

Table 7
Conveyance Costs Remaining to be Incurred / Paid

	Estimated Cost, \$M (1)
Construction (2)	
Central Tunnel (VPFK)	\$25.7
West Tunnel (JCT)	\$0.0
BT3C (JDC) (3)	\$20.2
West Tunnel Completion (4)	\$12.0
IPS	\$19.9
Marine Outfall (Diffuser Cap)	\$0.5
Ballinger Wy/N.Kenmore Odor Control	\$2.2
Emerson I&C (Owner Furnished Mat'l)	\$0.3
Subtotal	\$80.9
Construction Mitigation (5)	\$0.6
Non-Construction (5)	
Engineering & CM Services	\$20.1
Permitting and Other Agency Support	\$0.1
Local Agency Mitigation	\$2.0
Misc. Services & Materials	\$1.2
Staff Labor	\$3.1
Subtotal	\$26.5
Other (5,6)	\$3.0
CONVEYANCE TOTAL	\$110.9

Notes:

(1) Includes Sales Tax where applicable. Includes some costs which will be disputed.

(2) Construction Costs remaining to be incurred/paid as of 3/31/2011.

(3) BT-3C Construction costs remaining to be incurred/paid as of 4/30/2011. Does not include Incentives not yet earned as of 4/30/2011.

(4) The \$12.0M shown here is the cost (including sales tax) of the scope deleted from JCT. Until the Final West change order is executed the actual amount is unknown.

(5) Construction Mitigation, Non-Construction and Other costs remaining to be incurred/paid as of 3/31/11 (costs between 12/31/10 and 3/31/11 estimated by OMC).

(6) Other includes Insurance deductible payments, Owner-Controlled Insurance Premiums and Utility Relocates.

Table 8
Treatment Plant Costs Remaining to be Incurred / Paid

	Estimated Cost, \$M (1)
Construction (2)	
Liquids (Hoffman)	\$11.7
Solids (Kiewit)	\$4.9
Subtotal	\$16.6
Owner Furnished Equipment & Mat'l's (3)	
MBR Contract (Zenon)	\$5.3
I&C Contract (Emerson)	\$1.0
Other KC Procurements	\$1.2
Procurement Mitigation	\$0.6
Subtotal	\$8.1
Construction Mitigation (1,3)	\$4.3
Non-Construction (3)	
Engineering & CM Services	\$7.0
Permitting and Other Agency Support	\$0.2
Local Agency Mitigation	\$0.9
Misc. Services & Materials	\$1.0
Staff Labor	\$3.0
Subtotal	\$12.1
Other (3,4)	\$1.2
TREATMENT PLANT TOTAL	\$42.4

Notes:

- (1) Includes Sales Tax where applicable. Includes some costs which will be disputed.
- (2) Construction Costs remaining to be incurred/paid as of 3/31/2011.
- (3) Owner-Furnished Materials, Construction Mitigation, Non-Construction and Other costs remaining to be incurred/paid as of 3/31/11 (costs between 12/31/10 and 3/31/11 estimated by OMC).
- (4) Other includes Insurance deductible payments, Owner-Controlled Insurance Premiums and Other Capital Charges.

Just under two-thirds of the remaining project expenses are for construction and owner-furnished materials such as the treatment plant membranes. Approximately \$35.6 million is non-construction costs – primarily construction management and engineering services during construction. Approximately \$7.7 million in mitigation expenses remain. The majority of this is landscaping at the treatment plant and expenses within the Environmental Education and Community Center (EECC).