

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

November 9, 2004 Board Meeting

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10-1

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**Subject**

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Status report for the Inland Feeder Program activities through September 2004 [**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 § 54956.9(a). Any discussion of potential litigation relating to the December 2003 Waterman Canyon Floods to be heard in closed session pursuant to Gov. Code § 54956.9(b)**]

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**Description**

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**Arrowhead Tunnels (ongoing)**

Arrowhead East Tunnel – On September 8 and 9 the tunnel boring machine (TBM) had advanced approximately 20 feet when the contractor suspended mining operations due to unstable ground conditions at the face of the TBM. The contractor has drilled additional chemical grouting and pressure relief/drainage holes and is in the process of injecting grout to stabilize the ground. Currently 5,675 feet (25%) has been mined through September.

Arrowhead West Tunnel – No mining was completed in September as the contractor continued pre-excitation grouting activities to control groundwater. A total of 1,530 feet (7%) has been mined to date.

**Arrowhead East & West Tunnels – Reaches 1 & 2 (completed contracts)**

The Board approved a partial settlement, at their May 2004 meeting, of the pending litigation relating to the previous contracts. All claims of Shank/Balfour Beatty and its subcontractors Coast Geo and IAFD, as well as a pending Government Code Claim relating to the Riverside Badlands Tunnel, have been settled. The only remaining issues in the pending litigation are the claims by the pipe vendor, Ameron, in the amount of approximately \$11.5 million. On May 17, 2004, Metropolitan filed a cross-complaint against Ameron, alleging the submission of false claims. The trial began on September 22, 2004 and is anticipated to last through October 18. Both parties waived jury. The court has 60 days after completion of the trial to render a decision.

**Budget and Schedule**

The projected cost at completion for the Inland Feeder Program is \$951.4 million, excluding costs for pending claims on the Arrowhead Tunnels and the Highland Pipeline contracts. Due to the confidentiality of recently settled claims with Shank/Balfour Beatty, the original Arrowhead Tunnels contractor, the costs associated with these claims will be added to the Program's projected cost upon resolution of the Ameron claim.

Total expenditures through September 2004 are \$738.7 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 unchanged 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 previously been estimated at late 2007. However, due to project delays, including the major flood at Christmas, and the amount of pre-excitation grouting for the control of groundwater projected over the length of remaining tunnel, the completion date is currently estimated at 2008. Pre-excitation grouting will likely continue to have a significant 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.

### **New Developments**

Arrowhead East Tunnel – Chemical grouting and pressure relief/drainage holes were drilled and chemical grouting operations were performed. TBM mining resumed on October 15.

Arrowhead West Tunnel – The contractor completed the current pre-excavation grouting cycle on September 30. Upon attempting to move the TBM forward, it was discovered that the shield had become earthbound. On October 11, an unsuccessful attempt to free the machine was made using auxiliary push-jacks. To reduce resistance and pressures on the shield, the contractor is clearing the ground around the shield to reduce the skin friction until the push-jacks are able to free the machine.

### **Policy**

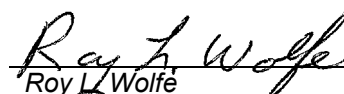
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Board request

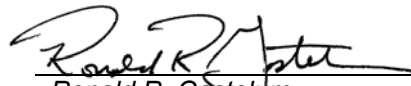
### **Fiscal Impact**

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

  
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Roy L. Wolfe  
Manager, Corporate Resources

10/15/2004  
Date

  
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Ronald R. Gastelum  
Chief Executive Officer

10/18/2004  
Date

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

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

BLA #2462

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

	BUDGET (Sep-04)	PROJECTED COST (Sep-04)	ACTUALS THRU (Sep-04)	PROGRESS		COMPLETION DATE		COMMENTS
				PLANNED % COMPLETE	ACTUAL % COMPLETE (Sep-04) (1)	CONTRACT (2) (3)	FORECAST (Sep-04) (3)	
<b><u>Active Construction</u></b>								
Arrowhead Tunnels	\$ 302,567,000	\$ 281,936,000	\$ 81,358,000	58%	32%	Mar-07	Aug-07	Under construction
Highland Pipeline	\$ 55,137,000	\$ 54,826,000	\$ 54,765,000	100%	100%	Sep-04	-----	Performing Contract Close-out
<b><u>Construction Support</u></b>								
Right-of-Way and Land	\$ 49,072,000	\$ 49,072,000	\$ 48,639,000	-----	99%	-----	-----	-----
Environmental Planning/Mitigation	\$ 18,598,000	\$ 18,598,000	\$ 13,659,000	-----	73%	-----	-----	-----
Program Management	\$ 32,401,000	\$ 32,401,000	\$ 26,957,000	-----	83%	-----	-----	-----
Arrowhead Tunnels Claims Cost	\$ 950,000	\$ 950,000	\$ 325,000	-----	34%	-----	-----	-----
<b><u>Completed Projects</u></b>								
Arrowhead West Tunnel Constr. (4)	\$ 44,563,000	\$ 44,495,000	\$ 44,491,000	-----	100%	-----	-----	-----
Arrowhead East Tunnel Constr. (4)	\$ 121,753,000	\$ 121,753,000	\$ 121,420,000	-----	100%	-----	-----	-----
Arrowhead Tunnels Design	\$ 29,380,000	\$ 29,381,000	\$ 29,381,000	-----	100%	-----	-----	-----
Mentone Pipeline	\$ 32,112,000	\$ 32,112,000	\$ 31,997,000	-----	100%	-----	-----	-----
Highland/Mentone Pipeline Design	\$ 16,122,000	\$ 16,121,000	\$ 16,121,000	-----	100%	-----	-----	-----
Riverside Badlands Tunnel (5)	\$ 144,931,000	\$ 144,931,000	\$ 144,901,000	-----	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	\$ 18,557,000	-----	99%	-----	-----	-----
<b>Expended To Date</b>			<b>\$ 738,725,000</b>					
<b>Total Cost To Complete</b>	<b>\$ 972,441,000</b>	<b>\$ 951,431,000</b>						
<b>Remaining Budget</b>	<b>\$ 214,019,000</b>	<b>\$ 235,029,000</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.

(4) Budget does not include Contractor Claims of \$5.3M and \$15.8M for the Arrowhead East Tunnel and Arrowhead West Tunnel, respectively.

(5) Will reduce budget to equal actuals following resolution of Contractors Claim of \$500K. Unused budget to be transferred to Remaining Budget category.

NOTE: Overall completion = 37 of 44 miles (84%)

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

<b>Construction Contract No. 1542</b>	<b>Budget Sep - 2004</b>	<b>Committed Sep - 2004</b>	<b>% of Budget Committed</b>
Mobilization	\$ 7.4	\$ 6.7	90.5%
Plant equipment / materials	\$ 62.2	\$ 36.1	58.0%
<u>Arrowhead East</u>			
Portal / pipeline work	\$ 11.0	\$ 6.6	60.0%
Excavation / final lining	\$ 64.2	\$ 12.5	19.5%
Grouting	\$ 11.6	\$ 0.3	2.6%
<u>Arrowhead West</u>			
Portal / pipeline work	\$ 6.8	\$ 1.6	23.5%
Excavation / final lining	\$ 68.1	\$ 5.1	7.5%
Grouting	\$ 11.6	\$ 1.7	14.7%
Construction Contract Total	<u>\$ 242.9</u>	<u>\$ 70.6</u>	<u>29.1%</u>

NOTE: Invoices paid through September 2004 = \$68.8 million