

- **Board of Directors**  
**Engineering and Operations Committee**

December 13, 2005 Board Meeting

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9-1

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## **Subject**

Status report for the Inland Feeder Program for activities through October 2005 [**Any discussion of litigation to be heard in closed session. Conference with legal counsel--existing litigation (Shank/Balfour Beatty, a Joint Venture vs. Metropolitan Water District of Southern California, LASC Case No. BC 283438); to be heard in closed session pursuant to Gov. Code Section 54956.9(a). Conference with legal counsel--potential litigation relating to contractor claims on Contract No. 1542 for the Arrowhead Tunnels; to be heard in closed session pursuant to Gov. Code Section 54956.9(b) (one potential case)**]

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## **Description**

### **Arrowhead Tunnels**

Arrowhead East Tunnel – On September 16, the tunnel boring machine (TBM) became stuck as a result of the contractor over-correcting the direction of the machine for line and grade. Initially, the contractor brought in hydraulic jacks to assist in moving the TBM forward. Repeated attempts to free the machine with the jacks were unsuccessful. After clearing ground from around the TBM's tail-shield using high-pressure water to reduce the pressure, the contractor was able to free the TBM and mining resumed. A total of 100 feet were mined in October. Another 420 feet were mined within the first three weeks in November bringing the total mined to date to 9,885 feet (44%).

Arrowhead West Tunnel –The contractor performed alternating cycles of grouting and mining. The TBM advanced a total of 360 feet in October. Another 300 feet were mined within the first three weeks in November bringing the total mined to date to 4,350 feet (22%).

### **Budget and Schedule**

As of October 31, 2005, the projected cost at completion for the Inland Feeder Program is \$980 million, but does not include potential claims by the contractor. Total expenditures through October 2005 are \$829.3 million (see [Attachment 1](#) for a budget comparison and schedule summary and [Attachment 2](#) for the Arrowhead Tunnels financial status). The board-approved budget remains at \$1.186 billion.

The on-line date for the Inland Feeder is dependent upon the completion of the Arrowhead Tunnels. The Arrowhead Tunnels' completion date was previously estimated to be late 2007. However, due to project delays, including the major flood on Christmas Day 2003, the completion date is currently estimated to be late 2008. Any changes to the project completion date, and costs associated with the schedule impacts, will be brought to the Board as new information becomes available.

Upon completion of construction, environmental mitigation measures will continue along the Arrowhead Tunnels' alignment for up to two years in accordance with the Environmental Impact Report.

### **Program Management Team**

During the month of November, Metropolitan and the contractor made significant revisions to their home-office and field management teams on this project. John Bednarski has been reassigned as Metropolitan's Inland Feeder Program Manager. Previously, Mr. Bednarski managed Engineering's Project Management Unit, where nearly all CIP projects are managed. Mr. Bednarski will be assisted by Mr. Jay Arabshahi, who will continue in the role of Assistant Program Manager. Metropolitan's former Chief Engineer Gary Snyder has been retained as a

consultant to serve as Metropolitan's Construction Manager in the field. Mr. Snyder will be assisted by Team Manager John Wallace, who will serve as Assistant Construction Manager.

**Policy**

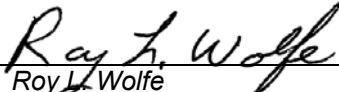
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Board request

**Fiscal Impact**

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Refer to [Attachment 1](#) and [Attachment 2](#).

  
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Roy L. Wolfe  
Manager, Corporate Resources

11/29/2005  
Date

  
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Debra C. Man  
Interim CEO/General Manager

11/30/2005  
Date

**[Attachment 1 – Budget Comparison and Schedule Summary](#)**

**[Attachment 2 – Arrowhead Tunnels Financial Status](#)**

BLA #3252

**Inland Feeder Program  
Budget Comparison and Schedule Summary**

	BUDGET (Oct-05)	PROJECTED COST (Oct-05)	ACTUALS THRU (Oct-05)	PROGRESS		COMPLETION DATE		COMMENTS
				PLANNED % COMPLETE	ACTUAL % COMPLETE (Oct-05) (1)	CONTRACT (2) (3)	FORECAST (Oct 05) (3)	
<b><u>Active Construction</u></b>								
Arrowhead Tunnels	\$ 334,727,000	\$ 310,046,000	\$ 167,996,000	77%	42%	Mar-07	Nov-08	Under construction
<b><u>Construction Support</u></b>								
Right-of-Way and Land	\$ 50,172,000	\$ 50,172,000	\$ 49,851,000	99%	99%	N/A	Nov-08	
Environmental Planning/Mitigation	\$ 18,598,000	\$ 18,598,000	\$ 14,225,000	76%	76%	N/A	Nov-10	
Program Management	\$ 32,401,000	\$ 32,401,000	\$ 29,283,000	90%	90%	N/A	Nov-08	
<b><u>Completed Projects</u></b>								
Arrowhead West Tunnel Constr. (previous contract)	\$ 44,563,000	\$ 44,496,000	\$ 44,493,000	-----	100%	-----	-----	Completed Nov-00
Arrowhead East Tunnel Constr. (previous contract)	\$ 121,753,000	\$ 121,753,000	\$ 121,422,000	-----	100%	-----	-----	Completed Jun-02
Arrowhead Tunnels Design	\$ 29,380,000	\$ 29,381,000	\$ 29,381,000	-----	100%	-----	-----	Completed Dec-01
Highland Pipeline	\$ 55,337,000	\$ 55,097,000	\$ 54,937,000	-----	100%	-----	-----	Completed May-04
Mentone Pipeline	\$ 32,112,000	\$ 32,112,000	\$ 32,034,000	-----	100%	-----	-----	Completed Nov-01
Highland/Mentone Pipeline Design	\$ 16,122,000	\$ 16,121,000	\$ 16,121,000	-----	100%	-----	-----	Completed Apr-02
Riverside Badlands Tunnel	\$ 144,931,000	\$ 144,931,000	\$ 144,909,000	-----	100%	-----	-----	Completed Apr-03
Riverside North Pipeline	\$ 55,713,000	\$ 55,713,000	\$ 55,713,000	-----	100%	-----	-----	Completed Dec-99
Riverside South Pipeline	\$ 42,418,000	\$ 42,418,000	\$ 42,418,000	-----	100%	-----	-----	Completed Aug-99
Inland Feeder Study / Initial Planning	\$ 8,024,000	\$ 8,024,000	\$ 8,024,000	-----	100%	-----	-----	Completed Feb-93
Owner Controlled Insurance Program	\$ 18,700,000	\$ 18,700,000	\$ 18,467,000	-----	100%	-----	-----	Completed May-04
<b>Expended To Date</b>			<b>\$ 829,273,000</b>					
<b>Total Cost To Complete</b>	<b>\$ 1,004,951,000</b>	<b>\$ 979,963,000</b>						
<b>Remaining Budget</b>	<b>\$ 181,509,000</b>	<b>\$ 206,497,000</b>						
<b>Total Approved Budget</b>	<b>\$ 1,186,460,000</b>	<b>\$ 1,186,460,000</b>						

(1) Based on work completed for construction reaches and \$ expended for construction support.

(2) Based on original contract duration and approved extensions.

(3) Completion date for Arrowhead Tunnels does not include time for grouting.

NOTE: Overall completion = 38.5 of 44 miles (88%)

**Inland Feeder Program**  
**Arrowhead Tunnels Financial Status**  
(\$ in Millions)

<b>Construction Contract No. 1542</b>	<b>Budget Sept - 2005</b>	<b>Committed Sept - 2005</b>	<b>% of Budget Committed</b>
Mobilization	\$ 7.4	\$ 7.0	94.6%
Plant equipment / materials	\$ 82.1	\$ 61.6	75.0%
<u>Arrowhead East</u>			
Portal / pipeline work	\$ 11.1	\$ 6.7	60.4%
Excavation / final lining	\$ 72.4	\$ 36.9	51.0%
Grouting	\$ 11.6	\$ 1.4	12.1%
<u>Arrowhead West</u>			
Portal / pipeline work	\$ 6.8	\$ 1.6	23.5%
Excavation / final lining	\$ 56.5	\$ 21.5	38.1%
Grouting	\$ 11.6	\$ 6.8	58.6%
Construction Contract Total	<u>\$ 259.5</u>	<u>\$ 143.5</u>	<u>55.3%</u>

NOTE: Invoices paid through October 2005 = \$140.6 million

Contractor's October 2005 cost loaded schedule not available at the time of submittal for this letter. Budget and Committed are through September 2005. October data will be presented at the December 2005 Board.