



King County

KING COUNTY AUDITOR'S OFFICE

CAPITAL PROJECTS OVERSIGHT PROGRAM

BRIGHTWATER PROJECT OVERSIGHT REPORT FOR QUARTER ENDING JUNE 30, 2011

CURRENT RISK RATING ▼ Although nearing completion, attention is needed to finish the project within the revised schedule and continue vigilant cost containment on remaining work.



PROJECT DESCRIPTION

The Brightwater wastewater treatment system is being constructed to meet the capacity needs outlined in the Regional Wastewater Services Plan. The new treatment plant is designed to provide 36-million gallons per day capacity with membrane bioreactor secondary treatment systems, Class B biosolids, and reclaimed water production. The conveyance system includes an influent pump station and 14 miles of large diameter tunnel connecting the plant near SR522 and SR9 to a marine outfall. The Wastewater Treatment Division (WTD) is managing multiple contracts nearing the end of the construction phase or in close-out. The quarterly report from SAIC, the Oversight Monitoring Consultant (OMC), is attached.

PROJECT STATUS ● = No Current Concerns ▼ = Attention Needed ◆ = Corrective Action Needed

● Scope

The scope of the final project has not changed. On September 6, 2011, WTD began interim commissioning of the treatment plant prior to completion of the conveyance system to mitigate schedule delay.

▼ Schedule

Milestone	Baseline Schedule	Current Forecast	Comment
Treatment Plant substantial completion	Jan. 2011	Aug. 2011 (actual)	8-month delay due to weather delays and conveyance system delays
Accept wastewater for treatment	Mar. 2011	Sept. 2011 (actual)	6-month delay due to work needed to start up without conveyance system
Conveyance System commissioning start	Jan. 2011	Sept. 2012	23-month delay due to Central Tunnel mining delay

▼ **Budget¹**: Cost estimates exceed the adopted baseline and are unchanged from the 2011 Trend Report.

Project	Adopted 2004 Baseline		WTD 2011 Cost Update ²	OMC 2011 Estimate ²	LTD Expenses	LTD %
	3% Inflation	5% Inflation			Thru June 2011	Expended
Conveyance	1,020.6	1,105.5	964.1	966.5	928.8	96%
Treatment Plant	639.6	684.4	885.1	886.1	847.2	96%
Total	\$1,660.2	\$1,789.9	\$1,849.2	\$1,852.6	\$1,776.0	96%

¹ All costs are shown in \$ millions. ² Estimates do not include disputed costs related to Central Tunnel delay.

▼ **Current Issues:** These items could impact schedule and/or cost outcomes.

- The outcome of disputed Central Tunnel delay costs.
- Repair of 180 feet of a 66" diameter influent pipe on the treatment plant site.
- Investigation of cause, redesign, and construction at the influent pump station to correct surge problem occurring during high flow conditions.

For detailed information, see the following report.

October 26, 2011

King County Auditor's Office – Cheryle Broom, County Auditor

The King County Auditor's Office was created in 1969 by the King County Home Rule Charter as an independent agency within the legislative branch of county government. Its mission is to promote and improve performance, accountability and transparency in King County government through conducting objective and independent audits and services.

Capital Projects Oversight Program – Tina Rogers, Manager

The Capital Projects Oversight Program (CPO) was established within the Auditor's Office by the Metropolitan King County Council through Ordinance 15652 in 2006. Its goal is to promote the delivery of capital projects in accordance with the council approved scope, schedule, and budget and to provide timely and accurate capital project reporting.

CPO oversight reports are available on the Auditor's Web site (www.kingcounty.gov/operations/auditor/reports) under the year of publication. Copies of reports can also be requested by mail at 516 Third Avenue, Rm. W-1033, Seattle, WA 98104, or by phone at 206-296-1655.

**ALTERNATIVE FORMATS AVAILABLE UPON REQUEST
CONTACT 206-296-1655 OR TTY 206-296-1024**

INTRODUCTION

Attached is the twelfth quarterly *Brightwater Project Construction Phase Oversight Monitoring Consultant Report* prepared by the Oversight Monitoring Consultant (OMC), SAIC. This is prepared and issued under the council-mandated Capital Projects Oversight (CPO) Program in the King County Auditor's Office. This transmittal to the Metropolitan King County Council (Council) Government Accountability and Oversight Committee is to provide timely information on the status of the scope, schedule, budget, and risk for the Brightwater project.

We show the risk level for the Brightwater project as yellow, indicating that attention is needed to continue diligent cost containment and schedule management for the remaining work, and to manage anticipated redesign and construction work to correct recently identified defects. We lowered the risk level from our previous quarterly report because of the successful completion of major milestones, most notably clean water testing of the treatment plant, completion of conveyance system mining, and initiation of wastewater treatment.

This report and the attached OMC report cover the second quarter of 2011, ending June 30. Where more current information is available, it has been included.

PROJECT STATUS UPDATE WITH RECOMMENDATIONS

Scope

The scope of the final project has not changed; WTD has implemented the startup of the treatment plant prior to the completion of the conveyance system, according to a revised project plan, to mitigate risks and costs associated with having the plant sit idle for a period of time before final testing and commissioning. The implementation activities are based on decisions made in mid-2010 consistent with the commissioning alternatives report developed in response to Council proviso and published in March 2010. Given the current schedule projections, WTD plans to operate the treatment plant continuously until full commissioning occurs using the completed conveyance system. No treatment plant shut down is anticipated.

Schedule

Although most of the Brightwater Program construction proceeded nearly on schedule, delays on the Central Tunnel portion of the conveyance system have caused a significant delay in the completion date for the project. Treatment plant startup occurred on September 6, 2011, six months later than originally scheduled. The projected date for commissioning of the conveyance system is projected to occur on September 26, 2012, twelve months later than originally scheduled.

Budget

Attachment A summarizes the appropriations and expenditures on the project through August 2011, as well as the Executive's request for 2012 budget appropriation on this project.

The OMC has reviewed project records regarding the known disputed costs related to the delays in mining of the Central Tunnel and notes the total to be \$132.9 million claimed by the County as of June 30, 2011, and requested change orders from VPFK, the Central Tunnel contractor, amounting to a counterclaim of \$95.4 million, unchanged from the previous report. These disputed costs are not included in the WTD cost update or the current OMC estimate of total project costs. Ultimate responsibility for these disputed costs may not be known for several years.

The OMC report shows the known disputed costs that have been expended to date and those under contract or planned to be spent to complete the conveyance system. The total amount of disputed costs will not be known until project completion.

One major component of the known disputed costs is the work being done by contractor JDC to complete mining of the BT-3 portion of the Central Tunnel. The contract for this work uses a cost reimbursable plus fixed fee to a target price, which is an alternative contract approach. Council required monthly reports from WTD regarding this contract. The OMC monitored these reports as directed by Council. In addition, WTD contracted for financial auditing of the contract payments. The OMC reports on both of these oversight activities for this contract.

Current Issues

The OMC report discusses the remaining risks on the Brightwater project in greater detail. Of greatest impact to the total project cost will be the outcome of the disputed costs related to the Central Tunnel delay.

New items of concern that could potentially impact project cost and schedule include:

- Repair of 180 feet of a 66" diameter influent pipe located on the treatment plant site. This pipe segment showed deflection beyond contract specifications and must be repaired before the treatment plant can be used at full capacity. Repair of the pipe involves excavation up to 50 feet deep, under areas previously graded and landscaped. The work is underway and expected to be completed early in 2012.
- The design engineer for the influent pump station is identifying the reason for unacceptable surges in the wastewater pumping systems and is designing corrective measures. These measures will need to be implemented prior to using the treatment plant at full capacity. Investigation of the problem is underway.

ACKNOWLEDGEMENTS

We appreciate the collaborative efforts of WTD, DNRP, DES, and OMB in providing for effective oversight of the Brightwater Treatment System consistent with Council intent. Oversight is being conducted, and this report was prepared by a team from the King County Auditor's Office, including Tina Rogers, Susan Baugh, and Cheryle Broom. The attached report was prepared by SAIC who is under contract with the Auditor's Office to provide oversight monitoring consulting services.

No formal presentation of this quarterly report is planned. Should you have questions or comments on the report, please contact Tina Rogers, Capital Projects Oversight Manager, or Cheryle Broom, County Auditor.

DISTRIBUTION

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ATTACHMENTS

Attachment A - Brightwater Budget Summary through August 2011

Brightwater Project Construction Phase Oversight Monitoring Consultant Report –Quarterly Report for Quarter Ending June 30, 2011, SAIC

ATTACHMENT A

BRIGHTWATER BUDGET SUMMARY THROUGH AUGUST 2011

Includes Expenditures per IBIS Accounting System for
Project Numbers 423457, 423484, and 423575

Brightwater Appropriation/Expenditure History

Year	Appropriation	Expenditures			Cumulative Balance
		Conveyance System	Treatment Plant	Total	
1998	\$195,842	\$122,611	\$73,231	\$195,842	-
1999	1,521,938	996,094	525,844	1,521,938	-
2000	3,672,816	1,657,382	2,015,434	3,672,816	-
2001	8,422,017	2,739,756	5,440,754	8,180,510	\$241,507
2002	38,266,455	1,762,691	9,674,916	11,437,608	27,070,354
2003	80,834,249	15,928,950	46,818,655	62,747,605	45,156,998
2004	178,569,564	40,922,914	33,118,446	74,041,360	149,685,202
2005	432,633,315	36,971,596	63,257,313	100,228,909	482,089,608
2006	298,704,845	74,651,114	94,683,302	169,334,416	611,460,037
2007	528,410,201	153,321,358	62,339,610	215,660,969	924,209,269
2008	117,988,737	204,232,705	165,534,653	369,767,358	672,430,648
2009	70,669,725	158,880,957	201,690,664	360,571,621	382,528,752
2010	28,044,005	181,520,062	139,085,374	320,605,437	89,967,321
2011*	143,216,836	75,600,174	34,743,738	110,338,661	122,845,495
Life-To-Date	\$1,931,150,545	\$949,308,365	\$858,996,685	\$1,808,305,049	\$122,845,495
2012 request	\$40,408,226				
2013-2017 proposed CIP	1,137,864				
Appropriations to date plus proposed CIP	\$1,972,696,635				

*2011 YTD is through August

ATTACHMENT – Brightwater Project Construction Phase Oversight
Monitoring Consultant Report – Quarterly Report for Quarter Ending June
30, 2011, SAIC

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Brightwater Project Construction Phase

Oversight Monitoring Consultant Report Quarterly Report for Quarter Ending June 30, 2011

King County
Brightwater Project Oversight Services
Contract No. P43024

October 2011



In association with:



Hatch Mott
MacDonald

Brightwater Project Construction Phase Oversight Monitoring Consultant Report Quarterly Report for Quarter Ending June 30, 2011

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Oversight Monitoring Consultant Report

Introduction

This report is a briefing on the Brightwater Project provided by the Brightwater Oversight Monitoring Consultant (OMC), working as part of the King County Auditor's Office Capital Project Oversight program. This report is based on the most current information available through the Wastewater Treatment Division's June 2011 Monthly Project Report, supplemented by more current information when available, including: construction cost information through July 31, 2011; tunnel mining progress through August 2011; and certain other cost, schedule, and construction progress data through early August 2011 that was obtained from meetings with WTD staff.

Project Progress

The following tables illustrate construction activity for the various major construction contracts. They are not intended to be an exhaustive list of construction activity, but instead are intended to illustrate the many types of construction activities that are ongoing.

Several key milestones have been reached:

- Clean Water Operational Testing at the treatment plant and influent pump station was initiated in May 2011.
- All conveyance system tunneling was completed on August 16, 2011.
- Wastewater treatment (interim commissioning) was initiated on September 6, 2011.

Conveyance Construction

Contract Status

Table 1 summarizes the status of the conveyance construction contracts.

Table 1: Conveyance Construction Contract Status

Contractor	Contract Name	Status (1)
KST	East Tunnel	Complete as of July 2010. Closeout Ongoing.
JCT	West Tunnel	Work Complete. One outstanding deductive change order remains.
VPFK	Central Tunnel	Contractor's Forecast Substantial Completion: October 2012.
JDC	BT-3 Completion	Contractor's Forecast Substantial Completion: December 2011. West Tunnel Completion (BT-4C) Change Order 8 executed 9/9/2011. Full Commissioning anticipated: Sept. 2012. Substantial Completion anticipated: May 2013.
Kiewit Pacific	Influent Pump Station	Contractor's Forecast Substantial Completion: December 2011.
Triton Marine	Marine Outfall	Complete as of October 2010.
McClure & Sons	Ancillary Facilities: Hollywood	Complete as of May 2008.
James W. Fowler	Ancillary Facilities: North Creek	Complete as of February 2009.
TBD	North Kenmore / Ballinger Way Odor Control	90% Design completed. Fall 2011 Bid Date. WTD Forecast Substantial Completion: July 2013.

(1) Status per WTD's June 2011 Schedule Report, except BT-4C status provided separately by WTD.

BT-4C is the term used in this report to describe construction activities needed to complete the BT-4 tunnel, and included in Change Order 8 (CO 8) to JDC's BT-3C contract. Most, but not all, BT-4C work is scope that was originally to have been completed by the BT-4 contractor (JCT), but was delayed because of the use of the BT-4 tunnel during BT-3C construction.

Central Tunnel (VPFK Contract)

Central Tunnel construction activities since April 1, 2011 are shown in Table 2.

Table 2: Summary of Central Tunnel Activities Since April 1, 2011

Month	Partial List of Construction Activity	Construction Percent Complete (1)
April	BT-2 Pipe installation & grouting ongoing. BT-3 TBM dismantling ongoing.	89% of the contract amount has been invoiced.
May	BT-2 segment bolt capping ongoing. BT-3 cut freeze pipe window in TBM.	90% of the contract amount has been invoiced.
June	BT-2 segment bolt capping ongoing. BT-3 TBM dismantling ongoing.	92% of the contract amount has been invoiced.
July	BT-2 segment bolt capping completed. BT-3 TBM dismantling ongoing.	92% of the contract amount has been invoiced.

(1) As measured by '% Paid to Date' per WTD's monthly Construction Reports. This calculation includes the \$20 million in Conditional Change Orders, which have been invoiced and paid, but for which the County seeks reimbursement. These are considered Known Disputed Costs and are discussed at greater length in OMC's 2011 Trend Report Review and later in this report.

BT-3C (JDC Contract)

BT-3C construction activities since April 1, 2011 are shown in Table 3.

Table 3: Summary of BT-3C Activities Since April 1, 2011

Month	Partial List of Construction Activity	Construction Percent Complete (1)
April	75% of mining completed. Ground Freeze drilling completed.	75% of the contract amount has been invoiced.
May	83% of mining completed. TBM damaged by boulders. Ground freeze development ongoing.	78% of the contract amount has been invoiced.
June	91% of mining completed. TBM repaired. Ground freeze development ongoing.	81% of the contract amount has been invoiced.
July	99% of mining completed. Mined to within 100 feet of BT-3 TBM.	87% of the contract amount has been invoiced.

(1) As measured by '% Paid to Date' per WTD's monthly Construction Reports.

As of September 9, 2011, the BT-3C schedule was revised as part of JDC Change Order 8 (discussed below), revising the schedule to account for the connection between BT-3C and BT-3. The revised Target Completion date for BT-3C is March 5, 2012.

BT-4C (JDC Contract)

BT-4C was added to the JDC contract by Change Order 8 (CO 8) on September 9, 2011. A portion of CO 8 covers the connection between BT-3C and BT-3.³ The majority of the CO 8 scope is the West Tunnel completion work (deleted from JCT's

³ JDC's work on the connection between BT-3C and BT-3 is addressed in two separate change orders. CO 4 is the majority of the connection work, including ground freezing. A portion of CO 8 is the "shotcrete" in-situ tunnel lining.

West Tunnel Contract by JCT Change Order 15). This work is referred to in previous reports as West Tunnel Completion, and in this report as BT-4C. Table 4 summarizes the Milestones and proposed schedule for BT-4C construction activities, as reported by WTD.

Table 4: Summary of BT-4C Schedule

Milestone	Date	Task Description
No Contract MS	1/27/12	JDC Submit/Procure/Subcontract Preparation
No Contract MS	3/5/12	Commence BT-4C Scope
MS 4	6/18/12	Complete Ballinger Way Portal and Vacate BWP Site
MS 5	9/13/12	Complete JDC Work for Full Commissioning
Substantial Completion	5/29/13	Site Restoration, Work Complete

Influent Pump Station (Kiewit Contract)

Influent Pump Station construction activities since April 1, 2011 are shown in Table 5.

Table 5: Influent Pump Station Activities Since April 1, 2011

Month	Partial List of Construction Activity	Construction Percent Complete (1)
April	Internal Clean Water Operational Test started. Component & System Testing ongoing.	83% of the contract amount has been invoiced.
May	Internal Clean Water Operational Test finished. Component & System Testing ongoing.	85% of the contract amount has been invoiced.
June	External Clean water Operational Test finished. Component & System Testing ongoing.	87% of the contract amount has been invoiced.
July	Component & System Testing ongoing.	89% of the contract amount has been invoiced.

(1) As measured by '% Paid to Date' per WTD's monthly Construction Reports.

Treatment Plant Construction

Liquids (Hoffman Contract)

A partial list of liquids construction activities since April 1, 2011 is shown in Table 6.

Table 6: Liquids Contract Activities Since April 1, 2011

Month	Partial List of Construction Activity	Construction Percent Complete (1)
April	Critical system testing completed.	93%
May	Clean Water Operational Testing started. Final earthwork, landscaping, planting ongoing.	94%
June	Clean Water Operational Testing completed. Misc. system and operational tests ongoing.	94%
July	Operational tests ongoing. Misc. punchlist activities.	95%

(1) As measured by '% Paid to Date' per WTD's monthly Construction Reports.

Solids (Kiewit Contract)

A partial list of Solids/Odor Control construction activities since April 1, 2011 is shown in Table 7.

Table 7: Solids/Odor Control Contract Activities Since April 1, 2011

Month	Partial List of Construction Activity	Construction Percent Complete (1)
April	Component and System Testing ongoing. Odor Control fan replacement underway.	98%
May	Odor Control fan replacement underway. Building finishes, punchlist and final cleaning ongoing.	98%
June	Operational Testing completed at Digesters, Sludge Storage, Digester Gas, GBT and Centrifuge. System Testing ongoing at Solids and Odor Control facilities.	98%
July	System and Operational Testing completed. Punchlist activities ongoing.	98%

(1) As measured by '% Paid to Date' per WTD's monthly Construction Reports.

Analysis and Findings

Cost

Revised OMC Estimate

OMC's estimated costs at project completion have not changed since OMC published its 2011 Trend Report Review⁴ on July 14, 2011. Table 8 summarizes the costs at project completion as estimated by WTD's 2011 Trend Report and OMC's 2011 Trend Report Review.

Table 8: Estimated Costs at Project Completion (nominal \$million)

Project Component	WTD Baseline Budget	WTD 2011 Trend Report	OMC 2011 Estimate
	3% Infl. - 5% Infl		
Conveyance	\$1,020.6 - \$1,105.5	\$964.1	\$966.5
Treatment Plant	\$639.6 - \$684.4	\$885.1	\$886.1
Subtotal	\$1,660.2 - \$1,789.9	\$1,849.2	\$1,852.6

This OMC 2011 Estimate is the lifetime cost of the Brightwater Program, and excludes Known Disputed Costs.
This table is unchanged from the OMC 2011 Trend Report Review.

⁴ Full title of report: Oversight Monitoring Consultant Report – Review of Brightwater Cost Update, Current Conditions and Trends, January 2011

Known Disputed Costs

Table 9 summarizes Known Disputed Costs related to delay in the performance of the Central Tunnel contract as reported by OMC in the 2011 Trend Report Review, and adjusted for changes since the April 2011 publication of WTD's Trend Report.

Table 9: Summary of Known Disputed Costs, \$M

Disputed Cost (1)	OMC Trend Report Review	Adjustments since OMC Trend Report Review			Total
		Amount	Note		
King County Seeks Reimbursement for the Following Costs					
Construction Cost - Paid by WTD	\$78.6	\$9.6	(2)		\$88.2
Construction Cost - Contractual Obligation to Pay in Future	\$24.6	(\$6.0)	(3)		\$18.6
Non-Construction Costs	\$26.1	\$0.0	(4)		\$26.1
King County Claims - Total	\$129.3				\$132.9
King County Denies Obligation to Pay the Following Costs					
VPFK Counterclaim - Total	\$95.4	\$0.0			\$95.4

Notes:

- (1) The OMC adjusted amount was developed from publicly available data.
- (2) Increased to reflect BT-3C construction progress, incentives, and associated sales tax from 4/30/11 to 7/31/11.
- (3) Reduced to reflect BT-3C construction progress on the original scope and sales tax from 4/30/11 to 7/31/11. This is included in the \$9.6 million above. Does not include any disputed portion of JDC CO8 (BT-4C and in-situ tunnel lining). The disputed portion is not yet known, but is not expected to exceed \$7.5 million.
- (4) Includes costs already incurred by WTD and costs projected to be incurred.

OMC's estimate of King County Claims has increased by \$3.6 million since April 2011. This increase is mostly due to BT-3C incentives, which were not included in previous reports, because their magnitude was not known until they were earned. A portion of the increase is also due to invoiced costs associated with the connection (primarily ground freezing), which was not part of the originally contracted scope. The Known Disputed Costs will continue to change over time. The above summary does not include the following:

- BT-3C and BT-4C incentives that have not yet been earned. Combining BT-3C and BT-4C work, JDC has the potential to earn up to another \$1.89 million in incentives. The actual amount will depend on the date future milestones are met.
- Costs associated with the connection between the BT-3C and BT-3 tunnel boring machines (primarily ground freezing costs) beyond the \$5.5 million paid as of July 31, 2011.
- Portions of CO 8 work considered to be disputed. The amount is yet to be determined.
- Other future change orders that would be considered Known Disputed Costs.

The Known Disputed Costs (in Table 9) and the lifetime cost estimate (in Table 8) are not additive. Because they are by definition "disputed", the final set of costs, final amount, and determination of responsibility has not been established.

GC/CM Contract Considerations

As of August 30, 2011, the remaining buyout savings were approximately \$5.0 million. This has not changed substantially during 2011 and is only \$80,000 less than the December 2010 balance. At the end of the project, unused buyout savings will be returned to the County via a deductive change order.

Use of the Maximum Allowable Contract Cost (MACC) Contingency has remained fairly steady for the past two years, averaging approximately \$320,000 per month. As of July 31, 2011, there is \$2,236,194 of MACC Contingency remaining. At the end of the project, unused MACC Contingency is returned to the County via a deductive change order.

BT-3C Update

OMC has conducted monthly reviews of the BT-3C documentation that WTD provides to the Auditor's Office in accordance with the reporting requirements of the Executive's Declaration of Emergency waiver. The BT-3C Contract has progressed ahead of schedule despite complications including slower than projected ground freezing and damage to the TBM from a boulder during May 2011. Despite these issues, the mining portion of the project was completed on August 16, 2011, 21 days ahead of the baseline scheduled completion date of September 6, 2011.

JDC's baseline cost-loaded schedule estimated a reimbursable cost (cost excluding Home Office Overhead, Fee and lump sum equipment costs) of \$51.0 million. This cost did not include performance and safety incentives or the cost of the connection between the BT-3C and BT-3 tunnels.

For the scope of work included in the baseline schedule, actual costs are lower than the baseline costs. This remains true even after adding the cost of incentives earned by JDC. Invoiced reimbursable costs plus incentives are approximately 5% lower than projected as of July 31, 2011 in the baseline cost-loaded schedule.

The reimbursable cost of the ground freezing invoiced as of July 31, 2011 is \$5.5 million. WTD has estimated that the cost at completion for ground freezing will be approximately \$6.4 million.

Within the reimbursable expenses, Subcontractor and Material expenses have trended higher than projected in the cost-loaded baseline schedule, but labor expenses have been lower.

Table 10 shows the incentives associated with the JDC contract, including incentives associated with additional scope added via change orders. To date JDC has earned \$2.95 million in incentives. Remaining incentives to be earned include the incentive for the BT-3C Target Completion Date (March 5, 2012), BT-4C Completion (September 13, 2012), Substantial Completion (March 29, 2013), and the Contractor and Employee Safety Incentives.

Table 10: Incentive Status

Incentives Earned to Date	Original Scope	Revised w/ CO4 (Ground Freeze)	Revised w/ CO8 (BT-4C)	Status
Milestone 1 (Start of Mining)	✓			\$500,000 Paid.
Milestone 2 (Mine to Connection)	✓			\$2,000,000 Paid.
Milestone 3 (Start Phase 1 Ground Freeze)		✓		\$400,000 Paid.
BT-3C Target Completion	✓			Not Yet Earned. \$500,000 plus \$15,000/day early.
Milestone 5 (BT-4C)			✓	Not Yet Earned. \$50,000 plus \$25,000/day early.
Substantial Completion			✓	Not Yet Earned. \$50,000 plus \$10,000/day early.
Contractor Safety Incentives	✓			Not Yet Earned. Now capped at \$240,000.
Employee Safety Incentives	✓			\$54,858 Paid to Date. Now capped at \$114,133.
Incentive Cap	\$3,700,000	\$4,000,000	\$4,790,000	\$2.95M Earned Through 7/31/11

WTD has hired MRW Advisory, LLC (MRW) to audit JDC's pay requests. MRW issues reports on a periodic basis; its August 4, 2011 report was its fifth. To date, MRW has reported a total of \$111,817 in questionable billings (compared with \$57.6 million in total JDC billings through the billing date of May 15, 2011). Of that \$111,817, JDC will process credits of \$30,924, WTD has deducted \$55,448 from payments to JDC, WTD and MRW have agreed to no longer question \$24,181 of the questioned costs after further discussion with JDC personnel, and the status of \$1,264 of the questioned costs is pending additional documentation from JDC.

Change Order Status

The most recent claim and change order data is from WTD's July 31, 2011, construction reports, and is as follows:

- Conveyance construction is approximately 92 percent complete, measured as percent of contract value earned by construction contractors. The sum of executed Conveyance change orders is approximately 12.5 percent of the construction contract value.
- Treatment Plant construction progress is approximately 96 percent complete, and 3.4 percent of the construction contract value.

Table 11 summarizes, for each of the major construction contracts, construction progress described by payments to contractors, the amount of executed change orders, and change orders as a percent of amount paid to the contractor.

Table 11:
Construction Progress and Change Order Summary by Contract as of July 31, 2011

Major Construction Contract	Amount Paid to Contractor \$M, (1,2)	Percent Construction Complete (1,2)	Executed Change Orders (2)	
			\$M	% of Paid
Marine Outfall	\$29.8	100%	\$2.2	7%
West Tunnel (JCT)	\$102.0	95%	\$15.4	15%
BT3C (3)	\$64.5	87%	\$5.3	8%
Central Tunnel (4)	\$208.0	92%	\$32.9	16%
East Tunnel	\$138.1	100%	\$7.3	5%
IPS	\$94.8	89%	\$14.4	15%
Treatment Plant - Liquids	\$290.0	94%	\$8.9	3%
Treatment Plant - Solids	\$170.6	98%	\$7.0	4%

(1) Measured by Milestone-Based Payments to Contractors. Amount paid divided by sum of original contract value plus executed change orders. Central Tunnel paid to date includes amounts paid under Conditional Change Orders 13, 15 and 18, and the ultimate payment responsibility has yet to be determined.

(2) As of July 31, 2011. Differs from WTD Monthly Construction reports because deductive change orders which remove scope are not included when calculating the amount of change orders as a percent of amount paid.

(3) Includes \$2.9 million in incentive payments.

(4) Includes Central Tunnel \$20 million conditional change orders.

Table 11 shows that executed change orders, as a percent of the amount paid to contractors, are below the percentages initially estimated by WTD in previous contingency projections. The three contracts with the highest percentage of change orders are West Tunnel, Central Tunnel, and IPS. The following explains the sources of the higher percentages.

- West Tunnel, where a \$4.8 million change order was executed to cover certain activities related BT-3 completion prior to execution of the BT-3C contract. This change order is considered a Known Disputed Cost.
- Central Tunnel, where executed change orders include \$20 million associated with conditional change orders, that are Known Disputed Costs.
- IPS, where the majority of the change orders are either :
 1. Known Disputed Costs, including a \$5.7 million change order for the Influent Structure redesign to allow for Influent Structure construction in advance of BT-2 mining completion.
 2. Related to impacts from the East Tunnel construction.

Contingency

WTD reported a \$33.9 million conveyance contingency in the 2011 Trend Report. OMC estimates that as of July 31, 2011, approximately \$32.2 million remains.

Of WTD's \$10.6 million treatment plant contingency shown in the 2011 Trend Report, approximately \$4.6 million remains as of July 31, 2011. The majority of the contingency use between April 30, 2011 and July 31, 2011 has been on the Liquids (Hoffman) contract, with the largest individual items being for Portal 46 Access delays.

OMC has not changed the conclusion it expressed in its 2011 Trend Report Review, which is that WTD's remaining contingency will likely be sufficient to cover cost risks in non-disputed portions of the Brightwater project.

Schedule

The projected commissioning schedule is shown in Table 12. It shows the schedule as of the March 2010 Commissioning Alternatives Report, the previous OMC Quarterly Report, the start of this quarter, and the end of this quarter.

Initiation of wastewater treatment commenced on September 6th. This represents a three-week schedule delay from the August 15, 2011 date previously reported. The delay is associated with resolving issues identified during the clean water recirculation testing.

The date to begin full commissioning is now estimated to be seven months later than the preliminary schedule used in the Commissioning Alternatives Report in March 2010. The Commissioning Alternatives Report was prepared before the BT-3C contractor's baseline schedule was prepared. The commissioning schedule as of September 12, 2011 reflects the schedule changes associated with JDC CO 8.

Table 12: Projected Commissioning Schedule

	Date of Activity Completion			
	3/30/10 Commissioning Alternatives Report	Prev. Qtly Report 7/2/10	As of 4/1/11	As of 9/12/11
Start Interim Commissioning	8/15/2011	8/15/2011	8/22/2011	9/6/2011 (actual)
BT-2 Lining		7/19/2011	7/11/2011	8/17/2011 (actual)
BT-3 Lining		1/25/2012	2/22/2012	2/20/2012
N. Kenmore Portal		6/27/2012	8/10/2012	8/8/2012
BT-3C Mining		9/6/2011	8/27/2011	8/16/2011 (actual)
BT-4 Lining/Piping		2/28/2012	3/15/2012	8/14/2012
Sampling Facility and Tie-In		6/29/2012	8/30/2012	9/13/2012
Start Full Commissioning	2/15/2012	6/29/2012	8/31/2012	9/13/2012

Risk and Issues

WTD issues weekly Risk Logs that classify identified risks based on their impact and probability. The following list summarizes open risk items with a rating of 'High'⁵ probability for occurrence, according to the Risk Logs as of September 19, 2011.

High Probability Conveyance Risk Items: None identified

High Probability Treatment Plant (TP) Risk Item:

⁵ High probability is defined as a greater than 75% chance of occurrence.

- Leaks are detected in force mains or effluent piping between the IPS and Plant. The remaining risk pertains to pipe deflection in a 180-foot section of the 66” force main at the Treatment Plant. Pipe repairs are needed because recent inspection found unacceptable pipe deformation in a section of pipe that now has up to 50 feet of landscaping earthwork above it. WTD has retained an outside expert to observe the excavation, and expects that the pipe repair will be completed in the first quarter of 2012.

Another emerging issue is the need to address surge issues at the Influent Pump Station. Demand has been made upon the project design engineers to identify the causes, to provide design alternatives to correct the problem, and to cover the cost of this work. This item was entered into the Risk Log on September 22 and reported out in subsequent risk registers.