

- **Board of Directors**  
**Engineering and Capital Programs Committee**

January 9, 2007 Board Meeting

---

8-3

---

**Subject**

---

Authorize an agreement with Jacobs Associates for tunnel feasibility analyses and hydrogeologic/geotechnical investigations of alternative alignments for San Diego Pipeline No. 6 (Approp. 15121)

---

**Description**

---

In March 2006, Metropolitan's Board appropriated \$4.36 million and authorized staff to conduct a feasibility study to evaluate several alternative alignments for the remaining portions of San Diego Pipeline No. 6 (Pipeline 6). Metropolitan staff has begun the feasibility investigations of the pipeline portions, along with evaluation of rights of way and environmental impacts. However, specialized consulting support is required to perform the geotechnical, geological, and hydrogeological investigations associated with the tunnel portions of the alignments. This action authorizes an agreement with the recommended consulting firm.

**Background**

Metropolitan's Board approved the Environmental Impact Report (EIR) for the Pipeline 6 Program in 1993. At that time, the planned on-line date was 1998. The combined length of the alignment originally certified in the EIR, including both Metropolitan's and the San Diego County Water Authority's (SDCWA) portions, is approximately 30 miles. This alignment has approximately 23.5 miles of pipeline and 6.5 miles of tunnel. Pipeline 6 is planned to convey 600 cubic feet per second (cfs) of untreated water from Lake Skinner to SDCWA's Twin Oaks Diversion Structure (see [Attachment 1](#)). When Pipeline 6 completes construction, San Diego Pipeline No. 3 will be converted to treated water service, thereby enabling Metropolitan to meet growing demands for both treated and untreated water in southern Riverside and San Diego Counties. Since 1993, there have been several revisions to demand projections based on: (1) implementation of SDCWA's Emergency Storage Program; (2) implementation of SDCWA's new 100 million gallon per day (mgd) water treatment plant; (3) implementation of other critical regional water projects by SDCWA, its member agencies, and Metropolitan; and (4) refinement of Metropolitan's System Overview Study. As a result, the current planned on-line date for Pipeline 6 is 2018. This date could be extended to 2025 pending successful completion of SDCWA's new seawater desalination plant, which is currently in the planning stages.

In December 2004, Metropolitan's Board awarded a construction contract for the North Reach of Pipeline 6. The North Reach is a 7-mile stretch of 10-foot-diameter pipeline that will meet urgent demands within Eastern Municipal Water District's (EMWD) service area. That work is now complete and EMWD is scheduled to begin service through its new connection, EM-21, in April 2007.

Since the original EIR was approved in 1993, local changes have occurred in the vicinity of the project which warrant revisiting the alignment for the remaining portions of Pipeline 6. For example, an alternative alignment paralleling the existing San Diego Pipelines Nos. 4 and 5, which was evaluated in 1993 but not recommended due to environmental and cost concerns, should again be considered. This alternative alignment may now be more favorable, given the potential challenges and costs to construct a 6.5 mile-long tunnel. In addition, changes in property ownership and ongoing development along the EIR alignment have impacted the original construction cost to the extent that an updated alternatives analysis is beneficial.

Several alternative alignments have been identified for the remaining portions of Pipeline 6, from the end of the North Reach at Anza and Deportola Roads, to its SDCWA terminus. Alternatives assessed include: (1) the original EIR alignment which is comprised of the 5.5-mile South Reach pipeline, the 6.5-mile Mt. Olympus Tunnel, and an

11-mile pipeline in San Diego County; (2) the East Bypass alignment, which is similar to the EIR alignment, but would detour around the Pechanga Indian-owned Great Oak Ranch; (3) the West alignment, which would include a longer pipeline adjacent to Metropolitan's existing San Diego Pipelines Nos. 1 and 2, a much shorter tunnel, and an 11-mile pipeline in San Diego County; and (4) the Far West alignment, which would be a much longer pipeline adjacent to Metropolitan's existing San Diego Pipelines Nos. 4 and 5, no tunnel, and an approximately 8.5-mile-long pipeline in San Diego County (see [Attachment 2](#)). While the Far West alternative was considered under the original EIR, the East Bypass and West alternatives were not.

### **Professional Services Agreement**

Aerial surveys and property ownership identification along the alternative alignments were completed in September 2006, and environmental and right-of-way analyses have commenced. While Metropolitan staff is performing the pipeline feasibility investigations and various analyses, specialized consulting firms are required to perform the geotechnical, geological, and hydrogeological investigations. The tunnel feasibility, groundwater monitoring, and hydrogeologic/geotechnical investigations and analyses are recommended to be performed by Jacobs Associates. Jacobs was selected through a multi-step competitive process. In May 2006, Metropolitan issued Request for Qualifications (RFQ) No. 787 for the selection of both tunnel engineering and geotechnical consultants. Based upon evaluation of the Statements of Qualifications submitted by 17 firms (6 tunnel and 11 geotechnical) in response to RFQ No. 787, six firms were shortlisted to perform tunnel engineering and six firms were shortlisted to perform the geotechnical work. Staff's project plan calls for a single agreement to result from this process, consisting of a tunnel engineering firm serving as prime consultant, with a geotechnical firm serving as subconsultant. Accordingly, Metropolitan issued Request for Proposals No. 811 to the 6 shortlisted tunnel engineering firms with a requirement for them to select a geotechnical firm as subconsultant from among that shortlisted group. As a result of this selection process, staff recommends Jacobs to be the prime consultant based on its: (1) expertise and experience in performing this type of work, including their plan for staffing and management of the work; (2) proposed methodology and approach; and (3) proposed cost. The geotechnical firm that Jacobs has selected as subconsultant is GeoPentech. For this agreement, Metropolitan has established a Small Business Enterprise participation level of 20 percent. Jacobs has committed to meet this level of participation.

The geotechnical investigations for the tunnel alignments will include several coreholes to better characterize the geologic and groundwater conditions under Mount Olympus. Jacobs has recommended several corehole locations in its proposal, which will be finalized as an initial task under the agreement. Typically, temporary access in the form of entry permits is obtained to perform field investigations of this nature. Additionally, entry permits will be required to access existing wells identified by the tunnel consultant for groundwater monitoring. Metropolitan staff will obtain the necessary entry permits along with any necessary environmental clearances.

This action authorizes an agreement with Jacobs Associates for tunnel feasibility and hydrogeologic/geotechnical services for an amount not to exceed \$2.2 million. No additional funding is required under this action, as sufficient funding remains within the program appropriation.

This project has been evaluated and recommended by Metropolitan's Capital Investment Plan Evaluation Team, and funds have been included within the fiscal year 2006/07 capital budget.

### **Policy**

---

Metropolitan Water District Administrative Code Section 8121: Authority to Enter Contracts

### **California Environmental Quality Act (CEQA)**

---

CEQA determination for Option #1:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. For carrying out studies and investigations associated with the agreement, the proposed action involves basic data collection and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These activities may be strictly for information gathering purposes, or as part of a study leading to an action that a public agency has not yet approved, adopted, or funded. Accordingly, the proposed

action qualifies as a Class 6 Categorical Exemption (Section 15306 of the State CEQA Guidelines). In addition, the authorization of the agreement is not defined as a project under CEQA because it involves continuing administrative activities (Section 15378(b)(2) of the State CEQA Guidelines) and because it involves other government fiscal activities, which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment (Section 15378(b)(4) of the State CEQA Guidelines).

The CEQA determination is: Determine that the proposed action is exempt from CEQA pursuant to Sections 15306, 15378(b)(2), and 15378(b)(4) of the State CEQA Guidelines.

CEQA determination for Option #2:

None required

## Board Options

---

### Option #1

Adopt the CEQA determination and authorize an agreement with Jacobs Associates for an amount not to exceed \$2.2 million for tunnel feasibility analyses and hydrogeologic/geotechnical services.

**Fiscal Impact:** Estimated \$4.86 million previously appropriated under Approp. 15121

**Business Analysis:** This option would complete the board-authorized technical feasibility study of tunnel alignment options for Pipeline 6, in order to ultimately recommend the most cost-effective alignment in time to meet the current planned on-line date of 2018.

### Option #2

Do not authorize an agreement for the tunnel feasibility analysis and hydrogeologic/geotechnical services, and direct staff to pursue only pipeline options for the remaining portions of Pipeline 6.

**Fiscal Impact:** None

**Business Analysis:** This option would eliminate some feasible alternative alignments for the remaining portions of Pipeline 6 prior to completion of environmental assessments and detailed cost estimates.

## Staff Recommendation

---

Option #1

  
 Roy L. Wolfe  
 Manager, Corporate Resources

12/15/2006  
 Date

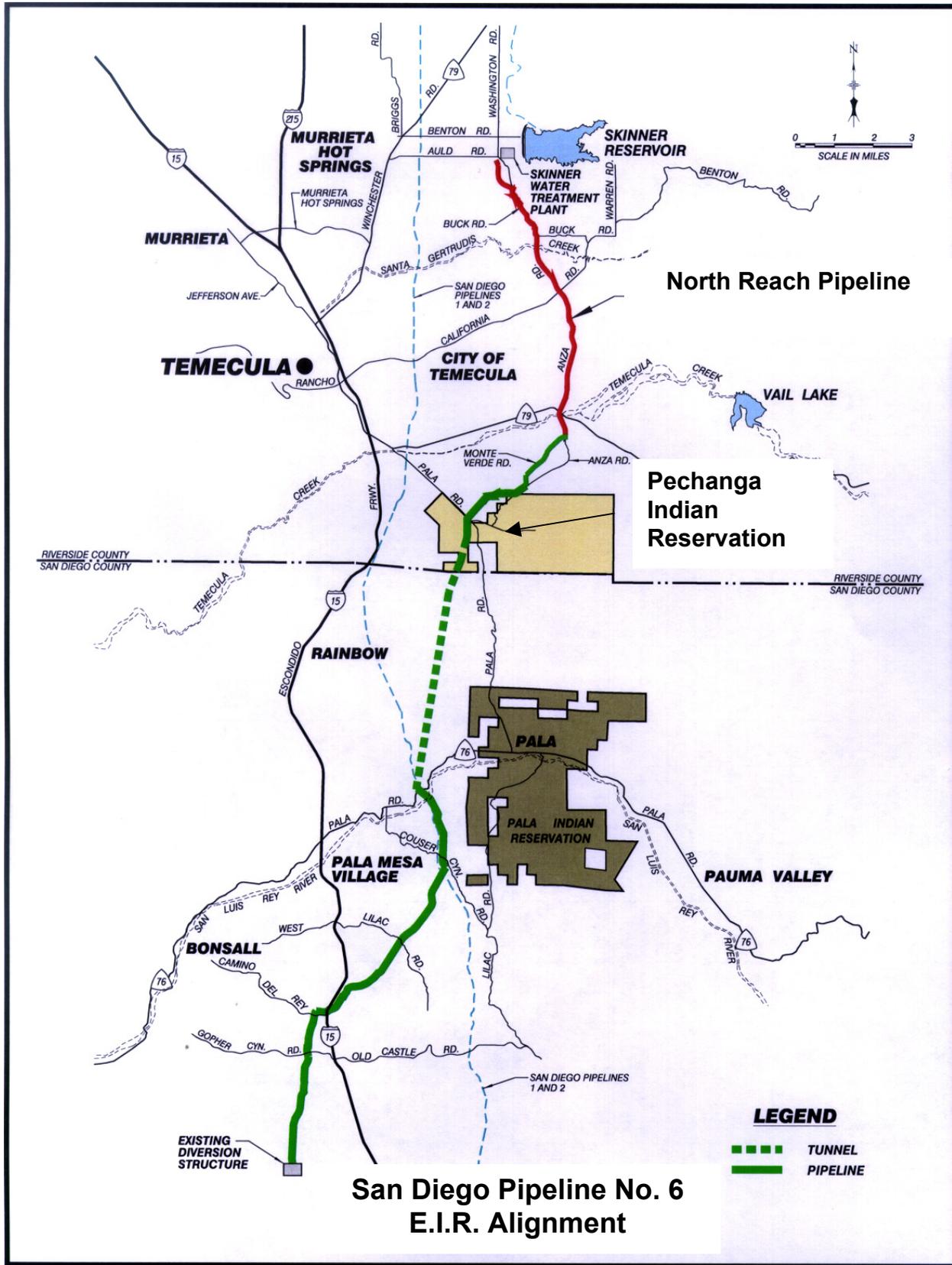
  
 Jeffrey Kightlinger  
 General Manager

12/18/2006  
 Date

[Attachment 1 – Location Map](#)

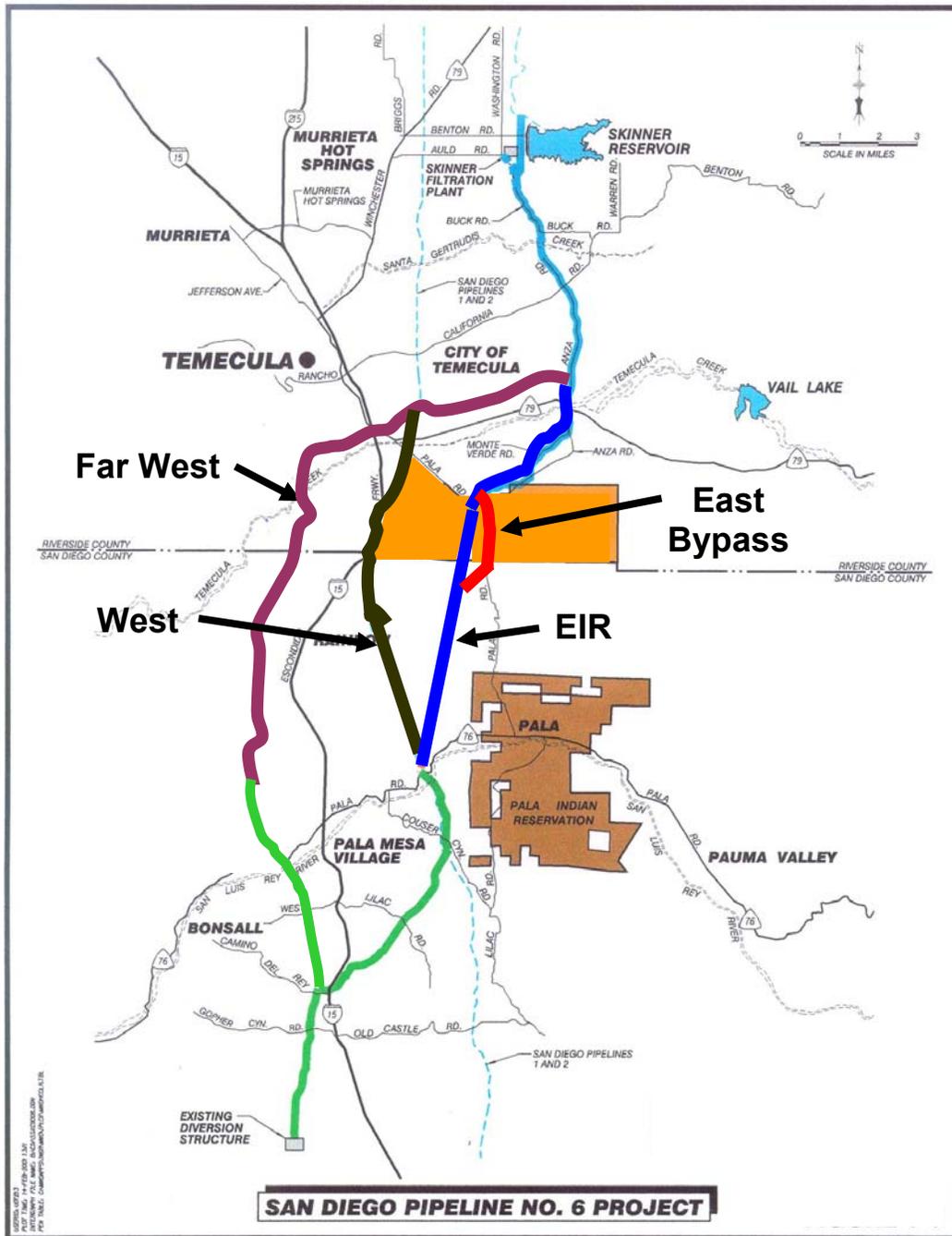
[Attachment 2 – Alignment Map](#)

BLA #4803



USERID: U0006 PLOT TIME: 22-FEB-2006 06:13 INTERGRAPH FILE NAME: I:\000552\PI\022006.DGN PER TITLE: MICH2LX17L

Location Map



Map of Alternative Alignments