

- Engineering Services Key Activities for the Month of January 2008

## **Summary**

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- Recent Events:
  - Santa Monica Feeder Relocation Program
- Construction Contract Updates
- Supply and Delivery Reliability:
  - Central Pool Augmentation Tunnel Geotechnical Feasibility
  - Dam Rehabilitation and Safety Improvements
  - Inland Feeder Program
  - Rialto Pipeline Improvements
  - Skinner Water Treatment Plant Expansion No. 4
- Infrastructure Reliability:
  - Conveyance and Distribution System Rehabilitation Program
  - Diemer Improvements Program
  - Reservoir Cover Replacement Program
- Water Quality:
  - Distribution System – Treated Water Cross Connection Prevention Program
  - Oxidation Retrofit Program
- Regulatory:
  - Chlorine Containment and Handling Facilities

## **Attachments**

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Monthly Progress Report of Construction and Procurement Contracts for December 2007.

## **Detailed Report**

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This report details key engineering activities for the month of January 2008.

## Board Report (Engineering Key Activities Report for the month of January 2008)

### **Recent Events:**

**Santa Monica Feeder Relocation Program:** In October 2003, Metropolitan's Board authorized entering into an agreement with the City of Los Angeles to relocate a portion of the Santa Monica Feeder as part of the City's Santa Monica Boulevard Transit Parkway Project. The Santa Monica Feeder is a cast-iron pipeline which was constructed in 1941. The parkway improvements would lead to increased traffic loading and the potential for pipeline failure. The relocation was an opportunity to reduce the risk of pipeline failure. Under Metropolitan's agreement with the City, the City would perform all construction and construction management activities related to the feeder relocation and Metropolitan would reimburse the City for these costs. At the beginning of construction in October 2003, the City estimated that construction costs would be \$7.7 million. Upon project completion in 2007, the final invoice from the City was \$8.25 million. Staff has reviewed and validated all costs. The increased costs were attributed by the City to utility interferences, relocation of above ground utility structures, removal and disposal of hazardous materials, and increased traffic controls. Metropolitan has issued final payment to the City and closed out the project.



Figure 1: Before and after views of intersection of Santa Monica Boulevard and Beverly Boulevard

### **Construction Contract Updates**

**Completed Construction Contract:** The following contract was completed this month:

- Lakeview Pipeline Cathodic Protection

**Supply and Delivery Reliability:**

**Central Pool Augmentation (CPA) and Tunnel Feasibility:** In June 2006, Metropolitan’s Board authorized geotechnical and geological investigations along the CPA Tunnel alignment through the Cleveland National Forest, in order to assess the economic feasibility of the approved tunnel alignment. The geotechnical investigation consists of a field exploration phase and a data analysis phase, both of which were completed in December 2007.

A draft report on the field investigations and laboratory testing associated with the CPA tunnel feasibility study was completed in December 2007. The preliminary results of the investigation (Figure 2) determined that the rock mass in the vicinity of the tunnel is weak with very low permeability and a high potential for squeezing. The low permeability indicates that water intrusion into the tunnel will be on the low side, while the squeezing ground indicates that the tunnel boring machine design and mining methods will have to be modified to handle this condition. A cost estimate is currently being prepared in order to complete the feasibility analysis of the tunnel. Staff expects to complete a tunnel feasibility report in late February and to discuss the findings with the Board in May 2008.



Figure 2: A core sample taken from Boring C-2 on the CPA tunnel alignment

Board Report (Engineering Key Activities Report for the month of January 2008)

**Supply and Delivery Reliability (cont.):**

**Dam Rehabilitation and Safety Improvements:** This program was established to assess the safety of Metropolitan’s dams and spillways, and to upgrade the dam surveillance-monitoring program (Figure 3). The program currently contains four projects, of which two have been completed. Recent activities include the following:

- Spillway Capacity Study – This project examined four of the twenty-six spillways which are associated with Metropolitan’s dams under the jurisdiction of the state Division of Safety of Dams. The four spillways examined are located at Lake Mathews, Lake Skinner, Eagle Mountain and Iron Mountain reservoirs. These spillways were examined due to changes over time in reservoir operating conditions or increased development within their watersheds. The other twenty-two spillways have not experienced similar changes and did not require reassessment. The studies of Lake Mathews and Lake Skinner were completed in February 2007, and have determined that spillway capacities are adequate. Assessments of spillway capacities at Iron Mountain and Eagle Mountain Reservoirs were completed in December 2007, and have been determined to be adequate. The Spillway Capacity Study is now complete.
- DVL Owen (West) Dam Riprap Study – Minor displacement of the dam’s riprap slope protection on Owen Dam’s upstream slope has been observed. A study was undertaken to assess the condition of the riprap and any potential impacts to the dam integrity. The study was completed in January 2008. Staff will return to the Board to request authorization for preliminary design of repairs in June 2008.
- Seismic Assessment Study – This study is being conducted in four phases to provide a systematic, rational and cost-effective assessment of the seismic safety of all Metropolitan dams. Phases 1 and 2 evaluated Metropolitan’s twenty-six dams and were completed in October 2006. Of the 26 dams evaluated, it was determined that 11 dams would not be subject to seismic instability and no further study or action is warranted. Phase 3 includes limited field and laboratory investigations and simplified analyses of the 15 remaining dam sites. The Phase 3 effort will be completed by April 2009. Phase 3 field investigations of the Orange County Reservoir were completed (Figure 3) in January 2008. Laboratory testing of samples taken at Orange County Reservoir are scheduled to commence in February 2008. Based on the results of the Phase 3 study, a more detailed Phase 4 study may be needed. Phase 4 efforts would include dynamic finite element analyses, more extensive field investigations, and laboratory testing.

The program is on schedule to be completed in fiscal year 2008/09 and is within budget.



Figure 3: Orange County Reservoir

Board Report (Engineering Key Activities Report for the month of January 2008)

**Supply and Delivery Reliability (cont.):**

**Inland Feeder Program:** The program consists of 44 miles of pipeline and tunnels that will enable Metropolitan to convey up to 1,000 cubic feet per second of State Water Project supplies from Devil Canyon’s Second Afterbay to Diamond Valley Lake. Eight of nine construction contracts have been completed. Recent activities include the following:

- Arrowhead East Tunnel – In mid-November, the contractor encountered a zone of very weak rock in front of the tunnel boring machine (TBM). An extensive grouting program, followed by short and measured mining cycles, allowed the TBM to advance 180 feet in December with another 220 feet mined through January 16th. Recently, more competent rock has been encountered, and as of the first week in January, daily mining production rates are increasing. Staff anticipates that the TBM hole-through into the completed section of the Arrowhead East Tunnel will occur in February or March 2008. The contractor completed installation of a ventilation line and utilities from the City Creek tunnel portal to the steel bulkhead that is 8,000-feet inside the tunnel (Figure 4). Efforts are now underway to drain the water from behind the bulkhead to prepare to demolish the bulkhead in January. The total length of tunnel mined through January 16th is 21,800 feet (97 percent of the tunnel’s length), with 658 feet remaining.
- Arrowhead West Tunnel – TBM mining continued in good ground and excellent mining progress continued for the month of December. The TBM advanced 720 feet in December and another 260 feet through January 16th. The total length of tunnel mined through January 16th is 15,990 feet (80 percent of the tunnel’s length). In mid-January, the contractor successfully completed a planned eight-day replacement of the TBM’s screw auger and performed significant repairs to the auger barrel, in order to improve wearability.

The Arrowhead Tunnels are presently about six months ahead of schedule. Construction of the tunnels is anticipated to be completed by early 2010.



Figure 4: Installation of the ventilation lines in the City Creek portion of Arrowhead East Tunnel

Board Report (Engineering Key Activities Report for the month of January 2008)

**Supply and Delivery Reliability (cont.):**

**Rialto Pipeline Improvements:** This program will enable continued operation of the Rialto Pipeline for isolated reaches during scheduled or emergency repairs. This program is being implemented in three phases. Recent activities include the following:

- Phase 1 – Construction of two isolation valve structures within the cities of Rancho Cucamonga and Claremont was completed in July 2007. Two 96-inch sectionalizing valves were fabricated and delivered to the Weymouth plant for storage in June 2007. The valves will be installed in the structures during Phase 2.
- Phase 2 – Construction of the bulkhead isolation structure in the city of Upland and installation of the sectionalizing valves in Phase 1 structures is approximately 30 percent complete. Figure 5 shows excavation work at the Upland site. A shutdown for the tie-in work and installation of the valves is scheduled for February 4-10, 2008.
- Phase 3 – Final design of the Live Oak Pumpback System is 15 percent complete and is scheduled to be completed by August 2008.

The program is on schedule to be completed in fiscal year 2009/10 and is within budget.



Figure 5: Excavation underway at Site No. 2 in the City of Upland

Board Report (Engineering Key Activities Report for the month of January 2008)

**Supply and Delivery Reliability (cont.):**

**Skinner Water Treatment Plant Expansion No. 4:** This program includes construction of a new 110-mgd water treatment module (Module No. 7) and supporting facilities. The work was completed under multiple construction contracts.

- Washwater Reclamation Plant No. 3 was completed in December 2006.
- Module No. 7 was placed into service in July 2007 and provides an additional 110 mgd of treatment capacity at the Skinner plant.
- The Chemical Systems Modifications construction project was completed in October 2007. Chemical systems are being commissioned sequentially and placed into service.

The overall program is on schedule and is within budget.



Figure 6: Skinner Reclaimed Washwater Pump Station

Board Report (Engineering Key Activities Report for the month of January 2008)

**Infrastructure Reliability:**

**Conveyance and Distribution System Rehabilitation Program:** This program was initiated to maintain reliable deliveries through specific repair and rehabilitation projects on Metropolitan’s pipelines, reservoirs, and control structures. The program currently contains 75 projects, of which 31 have been completed. Recent activities include the following:

- Lake Skinner East Bypass Screening Rehabilitation – Final design is 60 percent complete and is scheduled to be completed by April 2008.
- Olinda Pressure Control Facility Pavement Repair – Final design is 90 percent complete and is scheduled to be completed by February 2008.
- Hydroelectric Plants Fire Suppression Modification – Final design is 90 percent complete and is scheduled to be completed by January 2008.
- Lakeview Pipeline Cathodic Protection – Construction is complete and the Notice of Completion was issued on January 4, 2008 (Figure 7).

The program is on schedule to be completed in fiscal year 2011/12 and is within budget.



Figure 7: Installation of casing to connect anodes for cathodic protection of Lakeview pipeline



Board Report (Engineering Key Activities Report for the month of January 2008)

**Infrastructure Reliability (cont.):**

**Diemer Improvements Program:** This program was initiated to maintain reliability and improve operating efficiency of the Diemer plant through specific improvements projects. The program currently contains 29 projects, of which 9 have been completed. Recent activities include the following:

- Hatch Covers Replacement – A request to the Board to award a construction contract is scheduled for March 2008.
- Washwater Tank Pump Replacement – Construction is complete and commissioning is underway.
- Finished Water Reservoir Seismic Upgrade – Preliminary design is 90 percent complete and is scheduled for completion by January 2008. Final design is scheduled to commence in April 2008.
- East Washwater Tank Seismic Study – This study is 90 percent complete and is scheduled for completion in February 2008 (Figure 8).
- Filter Outlet Line Slope Remediation – This study is 70 percent complete and is scheduled for completion in May 2008, pending additional rock strength analysis.

The program is on schedule to be completed in fiscal year 2010/11 and is within budget.



Figure 8: Diemer East Washwater Tank

**Infrastructure Reliability (cont.):**

**Reservoir Cover Replacement Program:** This program consists of replacement of the floating covers, installation of liners, and related repairs at the Orange County, Palos Verdes, and Skinner Finished Water Reservoirs. The existing floating covers at these facilities have reached the end of their useful lives and require replacement. In addition, modifications to the cover at Jensen Finished Water Reservoir No. 2 are planned to improve reservoir operations.

- Orange County Reservoir – Geotechnical investigations and inlet channel hydraulic modeling have been completed. Final design of the replacement floating cover and reservoir liner is being coordinated with the California Department of Public Health and Division of Safety of Dams. Final design is 75 percent complete and is scheduled to be completed by May 2008.
- Skinner Finished Water Reservoir – Final design for floating cover replacement is 50 percent complete and is scheduled to be completed by May 2008.
- Palos Verdes Reservoir – Final design for floating cover replacement is scheduled to commence in May 2008.
- Jensen Finished Water Reservoir No. 2 – An assessment of the floating cover was completed in December 2007. Modifications of the existing floating cover are recommended to allow reservoir operation at maximum plant flow without damaging the cover. Preliminary design for the existing floating cover inlet modification is scheduled to commence in February 2008 (Figure 9).

The program is on schedule to be completed by fiscal year 2009/2010 and is within budget.



Figure 9: Existing floating cover at Jensen Finished Water Reservoir No. 2

**Water Quality:**

**Distribution System – Treated Water Cross Connection Prevention Program:** This program will relocate air release and vacuum valves on treated-water feeders from subsurface vaults to above-ground locations to eliminate potential cross connections. The valves at 160 sites have been relocated to date, with another 300 sites scheduled to be modified under 12 separate construction contracts.

The initial three construction contracts, which address 74 sites, are approximately 83 percent complete and are scheduled to be completed by February 2008. Final design of Contracts Nos. 4, 5, and 6, which address an additional 75 sites, has been completed. The projects were advertised for bids in January and February 2008. The final design of Contracts Nos. 7 through 12, which address the remaining 151 sites, is 50 percent complete and is scheduled to be completed in late 2008.

The program is on schedule to be completed in fiscal year 2012/13 and is within budget.



Figure 10: Air release and vacuum valve and enclosure

**Water Quality (cont.):**

**Oxidation Retrofit Program:** This program was established to reduce the level of disinfection by-products in the finished water at all five of Metropolitan’s treatment plants in order to meet state and federal drinking water regulations and to remove blend or plant capacity restrictions at the three blend plants. Recent activities include the following:

- Mills Plant – A construction contract is underway to add two new ozone contactors to upgrade the plant’s ozonation system capacity to 326 mgd. The contractor has mobilized and site work has commenced. Construction of Contactors Nos. 3 & 4 is approximately 20 percent complete and is scheduled to be completed in June 2009. Installation of additional ozone equipment is scheduled to be completed by September 2009.
- Jensen Plant – The plant’s ozone system was fully operational in July 2005.
- Skinner Plant – Construction is approximately 72 percent complete and is scheduled to be completed in early 2009 (Figure 11). A request to the Board to authorize completion activities for the major construction program at the Skinner plant is scheduled for February 2008.
- Weymouth Plant – As discussed with the Board in November 2007, this program is being staged across multiple construction contracts. The first stage will reroute the Weymouth plant’s 65-year old inlet conduit from below the Administration Building to the location of the planned ozone contactors, and will upgrade the rapid mix system. In December 2007, the Board authorized final design of the new plant inlet conduit. Design is scheduled for completion in August 2008, while the Weymouth ozone facilities are scheduled to be completed by 2014. Rehabilitation of the plant’s electrical system will also commence prior to construction of the ozone facilities.
- Diemer Plant – Construction of the ORP site preparation work is approximately 92 percent complete and is scheduled for completion in February 2008. Construction of the Vehicle Maintenance Center is complete and an occupancy permit was issued. Construction of Phase I of the Chemical Tank Farm Improvements is complete and the sulfuric acid system is on line. Final design of the ozone contactors and Ozone Generation Building is complete, and the project will be advertised for bids in February 2008.



Figure 11: Skinner ORP inlet control structure construction

Board Report (Engineering Key Activities Report for the month of January 2008)

**Regulatory:**

**Chlorine Containment and Handling Facilities:** This program includes design and construction of facilities to handle and contain chlorine to minimize the possibility of a chlorine leak. Recent activities include the following:

- Diemer and Weymouth Plants – The Diemer and Weymouth projects were completed in 2002 and 2005, respectively, and are fully operational.
- Skinner Plant – Start-up testing has been completed and the new facilities will commence service in early 2008.
- Jensen Plant – Construction of the chlorine containment facilities is 58 percent complete. Figure 12 shows the chlorine scrubber facility.
- Mills Plant – Construction and start-up testing of the southern portion of the chlorine containment facilities are complete. Construction of the northern portion has commenced but the project completion date has been extended to June 2008 due to contractor delays. Overall, the project is 75 percent complete.

The program will be completed in fiscal year 2010/11 and is within budget.



Figure 12: Construction of the foundation for the Jensen scrubber pad units



**MONTHLY PROGRESS REPORT  
OF CONSTRUCTION AND PROCUREMENT CONTRACTS  
December 2007**  
(Progress Through December 25, 2007)

<b>Summary of Progress</b>		
	Construction	Related Procurement
Number of Contracts	18	4
Total Bid Amount of Contracts in Progress	\$ 812,479,570	\$ 45,501,420
Number of Contracts Awarded This Month	0	0
Total Bid Amount of Contracts Awarded This Month	\$ -	\$ -
Contract Gross Earnings This Month*	\$ 13,160,369	\$ -
<p><i>*Note: Earnings reflected in this report represent the value of the work performed by the contractor through the 25th day of the month. Earnings include contract retention and other similar deductions from amounts earned by the contractor but otherwise required to be withheld by Metropolitan by law or by contract. Further, payments are made in the month following the performance of the work. For these reasons, contract payments reflected in Metropolitan's financial system will be less than the earnings shown in this report until the final payment has been made to the contractor.</i></p>		

**Contracts Awarded This Month**

No contracts were awarded this month.

**Contracts Completed This Month**

Contract No. 1652, Lakeview Pipeline Cathodic Protection, was completed on December 7, 2007, and the notice of completion was recorded on January 3, 2008.

**Summaries/Status of Contracts**

The summaries/status of current construction and construction-related procurement contracts are provided on the following pages.

**Summary of Construction Contracts (Page 1 of 3)**

Cont. No.	Spec. No.	Feature	Contractor	Contract Amount	Earnings This Month	Earnings To Date	Net Extra Work To Date	Start Date	Contract Completion Date	Estimated Completion Date	Estimated Percent Complete
		<b>Inland Feeder Contract</b>		Projected Cost to Complete							
1542	1437	Arrowhead Tunnels Project <sup>1</sup>	J. F. Shea Const Inc/Kenny Const Co., JV	\$ 397,000,000	\$ 5,065,175	\$ 258,074,553	N/A	8/2/02	9/15/10	9/10	65%
		<b>Inland Feeder Totals</b>		<b>\$ 397,000,000</b>	<b>\$ 5,065,175</b>	<b>\$ 258,074,553</b>	<b>\$ -</b>				
		<b>Miscellaneous Contracts</b>		Bid Amount							
1607	1504	Robert B. Diemer Water Treatment Plant Entrance Relocation, Vehicle Maintenance Center, and Solids Handling Facilities	Brutoco Engineering & Construction, Inc.	\$ 29,260,000	\$ (30,588)	\$ 29,990,567	\$ 747,667	6/13/05	6/15/07	1/08 <sup>2</sup>	99%
1609	1483	Robert A. Skinner Water Treatment Plant Oxidation Retrofit Program and Washwater Reclamation Plant No. 3	Shimmick Construction/Obayashi Corp. JV	\$ 184,650,000	\$ 2,768,984	\$ 136,013,640	\$ 3,602,442	7/28/05	1/15/09	1/09	72%
1620	1495	Robert B. Diemer Water Treatment Plant Oxidation Retrofit Program Chemical System Upgrades	Brutoco Engineering & Construction, Inc.	\$ 13,960,000	\$ -	\$ 14,408,404	\$ 448,404	1/13/06	8/14/07	1/08	99% <sup>3</sup>
1628	1517	Henry J. Mills Water Treatment Plant Chemical System Upgrades	J. R. Filanc Construction Co., Inc.	\$ 19,914,600	\$ 246,880	\$ 14,657,974	\$ 261,400	5/2/06	2/20/08	2/08	73%
1631	1535	Diemer Water Treatment Plant Site Preparation for Oxidation Retrofit Program	Kiewit Pacific Co.	\$ 70,516,455	\$ 704,425	\$ 69,094,643	\$ 820,414	5/15/06	3/10/08	3/08	97%
1633	1516A	Joseph Jensen Water Treatment Plant Jensen Chlorine Containment and Fluoride Project	Brutoco Engineering & Construction, Inc.	\$ 19,988,000	\$ 727,890	\$ 12,759,840	\$ 484,769	8/29/06	7/21/08	7/08	62%

<sup>1</sup> Earnings for this project are as of November 25, 2007.

<sup>2</sup> Time extension pending.

<sup>3</sup> Contract substantially complete. Punch list work remains.



Summary of Construction Contracts (Page 2 of 3)

Cont. No.	Spec. No.	Feature	Contractor	Contract Amount	Earnings This Month	Earnings To Date	Net Extra Work To Date	Start Date	Contract Completion Date	Estimated Completion Date	Estimated Percent Complete
		<b>Miscellaneous Contracts</b>		Bid Amount							
1636	1546A	F. E. Weymouth Water Treatment Plant Perimeter Improvements, Phase I	Pima Corp. dba Advanced Construction	\$ 2,648,710	\$ -	\$ 2,716,421	\$ 77,211	10/24/06	10/31/07	1/08	99% <sup>3</sup>
1640	1542	Air Release and Vacuum Valve Relocation for Treated Water Pipelines Construction Package No.1	Steve P. Rados, Inc.	\$ 2,806,400	\$ 630,087	\$ 2,759,400	\$ -	12/18/06	12/27/07	1/08	98%
1642	1543	Air Release and Vacuum Valve Relocation for Treated Water Pipelines Construction Package No. 2	PPC Construction, Inc.	\$ 1,195,115	\$ 250,002	\$ 901,593	\$ -	1/2/07	10/26/07	2/08 <sup>2</sup>	75%
1643	1544	Air Release and Vacuum Valve Relocation for Treated Water Pipelines Construction Package No. 3	Abhe & Svoboda, Inc.	\$ 1,678,240	\$ -	\$ 1,632,250	\$ -	1/2/07	10/25/07	1/08 <sup>2</sup>	97%
1646	1547	F. E. Weymouth Water Treatment Plant Perimeter Improvements, Phase II	Pima Corp. dba Advanced Construction	\$ 413,240	\$ 83,850	\$ 366,090	\$ 3,000	4/19/07	1/28/08	1/08	88%
1649	1559	F. E. Weymouth Water Treatment Plant Operations and Maintenance Building	Brutoco Engineering & Construction, Inc.	\$ 9,030,000	\$ 433,832	\$ 2,530,004	\$ -	7/13/07	6/5/08	6/08	28%
1650	1549	Henry J. Mills Water Treatment Plant Ozone Contactors 3 and 4	C.W. Roen Construction Co.	\$ 14,556,000	\$ 225,600	\$ 2,713,200	\$ -	7/25/07	5/26/09	5/09	19%
1651	1589	Perris Valley Pipeline, North Reach	W.A. Rasic Construction Co., Inc.	\$ 39,250,000	\$ 1,766,362	\$ 9,428,596	\$ 4,180	8/7/07	8/14/08	8/08	24%

<sup>2</sup>Time extension pending.

<sup>3</sup>Contract substantially complete. Punch list work remains.





Summary of Construction Contracts (Page 3 of 3)

Cont. No.	Spec. No.	Feature	Contractor	Contract Amount	Earnings This Month	Earnings To Date	Net Extra Work To Date	Start Date	Contract Completion Date	Estimated Completion Date	Estimated Percent Complete
		<b>Miscellaneous Contracts</b>		Bid Amount							
1652	1587	Lakeview Pipeline Cathodic Protection	Farwest Corrosion Control Company	\$ 83,200	\$ 20,800	\$ 83,200	\$ -	8/20/07	12/7/07	12/07	100%
1653	1568	CRA Reliability Program Phase 6	Abhe & Svoboda, Inc.	\$ 3,382,110	\$ 7,570	\$ 35,305	\$ -	10/8/07	5/7/09	5/09	1%
1654	1565	Rialto Pipeline Improvements Phase II	Brutoco Engineering & Construction, Inc.	\$ 2,147,500	\$ 259,500	\$ 520,500	\$ -	10/8/07	9/4/08	9/08	24%
				<b>\$ 415,479,570</b>	<b>\$ 8,095,194</b>	<b>\$ 300,611,627</b>	<b>\$ 6,445,307</b>				
<b>Total Value of Construction Contracts in Progress</b>				<b>\$ 812,479,570</b>	<b>\$ 13,160,369</b>	<b>\$ 558,686,180</b>	<b>\$ 6,445,307</b>				





**Summary of Construction and Procurement Contracts Completed This Month Pending Final Payment**

Cont. No.	Spec. No.	Feature	Contractor	Bid Amount	Estimated Final Earnings	Estimated Total Net Value of Extra Work	Date Work Accepted	Date Notice of Completion Recorded	Date Final Payment Due
1652	1587	Lakeview Pipeline Cathodic Protection	Farwest Corrosion Control Company	\$ 83,200	\$ 83,200	\$ -	12/7/07	1/3/08	2/5/08

**Summary of Procurement Contracts**

Cont. No.	Spec. No.	Feature	Contractor	Bid Amount	Earnings This Month	Earnings to Date	Starting Date	Delivery Date	Remarks
1582	1480	Oxygen/Ozone System Equipment for the Robert A. Skinner Water Treatment Plant Oxidation Retrofit Program	Ozonia North America	\$ 8,409,000	\$ -	\$ 6,196,004	6/22/04	11/30/08	Payments on this contract are made quarterly
1622	1515A	Oxygen/Ozone System Equipment for the Robert B. Diemer and F. E. Weymouth Water Treatment Plants Oxidation Retrofit Program	Ozonia North America	\$ 15,733,300	\$ -	\$ 1,406,101	2/2/06	6/3/10	Payments on this contract are made quarterly
1645	1547	Steel Pipe and Fittings for Perris Valley Pipeline	Northwest Pipe Company	\$ 17,955,170	\$ -	\$ 10,291,057	3/5/07	11/1/08	
1655	1604	Henry J. Mills Water Treatment Plant Ozone System Reliability Upgrade Equipment	Ozonia North America	\$ 3,403,950	\$ -	\$ -	1/17/08	8/17/09	Payments on this contract are made quarterly
<b>Total Value of Procurement Contracts in Progress</b>				<b>\$ 45,501,420</b>	<b>\$ -</b>	<b>\$ 17,893,162</b>			


<p>Contract No. 1542 Specifications No. 1437 Contractor: J. F. Shea Const Inc/Kenny Const Co., JV</p>	<p><b>Inland Feeder Program Arrowhead Tunnels Project</b></p>	
<p><b>Scope of Work:</b> The project consists of purchasing two tunnel boring machines (TBMs); excavating two 12-foot interior finished diameter tunnels; constructing three portal structures; furnishing and installing a precast concrete segmental liner and a final liner for the Arrowhead West tunnel. Project modified to a cost reimbursable contract effective April 26, 2006.</p>		
<p><b>At a Glance:</b> Estimated Percent Complete <b>65%</b> Estimated Completion Date <b>September 2010</b></p>		
<p><b>Details:</b> Projected Cost to Complete <b>\$397,000,000</b> Earnings To Date <b>\$258,074,553 *</b> Earnings This Month <b>\$5,065,175 *</b></p>		
<p>Contract Start <b>8/2/02</b></p>		
<p>Contract Completion <b>9/15/10</b></p>		
<p>Installation of ventilation and utility lines in existing City Creek Tunnel</p>		
<p>Contract No. 1607 Specifications No. 1504 Contractor: Brutoco Engineering &amp; Construction, Inc.</p>	<p><b>Robert B. Diemer Water Treatment Plant Entrance Relocation, Vehicle Maintenance Center, and Solids Handling Facilities</b></p>	
<p><b>Scope:</b> The work consists of construction of gravity thickeners; a solids dewatering facility building; a truck loading facility; elevated solids storage hoppers; a pump station; vehicle maintenance building; and entrance gate facilities.</p>		
<p><b>At a Glance:</b> Estimated Percent Complete <b>99%</b> Percent Extra Work <b>2.6%</b> Estimated Completion Date <b>January 2008</b></p>		
<p><b>Details:</b> Bid Amount <b>\$29,260,000</b> Earnings To Date <b>\$29,990,567</b> Net Extra Work To Date <b>\$747,667</b> Earnings This Month <b>(\$30,588)</b> Net Extra Work This Month <b>(\$59,088)</b></p>		
<p>Contract Start <b>6/13/05</b></p>		
<p>Duration in Working Days <b>350</b></p>		
<p>Contract Completion <b>6/15/07 **</b></p>		
<p>Inspection of emergency generator by Orange County Fire Authority</p>		

\*Earnings for this project are as of November 25, 2007.

\*\*Time extension pending.

Contract No.	1609
Specifications No.	1483
Contractor:	Shimmick Construction/Obayashi Corp. JV
<b>Scope:</b> The work consists of construction of buildings and water treatment structures, washwater reclamation plant, chemical and liquid oxygen facilities, cooling water pump station, power substation, switchgear building, and associated work.	
<b>At a Glance:</b>	
Estimated Percent Complete	<b>72%</b>
Percent Extra Work	<b>2.0%</b>
Estimated Completion Date	<b>January 2009</b>
<b>Details:</b>	
Bid Amount	<b>\$184,650,000</b>
Earnings To Date	<b>\$136,013,640</b>
Net Extra Work To Date	<b>\$3,602,442</b>
Earnings This Month	<b>\$2,768,984</b>
Net Extra Work This Month	<b>\$151,623</b>
Contract Start	<b>7/28/05</b>
Duration in Working Days	<b>865</b>
Contract Completion	<b>1/15/09</b>


**Robert A. Skinner Water Treatment Plant  
Oxidation Retrofit Program  
and Washwater Reclamation Plant No. 3**



Preparation for paving activities


Contract No.	1620
Specifications No.	1495
Contractor:	Brutoco Engineering & Construction, Inc.
<b>Scope:</b> The work consists of demolition of existing washwater reclamation facility; construction of sulfuric acid feed and storage system and three other chemical storage tanks; and installation of chemical trenches and chemical lines.	
<b>At a Glance:</b>	
Estimated Percent Complete	<b>99%</b>
Percent Extra Work	<b>3.2%</b>
Estimated Completion Date	<b>January 2008</b>
<b>Details:</b>	
Bid Amount	<b>\$13,960,000</b>
Earnings To Date	<b>\$14,408,404</b>
Net Extra Work To Date	<b>\$448,404</b>
Earnings This Month	<b>\$0</b>
Net Extra Work This Month	<b>\$0</b>
Contract Start	<b>1/13/06</b>
Duration in Working Days	<b>270</b>
Contract Completion	<b>8/14/07 *</b>


**Robert B. Diemer Water Treatment Plant  
Oxidation Retrofit Program  
Chemical System Upgrades**





Replacement of flow switch at sulfuric acid transfer pump

\*Contract substantially complete on August 15, 2007. Punch list work remains.


Contract No. 1628 Specifications No. 1517 Contractor: J. R. Filanc Construction Co., Inc.	<b>Henry J. Mills Water Treatment Plant Chemical System Upgrades</b>
<b>Scope:</b> The work consists of construction of new chlorine containment facility including truck unloading and acid storage buildings, evaporator room, injection facility, and chlorine scrubber areas.	
<b>At a Glance:</b> Estimated Percent Complete 73% Percent Extra Work 1.31% Estimated Completion Date <b>February 2008</b>	
<b>Details:</b> Bid Amount \$19,914,600 Earnings To Date \$14,657,974 Net Extra Work To Date \$261,400 Earnings This Month \$246,880 Net Extra Work This Month \$88,565 Contract Start 5/2/06 Duration in Working Days 360 Contract Completion 2/20/08	
Excavation of sump pump in Chlorine Storage Facility	


Contract No. 1631 Specifications No. 1535 Contractor: Kiewit Pacific Co.	<b>Diemer Water Treatment Plant Site Preparation for Oxidation Retrofit Program</b>
<b>Scope:</b> The work consists of demolition of shop building, underground fuel tanks, and steel pipelines; installation of more than 3,000 feet of steel pipe, motor control center, remote transmitting unit, LPG tank and vaporizer, subdrain systems, and associated work.	
<b>At a Glance:</b> Estimated Percent Complete 97% Percent Extra Work 1.2% Estimated Completion Date <b>March 2008</b>	
<b>Details:</b> Bid Amount \$70,516,455 Earnings To Date \$69,094,643 Net Extra Work To Date \$820,414 Earnings This Month \$704,425 Net Extra Work This Month \$1,800 Contract Start 5/15/06 Duration in Working Days 445 Contract Completion 3/10/08	
Exposed east buttress	

Contract No. 1633 Specifications No. 1516A Contractor: Brutoco Engineering & Construction, Inc.	<b>Joseph Jensen Water Treatment Plant Jensen Chlorine Containment and Fluoride Project</b>
<b>Scope:</b> The work consists of construction of new chlorine containment facility, evaporator room, and chlorine scrubber area, new fluorosilicic acid unloading, storage and injection facility, and associated work.	
<b>At a Glance:</b>	
Estimated Percent Complete <b>62%</b> Percent Extra Work <b>2.4%</b> Estimated Completion Date <b>July 2008</b>	
<b>Details:</b>	
Bid Amount <b>\$19,988,000</b> Earnings To Date <b>\$12,759,840</b> Net Extra Work To Date <b>\$484,769</b> Earnings This Month <b>\$727,890</b> Net Extra Work This Month <b>\$237,790</b> Contract Start <b>8/29/06</b> Duration in Working Days <b>460</b> Contract Completion <b>7/21/08</b>	
	Demolition of existing ductbank


Contract No. 1636 Specifications No. 1546A Contractor: Pima Corp. dba Advanced Construction	<b>F. E. Weymouth Water Treatment Plant Perimeter Improvements, Phase I</b>
<b>Scope:</b> The work consists of landscape, lighting and irrigation improvements; decorative fencing; and extending paved parking.	
<b>At a Glance:</b>	
Estimated Percent Complete <b>99%</b> Percent Extra Work <b>2.9%</b> Estimated Completion Date <b>January 2008</b>	
<b>Details:</b>	
Bid Amount <b>\$2,648,710</b> Earnings To Date <b>\$2,716,421</b> Net Extra Work To Date <b>\$77,211</b> Earnings This Month <b>\$0</b> Net Extra Work This Month <b>\$0</b> Contract Start <b>10/24/06</b> Duration in Working Days <b>160</b> Contract Completion <b>10/31/07 *</b>	
	Completed landscaping along Moreno Avenue


\*Contract substantially complete on October 31, 2007. Punch list work remains.

Contract No. 1640 Specifications No. 1542 Contractor: Steve P. Rados, Inc.	<b>Air Release and Vacuum Valve Relocation for Treated Water Pipelines Construction Package No. 1</b>
<b>Scope:</b> The work consists of furnishing new replacement valves, pipes, and fittings for Metropolitan's inventory; removal of existing subsurface vacuum and air release valves; abatement of lead, PCBs and asbestos-containing material inside subsurface vaults; and modification and extension of piping system for installation of new vacuum and air release valves at above-ground locations within the cities of Los Angeles, Alhambra, Commerce, Montebello, Monterey Park, Rosemead, and South Pasadena.	
<b>At a Glance:</b> Estimated Percent Complete <b>98%</b> Percent Extra Work <b>0.00%</b> Estimated Completion Date <b>January 2008</b>	
<b>Details:</b> Bid Amount <b>\$2,806,400</b> Earnings To Date <b>\$2,759,400</b> Net Extra Work To Date <b>\$0</b> Earnings This Month <b>\$630,087</b> Net Extra Work This Month <b>\$0</b> Contract Start <b>12/18/06</b> Duration in Working Days <b>260</b> Contract Completion <b>12/27/07</b>	
	Testing insulating materials for electrical isolation at Montebello site

Contract No. 1642 Specifications No. 1543 Contractor: PPC Construction, Inc.	<b>Air Release and Vacuum Valve Relocation for Treated Water Pipelines Construction Package No. 2</b>
<b>Scope:</b> The work consists of removal of existing subsurface vacuum and air release valves; abatement of lead, PCBs and asbestos-containing material inside subsurface vaults; and modification and extension of piping system for installation of new Metropolitan-furnished vacuum and air release valves at above-ground locations within the cities of Brea, Covina, Diamond Bar, San Dimas, and portions of Los Angeles County.	
<b>At a Glance:</b> Estimated Percent Complete <b>75%</b> Percent Extra Work <b>0.00%</b> Estimated Completion Date <b>February 2008</b>	
<b>Details:</b> Bid Amount <b>\$1,195,115</b> Earnings To Date <b>\$901,593</b> Net Extra Work To Date <b>\$0</b> Earnings This Month <b>\$250,002</b> Net Extra Work This Month <b>\$0</b> Contract Start <b>1/2/07</b> Duration in Working Days <b>210</b> Contract Completion <b>10/26/07 *</b>	
	Flushing of line prior to connection to feeder at Brea site



\*Time extension pending.



Contract No. 1643 Specifications No. 1544 Contractor: Abhe & Svoboda, Inc.	<b>Air Release and Vacuum Valve Relocation for Treated Water Pipelines Construction Package No. 3</b>
<b>Scope:</b> The work consists of removal of existing subsurface vacuum and air release valves; abatement of lead, PCBs and asbestos-containing material inside subsurface vaults; and modification and extension of piping system for installation of new Metropolitan-furnished vacuum and air release valves at above-ground locations within the cities of Culver City, Los Angeles, Norwalk, Santa Fe Springs, and portions of Los Angeles County.	
<b>At a Glance:</b> Estimated Percent Complete <b>97%</b> Percent Extra Work <b>0.00%</b> Estimated Completion Date <b>January 2008</b>	
<b>Details:</b> Bid Amount <b>\$1,678,240</b> Earnings To Date <b>\$1,632,250</b> Net Extra Work To Date <b>\$0</b> Earnings This Month <b>\$0</b> Net Extra Work This Month <b>\$0</b> Contract Start <b>1/2/07</b> Duration in Working Days <b>210</b> Contract Completion <b>10/25/07 *</b>	
	Completed road work and re-pavement at Culver City site


Contract No. 1646 Specifications No. 1547 Contractor: Pima Corp. dba Advanced Construction	<b>F. E. Weymouth Water Treatment Plant Perimeter Improvements, Phase II</b>
<b>Scope:</b> The work consists of landscape and irrigation improvements along the north and south boundaries of the plant and around Building No. 4.	
<b>At a Glance:</b> Estimated Percent Complete <b>88%</b> Percent Extra Work <b>0.73%</b> Estimated Completion Date <b>January 2008</b>	
<b>Details:</b> Bid Amount <b>\$413,240</b> Earnings To Date <b>\$366,090</b> Net Extra Work To Date <b>\$3,000</b> Earnings This Month <b>\$83,850</b> Net Extra Work This Month <b>\$3,000</b> Contract Start <b>4/19/07</b> Duration in Working Days <b>180</b> Contract Completion <b>1/28/08</b>	
	Placement of brick edging for new sidewalk


\*Time extension pending.



<p>Contract No. 1649 Specifications No. 1559 Contractor: Brutoco Engineering &amp; Construction, Inc.</p>	<p><b>F. E. Weymouth Water Treatment Plant Operations and Maintenance Building</b></p>	
<p><b>Scope:</b> The work consists of constructing a new centralized Operations and Maintenance Building of approximately 26,566 square feet including a Weld Shop, Machine Shop, Pipe Shop, Carpentry Shop, Test Area, Parts Storage Area, Instrumentation Shop, office areas, and restrooms/locker rooms.</p>		
<p><b>At a Glance:</b> Estimated Percent Complete <b>28%</b> Percent Extra Work <b>0.00%</b> Estimated Completion Date <b>June 2008</b></p>		
<p><b>Details:</b> Bid Amount <b>\$9,030,000</b> Earnings To Date <b>\$2,530,004</b> Net Extra Work To Date <b>\$0</b> Earnings This Month <b>\$433,832</b> Net Extra Work This Month <b>\$0</b> Contract Start <b>7/13/07</b> Duration in Working Days <b>220</b> Contract Completion <b>6/5/08</b></p>		
<p>Placement of concrete slab-on-grade for office area</p>		
<p>Contract No. 1650 Specifications No. 1549 Contractor: C.W. Roen Construction Co.</p>	<p><b>Henry J. Mills Water Treatment Plant Ozone Contactors 3 and 4</b></p>	
<p><b>Scope:</b> The work consists of constructing two new contactors, installing Metropolitan-furnished ozone equipment, and making tie-ins to existing process and utility lines within the existing contactor structure.</p>		
<p><b>At a Glance:</b> Estimated Percent Complete <b>19%</b> Percent Extra Work <b>0.00%</b> Estimated Completion Date <b>May 2009</b></p>		
<p><b>Details:</b> Bid Amount <b>\$14,556,000</b> Earnings To Date <b>\$2,713,200</b> Net Extra Work To Date <b>\$0</b> Earnings This Month <b>\$225,600</b> Net Extra Work This Month <b>\$0</b> Contract Start <b>7/25/07</b> Duration in Working Days <b>460</b> Estimated Contract Completion <b>5/26/09</b></p>		
<p>Fabrication of wall forms</p>		

<p>Contract No. 1651 Specifications No. 1589 Contractor: W.A. Rasic Construction Co., Inc.</p>	<p><b>Perris Valley Pipeline, North Reach</b></p>	
<p><b>Scope:</b> The project consists of installing approximately 2.7 miles of large-diameter welded steel pipe. The work includes excavation; tunneling; pipe installation and welding; street improvements; construction of service connection EM-23; furnishing and installing valves and related piping; constructing manhole, blow-off, and other cast-in-place reinforced concrete vault structures; and electrical instrumentation and equipment.</p>		
<p><b>At a Glance:</b> Estimated Percent Complete <b>24%</b> Percent Extra Work <b>0.01%</b> Estimated Completion Date <b>August 2008</b></p>		
<p><b>Details:</b> Bid Amount <b>\$39,250,000</b> Earnings To Date <b>\$9,428,596</b> Net Extra Work To Date <b>\$4,180</b> Earnings This Month <b>\$1,766,362</b> Net Extra Work This Month <b>\$0</b> Contract Start <b>8/7/07</b> Duration in Working Days <b>250</b> Contract Completion <b>8/14/08</b></p>		
<p>Percussion drilling of hard ground for pipeline installation</p>		
<p>Contract No. 1652 Specifications No. 1587 Contractor: Farwest Corrosion Control Company</p>	<p><b>Lakeview Pipeline Cathodic Protection</b></p>	
<p><b>Scope:</b> The project consists of removing two existing 49-foot deep anode wells with appurtenant structures and replacing with one 400-foot deep anode well and one rectifier, and removing entire solar-powered cathodic protection system at two locations along the pipeline.</p>		
<p><b>At a Glance:</b> Percent Complete <b>100%</b> Percent Extra Work <b>0.00%</b> Completion Date <b>December 2007</b></p>		
<p><b>Details:</b> Bid Amount <b>\$83,200</b> Earnings To Date <b>\$83,200</b> Net Extra Work To Date <b>\$0</b> Earnings This Month <b>\$20,800</b> Net Extra Work This Month <b>\$0</b> Contract Start <b>8/20/07</b> Duration in Working Days <b>120</b> Actual Contract Completion <b>12/7/07</b></p>		
<p>Completed cathodic protection system</p>		

Contract No. 1653 Specifications No. 1568 Contractor: Abhe & Svoboda, Inc.	<b>CRA Reliability Program Phase 6</b>
<b>Scope:</b> The project consists of rehabilitating deteriorated slide gates and upgrading electrical equipment at the San Jacinto Diversion Structure, and replacing valves and installing a security fence at the Desert Water/Coachella Valley discharge structure located at the Whitewater River.	
<b>At a Glance:</b> Estimated Percent Complete 1% Percent Extra Work 0.00% Estimated Completion Date May 2009	
<b>Details:</b> Bid Amount \$3,382,110 Earnings To Date \$35,305 Net Extra Work To Date \$0 Earnings This Month \$7,570 Net Extra Work This Month \$0 Contract Start 10/8/07 Duration in Working Days 400 Contract Completion 5/7/09	
	Field measurements for grating at San Jacinto Diversion Structure

Contract No. 1654 Specifications No. 1565 Contractor: Brutoco Engineering & Construction, Inc.	<b>Rialto Pipeline Improvements Phase II</b>
<b>Scope:</b> The project consists of construction of a new isolation bulkhead structure with removable spool piece, replacement of 30 feet of PCCP with 120-inch-diameter welded steel pipe, and installation of 96-inch-diameter sectionalizing valves in existing vault structures. The removable spool piece and 96-inch-diameter valves are furnished by Metropolitan.	
<b>At a Glance:</b> Estimated Percent Complete 24% Percent Extra Work 0.00% Estimated Completion Date September 2008	
<b>Details:</b> Bid Amount \$2,147,500 Earnings To Date \$520,500 Net Extra Work To Date \$0 Earnings This Month \$259,500 Net Extra Work This Month \$0 Contract Start 10/8/07 Duration in Working Days 230 Contract Completion 9/4/08	
	Excavation for installation of vault at Upland site