

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

October 11, 2005 Board Meeting

9-1

Subject

Status report for the Inland Feeder Program for activities through August 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)**]

Description

Arrowhead Tunnels

Arrowhead East Tunnel – In August, the contractor mined a total of 435 feet. On August 15, mining was halted to install new thrust rams and modified hydraulics to increase the tunnel boring machine (TBM) thrust; to install a new screw auger; and to replace the cutter head bearing seal. This work is expected to require approximately one month. Under this contract, a total of 9,230 feet (41%) has been mined to date.

Arrowhead West Tunnel – The TBM advanced 60 feet in the first three days of August before flowing/raveling ground conditions were encountered, resulting in ground loss and high water inflows. Subsequent void-filling and ground-consolidation-grouting operations continued through August and into September. Mining resumed on September 6 and the TBM advanced another 45 feet through September 7. A total of 765 feet of the 1,000 feet has been mined under the time and materials work. The Arrowhead West Tunnel has advanced a total of 3,425 feet and is 17% complete.

Budget and Schedule

As of August 31, 2005, the projected cost at completion for the Inland Feeder Program is \$980 million. Total expenditures through August 2005 are \$818.4 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 has been 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. Pre-excavation grouting will likely continue to have an impact on project completion as the tunnels advance. 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.

Policy

Board request


Fiscal Impact

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



Roy L. Wolfe
Manager, Corporate Resources

9/16/2005
Date



Dennis B. Underwood
CEO/General Manager

9/26/2005
Date

Attachment 1 – Budget Comparison and Schedule Summary

Attachment 2 – Arrowhead Tunnels Financial Status

BLA #3250

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

	BUDGET (Aug-05)	PROJECTED COST (Aug-05)	ACTUALS THRU (Aug-05)	PROGRESS		COMPLETION DATE		COMMENTS
				PLANNED % COMPLETE	ACTUAL % COMPLETE (Aug-05) (1)	CONTRACT (2) (3)	FORECAST (Aug-05) (3)	
<u>Active Construction</u>								
Arrowhead Tunnels	\$ 334,727,000	\$ 310,046,000	\$ 157,544,000	72%	42%	Mar-07	Nov-08	Under construction
Highland Pipeline	\$ 55,337,000	\$ 55,096,000	\$ 54,922,000	100%	100%	Sep-04	-----	Performing Contract Close-out
<u>Construction Support</u>								
Right-of-Way and Land	\$ 50,172,000	\$ 50,172,000	\$ 49,842,000	-----	99%	-----	-----	-----
Environmental Planning/Mitigation	\$ 18,598,000	\$ 18,598,000	\$ 14,139,000	-----	76%	-----	-----	-----
Program Management	\$ 32,401,000	\$ 32,401,000	\$ 29,025,000	-----	90%	-----	-----	-----
<u>Completed Projects</u>								
Arrowhead West Tunnel Constr.	\$ 44,563,000	\$ 44,496,000	\$ 44,492,000	-----	100%	-----	-----	-----
Arrowhead East Tunnel Constr.	\$ 121,753,000	\$ 121,753,000	\$ 121,422,000	-----	100%	-----	-----	-----
Arrowhead Tunnels Design	\$ 29,380,000	\$ 29,381,000	\$ 29,381,000	-----	100%	-----	-----	-----
Mentone Pipeline	\$ 32,112,000	\$ 32,112,000	\$ 32,033,000	-----	100%	-----	-----	-----
Highland/Mentone Pipeline Design	\$ 16,122,000	\$ 16,121,000	\$ 16,121,000	-----	100%	-----	-----	-----
Riverside Badlands Tunnel	\$ 144,931,000	\$ 144,931,000	\$ 144,908,000	-----	100%	-----	-----	-----
Riverside North Pipeline	\$ 55,713,000	\$ 55,713,000	\$ 55,713,000	-----	100%	-----	-----	-----
Riverside South Pipeline	\$ 42,418,000	\$ 42,418,000	\$ 42,418,000	-----	100%	-----	-----	-----
Inland Feeder Study / Initial Planning	\$ 8,024,000	\$ 8,024,000	\$ 8,024,000	-----	100%	-----	-----	-----
Owner Controlled Insurance Program	\$ 18,700,000	\$ 18,700,000	\$ 18,467,000	-----	99%	-----	-----	-----
Expended To Date			\$ 818,448,000					
Total Cost To Complete	\$ 1,004,951,000	\$ 979,962,000						
Remaining Budget	\$ 181,509,000	\$ 206,498,000						
Total Approved Budget	\$ 1,186,460,000	\$ 1,186,460,000						

(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 = 37 of 44 miles (84%)

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

Construction Contract No. 1542	Budget July - 2005	Committed July - 2005	% of Budget Committed
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	\$ 70.4	\$ 31.3	44.5%
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	\$ 18.1	32.0%
Grouting	\$ 11.6	\$ 6.8	58.6%
Construction Contract Total	\$ 257.5	\$ 134.5	52.2%

NOTE: Invoices paid through August 2005 = \$131.8 million

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