

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

September 12, 2006 Board Meeting

9-1

Subject

Status report for the Inland Feeder Program for activities through July 2006 [**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

Recent Development

At its August 15 meeting, the Board approved a settlement agreement and contract amendment with the project contractor to complete Arrowhead Tunnels and a new on-line date of September 2010 was established.

Work Completed to Date

The Inland Feeder Program consists of 44 miles of pipelines and tunnels that will enable Metropolitan to convey up to 1,000 cubic feet per second of State Water Project supplies from Devil Canyon Afterbay to Diamond Valley Lake. To date, eight of nine construction contracts totaling \$542 million have been completed. These completed contracts represent 36.3 miles or 82% of the Inland Feeder's length. Remaining program work includes completion of the Arrowhead East and West Tunnels, which are presently under construction by a joint venture of Shea/Kenny.

Arrowhead Tunnels

Arrowhead East Tunnel – Rock conditions deteriorated slightly during the month, while relatively low groundwater conditions continued on the Arrowhead East Tunnel. The contractor made good mining progress although substantial quantities of grout were used to fill voids and stabilize loose rock. In July, the tunnel boring machine (TBM) advanced a total of 520 feet, while another 175 feet were mined in the first two weeks in August. The total length of tunnel mined to date is 13,790 feet (61% of the tunnel's length). In early August, the contractor made planned repairs on the TBM to replace the screw auger and upgrade pump systems.

Arrowhead West Tunnel – The TBM continued moving through an extended length of fault/shear zone material. The contractor is completing regular cycles of grouting to successfully control water inflows. In July, the contractor replaced the TBM screw auger and the TBM advanced a total of 230 feet, while another 120 feet were mined in the first two weeks in August. The total length of tunnel mined to date is 6,580 feet (33% of the tunnel's length).

Program Management

Metropolitan and the contractor completed negotiations on a settlement agreement and contract amendment. The Board authorized execution of both documents at the August board meeting. A full-team partnering session between Metropolitan and the contractor was held in early August to continue the process of team building, improving efficiency, identifying and resolving team issues, and streamlining implementation of the contract amendments.

Budget and Schedule

As of July 31, 2006, the projected cost to complete the Inland Feeder Program is \$982.3 million. This amount is under review and will be updated next month to reflect the execution of the settlement agreement and contract amendment. Total expenditures through July 2006 are \$866.7 million (see [Attachment 1](#) for a budget comparison and schedule summary for the entire Inland Feeder Program, and budget status for the Arrowhead Tunnels construction contract). The board-approved budget for the entire program remains at \$1.186 billion.

The on-line date for the Inland Feeder is dependent upon completion of the Arrowhead Tunnels. A revised project on-line date of September 2010 was approved at the August board meeting.

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

Submitted per request of the Board

Fiscal Impact

Refer to [Attachment 1](#).



Roy L. Wolfe
Manager, Corporate Resources

8/18/2006
Date



Jeffrey Kightlinger
General Manager

8/23/2006
Date

Attachment 1 – Inland Feeder Program Budget Comparison and Schedule Summary, and Arrowhead Tunnels Construction Contract Budget Status

BLA #4220

Inland Feeder Program Budget Comparison and Schedule Summary (\$ in Millions)				
	Total Program Estimate (FY 2005/6 CIP)	Projected Cost to Complete (Updated July 2006)	Expenditures to Date (July 2006)	% Complete Based on Expenditures (July 2006)
<u>Active Construction</u>				
Arrowhead Tunnels	\$ 289.3	\$ * 265.7	\$ 166.2	57%
Construction Inspection and Support	\$ 39.1	\$ * 39.1	\$ 29.5	76%
Subtotal, Active Construction	\$ 328.4	\$ 304.8	\$ 195.8	60%
<u>Other Components</u>				
Completed Projects	\$ 576.9	\$ 576.4	\$ 574.9	100%
Others (R/W, Env., Prog. Mgt.)	\$ 101.1	\$ 101.1	\$ 96.0	99%
Subtotal, Other Components	\$ 678.0	\$ 677.5	\$ 671.0	99%
Expended To Date			\$ 866.7	73%
Subtotal, All Projects	\$ 1,006.4	\$ 982.3		
Remaining Budget	\$ 180.0	\$ 204.1		
Board-Authorized Budget	\$ 1,186.4	\$ 1,186.4		

* Under review

NOTE: Overall completion = 36.3 of 44.2 miles (82%)

Arrowhead Tunnels Construction Contract Budget Status (\$ in Millions)			
Construction Contract No. 1542	Current Contract Amount (July 2006)	Amount of Contract Committed (July 2006)	% of Contract Committed
Mobilization	\$ 7.6	\$ 7.3	96%
Plant equipment / materials	\$ 76.2	\$ 60.3	79%
<u>Arrowhead East</u>			
Portal / pipeline work	\$ 10.9	\$ 6.4	59%
Excavation / final lining	\$ 64.2	\$ 33.2	52%
Grouting	\$ 11.6	\$ 4.4	38%
<u>Arrowhead West</u>			
Portal / pipeline work	\$ 6.6	\$ 1.4	21%
Excavation / final lining	\$ 53.8	\$ 19.1	36%
Grouting	\$ 11.6	\$ 8.5	73%
Subtotal	\$ 242.5	\$ 140.6	58%
Authorized Change Orders	\$ 31.6	\$ 31.6	100%
Construction Contract Total	\$ 274.1	\$ 172.2	63%
Length of Tunnels Mined Through 8/14/06			
Arrowhead East	13,790 ft of 22,458 ft (61%)		
Arrowhead West	6,580 ft of 19,884 ft (33%)		
Total	20,370 ft of 42,342 ft (48%)		

NOTE: Contractor invoices paid through July 2006 = \$166.2M