

NACIMIENTO WATER PROJECT

– WATER FROM “THE DRAGON” –



Lake Nacimiento

-Graphic from Microsoft Virtual Earth

INTRODUCTION

Recently, the Atlanta metropolitan area faced a crisis due to the near failure of its primary water supply. The effects of a growing population, climate change and a lack of planning combined to threaten one of the area's most basic needs. Unfortunately, this is not an isolated occurrence. It is a challenge that many areas around the country will be facing in the very near future.

This report examines the work being done by five local governments in San Luis Obispo County to address this problem by securing an additional source of water for their citizens. This cooperative effort has resulted in the County's largest public works project, the Nacimiento Water Project (NWP).

ORIGIN/PURPOSE

One of the primary roles of the San Luis Obispo County Grand Jury is to provide oversight of governmental agencies within our county. The Grand Jury decided an investigation of the Nacimiento Water Project would be appropriate because it is the largest construction project ever undertaken by the County. It is a major investment of public funds and the project impacts many county residents.

This investigation analyzes the project's history, development, management, construction contacts, schedule, cost, and impacts.

METHOD

As part of its investigation the Grand Jury:

- Reviewed documents related to history of water rights for Lake Nacimiento
- Reviewed Agreements, environmental impact reports, financial reports, management reports and other documents associated with the project
- Reviewed bid documents associated with project's construction contracts
- Interviewed water utility managers and/or project related staff from:
 - ▣ City of Paso Robles
 - ▣ Atascadero Mutual Water Company
 - ▣ City of San Luis Obispo
 - ▣ Templeton Community Services District
 - ▣ San Luis Obispo County (NWP Project Manager and staff representing Cayucos Community Service Area 10A)
- Reviewed water resource planning documents

NARRATIVE

History:

Nacimiento Dam was constructed in 1957 by the Monterey County Flood Control and Water Conservation District which is now the Monterey County Water Resources Agency (MCWRA). Although the dam and lake are both entirely within San Luis Obispo County, they are operated by the MCWRA. After the dam was constructed, the MCWRA also retained rights to the water contained in the lake.

In the late 1950's the MCWRA wanted to expand its water resources by building a new dam on the San Antonio River. Even though entirely within Monterey County, San Luis Obispo County objected to the project during the state's review process. In 1959, the two counties entered into a contract that resolved their disagreement. Under this contract San Luis Obispo County would withdraw its objection to the San Antonio Project in return for an entitlement to 17,500 acre feet per year of water from Lake Nacimiento. The construction of San Antonio Dam was approved and the project was completed in 1965. San Luis Obispo's entitlement to Nacimiento water is managed by the San Luis Obispo County Flood Control and Water Conservation District (District).

Project Development:

Between 1959 and the mid-1990s, there were several proposals to take advantage of the newly available water supply but none were adopted. In 1994, the Nacimiento Water Project was initiated when the District began preparation of a project description and an Environmental Impact Report (EIR). The initial project description included the conveyance and possible treatment facilities for approximately 15,750 acre-feet of water per year (afy). The treatment facilities were eventually removed from the project. The project was sized to only transfer 15,750 afy rather than the entire 17,500 afy allocation granted in the agreement with MCWRA because 10% (1,750 afy) was required to service County residents in the Lake Nacimiento area. The stated purpose of the project in the EIR was "to serve water to cities and agencies along the Highway 101 corridor from San Miguel to San Luis Obispo."

In 2004, four agencies entered into a contract with the District to “construct and operate a water system which will convey the District’s waters from the Nacimiento Reservoir to the Participant” (see ATTACHMENT A for project map). The contract (Nacimiento Project Water Delivery Entitlement Contract) describes the obligations of each participant, sets the terms and conditions for project cost sharing, and establishes the Nacimiento Project Commission as the project’s governing body. The agencies participating in the original contract were:

- City of San Luis Obispo,
- City of Paso Robles,
- Templeton Community Services District (CSD), and
- Atascadero Mutual Water Company (MWC).

The Cayucos County Service Area Ten, Benefit Zone A (CSA 10A) was added as a participant in 2006. Under a special arrangement, the City of San Luis Obispo will actually receive the CSA 10A allocation from the Nacimiento Water Project and, in return, CSA 10A will be permitted to draw its allocated amount of water from the Whale Rock Reservoir. As a result of this arrangement, no additional pipeline facilities have to be constructed to serve CSA 10A.

Currently 9,655 afy of the available 15,750 afy are committed to the participants. This means that 6,095 afy will be available to current participants who wish to increase their allocation, or to other agencies that agree to “buy into” the project. The current annual water allocations for the participating agencies are:

Participant	Annual Allocation ¹
City of Paso Robles	4,000 afy
Templeton CSD	250 afy
Atascadero MWC	2,000 afy
City of San Luis Obispo	3,380 afy
Cayucos – CSA 10A	25 afy
TOTAL:	9,655 afy

¹ Allocation is measured in afy (acre-feet per year).
One afy will service approx. 2.5 homes.

Project Management:

As required by the Nacimiento Project Water Delivery Entitlement Contract, all project related decisions are made by the Nacimiento Project Commission which consists of one member from each of the participating agencies. The County Board of Supervisors is responsible for the final approval of all contracts and expenditures. The Project Manager (a District staff member) is responsible for day-to-day project leadership. Project team organization charts for the project's design and construction phases are contained in ATTACHMENT B.

Project Cost:

The originally projected total cost for this project as approved in August 2004 was \$150 million. With the design phase of the project nearing completion and all major construction contracts awarded, the current proposed budget for the total projects is now approximately \$176 million (a recent project budget report is shown in ATTACHMENT C). Due to factors discussed later in this report, the total cost could change significantly during the project's construction phase.

The Nacimiento Project Water Delivery Entitlement Contract determines how project costs will be divided among the participants. In general, each participant's share is based upon the amount of water allocated and the distance that the water is conveyed. The following chart shows the annual cost for each of the participating agencies when the project is completed:

Participant	Nacimiento Project Construction Costs	Less Prior District Costs ¹	Net Annual Base Debt Costs, 100% CAPI ²	Annual O&M Costs	Ad Valorem Property Tax Allocation Credit	Total Annual Nacimiento Project Costs
City of Paso Robles	\$60,720,840	\$426,100	\$4,612,000	\$1,341,731	(\$425,117)	\$5,528,614
Templeton CSD	\$6,335,142	\$26,631	\$480,000	\$186,344	(\$26,570)	\$639,774
Atascadero MWC	\$33,562,390	\$213,050	\$3,068,000	\$772,922	(\$212,559)	\$3,628,363
City of San Luis Obispo	\$73,992,045	\$875,555	\$5,489,000	\$1,327,737	(\$359,224)	\$6,457,513
Cayucos (CSA 10A)	\$547,278	\$2,664	\$0	\$9,821	(\$2,657)	\$7,164
Total	\$175,157,695	\$1,544,000	\$13,649,000	\$3,638,555	(\$1,026,127)	\$16,261,428

Note: All values presented in this table are estimated as of 8/17/2007.

- \$1,031,000 Cuesta Tunnel and \$513,000 prior district costs, not to be financed. Repayment by participants is not included in the total annual Nacimiento.
- Net Funded - CSA 10A will be cash funding their capital costs - City of SLO will also pay an annual payment of \$322,880 for the BAN.

As the chart shows, once facilities start operation, construction participants will have to pay for the project's ongoing operation and maintenance (O&M) in addition to costs associated with the

long-term debt financing of the. The projected O&M cost during the first year of operation (2010/11) is approximately \$3.6 Million and will be divided among the participants based upon the percentage of facilities used.

Project Construction Contracts:

The construction of the main facilities is divided into five separate contracts (Figure 1 shows overall project map). These contracts are:

- #1. Intake – Intake facilities near the dam at Lake Nacimiento
- #2. Facilities – Three pump stations, three tanks and the Supervisory Control and Data Acquisition (SCADA) system at various locations along the pipeline alignment.
- #3. Pipeline North – 22 miles of pipeline from Lake Nacimiento to Paso Robles.
- #4. Pipeline Central – 11 miles of pipeline from Paso Robles to Atascadero.
- #5. Pipeline South – 12 miles of pipeline from Atascadero to San Luis Obispo.

Bids for all construction contracts were received and opened by the District before August 16, 2007. The County Board of Supervisors awarded contracts #1, #3, #4 and #5 on August 28, 2007. Contract #2 was awarded on September 11, 2007. All awards were made to the lowest bidder. The following table summarizes these awards:

Construction Contract / Contactor	Engineer's Estimate	Contactor's Bid	Variance From Estimate
#1 – Intake / James W. Fowler Co.	\$13.1 million	\$20.8 million	\$7.7 million
#2 – Facilities / Mountain Cascade Inc.	\$30.8 million	\$25.6 million	(\$5.2 million)
#3 – Pipeline North / Teichert Construction	\$49.8 million	\$38.4 million	(\$11.4 million)
#4 – Pipeline Central / Whitaker Contractors	\$27.1 million	\$22.0 million	(\$5.1 million)
#5 – Pipeline South / Southern California Pipeline	\$18.2 million	\$16.3 million	(\$1.9 million)
TOTAL:	\$139.0 million	\$123.1 million	(\$15.9 million)

Note: Contract amounts do not include design, environmental and other non-construction related costs

As can be seen from this table, the costs for all but one of the contracts are below the “Engineer’s Estimate”. The total construction cost for these facilities is almost **\$16 million** less than the estimate. One important caution that should be noted is, at this point, it is unknown how many contract “change orders” will be required due to modifications to the original design and bid documents, modifications to project scope, or other unanticipated changes. The project has budgeted approximately \$12 million in contingency funds to address this possibility as well as to cover any construction and/or professional services changes. Unplanned changes during construction are very difficult to anticipate for such a large project and any major changes could significantly impact the final project cost.

Project Schedule:

The project is currently meeting its projected schedule. The “Groundbreaking Ceremony” celebrating the start of project construction was held on October 25, 2007. If there are no serious construction problems, the project should be completed in 2010. The current schedule for project construction is contained in ATTACHMENT D.

Right-of-Way acquisition is one of the key elements of the design phase that is not yet completed. The project passes through more than fifty-four parcels that are either publicly or privately owned (42 private & 12 public). Access to most of these parcels has already been negotiated. However, a few owners have refused the County’s negotiated offer and the County will have to exercise its power of eminent domain. This is a legal process that requires land owners to grant a governmental agency ownership or property rights in return for cash settlement based upon the fair market value of the property involved. It is expected that all right-of-way issues will be resolved in time to allow construction to proceed on schedule. However, as is the case with any legal proceeding, appeals and other factors could delay project completion.

Project Impacts:

The most obvious impact to the citizens in the participating agencies is the cost of the project. All of the participants, with the exception of Cayucos, will issue bonds to fund their share of the project’s design and construction costs. In addition to the base cost, participants will have to pay

the applicable interest over the term of the bond (typically 30 years). Agencies will fund this cost by significantly increasing the water connection fees for new construction, by raising customer water rates, or both. Starting in 2010, participants will also have to fund their share of the approximately \$3.6 million of operation and maintenance costs. These costs will most likely be accomplished through increased water rates.

Another obvious impact is that, in the short term, water shortages that would have occurred without the project will be postponed. It is important to note this is **not** a permanent solution. The project's Environmental Impact Report (EIR) states that by 2020, even **with** the project, Paso Robles, Atascadero, and San Luis Obispo will have "water demands in excess of supplies" and "these entities would either increase groundwater pumping or would need to develop other supplemental water supplies."

The EIR also states that the project may have a "growth inducement" effect. In areas where water availability is a growth limiting factor, the additional water availability provided by the project may encourage greater growth than currently projected. This could result in a sooner than expected water "deficit". Most of the agency representatives interviewed said that increased growth was not a key factor in their choice to participate in the project. However, private developers may use the additional supply as an argument to increase growth. It will be up to the elected officials in each participating agency to decide whether to use the additional water provided by the project to increase short term growth, or use it to extend the time that current growths rate can be sustained.

Landowners who are required under eminent domain to allow the project to use their land will obviously also be impacted (see last paragraph under "Project Schedule"). Future uses for land adjacent to the pipeline or other project facilities will be restricted. While the legally determined monetary settlements should fully compensate owners for any losses, the process of having private property taken by the government is often not fully understood or well tolerated by many citizens.

FINDINGS

1. This is the largest public works project ever attempted in San Luis Obispo County. The size and complexity of the project requires a great deal of dedication and technical ability. Throughout its investigation, the Grand Jury was impressed by the capabilities and professionalism of those involved in the project's planning and implementation.
2. Due to the current economic environment, the project was able to award four of its five major construction contracts for less than the original cost estimates. This saves the project almost \$16 million.
3. Even with the savings noted in Finding #2, the currently projected overall project cost has increased approximately 19% from the project's original 2004 budget projection.
4. While the project is important in addressing the short term needs of the participating agencies, it is not a permanent solution. All local governments in the County will need to develop long term strategies to address future water needs and threats to current supplies. The Jury found that many of the existing water resource planning documents are outdated.
5. Many consumers will be facing significant water rate increases to pay for the project's construction and ongoing operation and maintenance. Most of the agencies involved in the project will be combining project costs with costs for their current water systems. Over time, it may be difficult for consumers to identify which portion of their water bill is being used to actually fund the project.
6. The project may have "growth inducing" effects and the governing bodies for the participating agencies will have to recognize and address this potential.
7. The project will have to use eminent domain to acquire portions of the necessary right-of-way. Project managers will have to address citizen resentment inherent in this legal process to avoid the potential for project delays.

Commendation

A great deal of energy and commitment is required to overcome the myriad of technical and political challenges that are inherent with any project of this magnitude. As mentioned in the “Method” section of this report, the Grand Jury met with many of those who were responsible for moving this project from a concept to an actuality. Throughout the process of taking testimony and gathering background information, the Jury was continually impressed by the technical competence and enthusiasm for the project demonstrated by these individuals. While it may be several years before it can be determined whether or not the project is a complete success, the Jury commends the participating governmental agencies, project staff and consultants for their work thus far. (Finding #1)

Recommendations

1. Because this project only addresses the area’s short term water requirements, the County and other participating agencies should frequently review and update their strategic water resource plans. These plans also need to address the “growth inducing” effects of increasing available resources. (Findings #4 & #6)
2. For customers to adequately evaluate the advantages and costs of projects like this one, participating agencies should insure that their water customers can readily identify which portions of their utility bills are attributable to the project. (Finding #5)

Required Responses

Responses to Recommendations #1 & #2 are required from:

- City of San Luis Obispo, Mayor and City Council
- City of Paso Robles, Mayor and City Council
- Templeton Community Services District (CSD), CSD Board of Directors

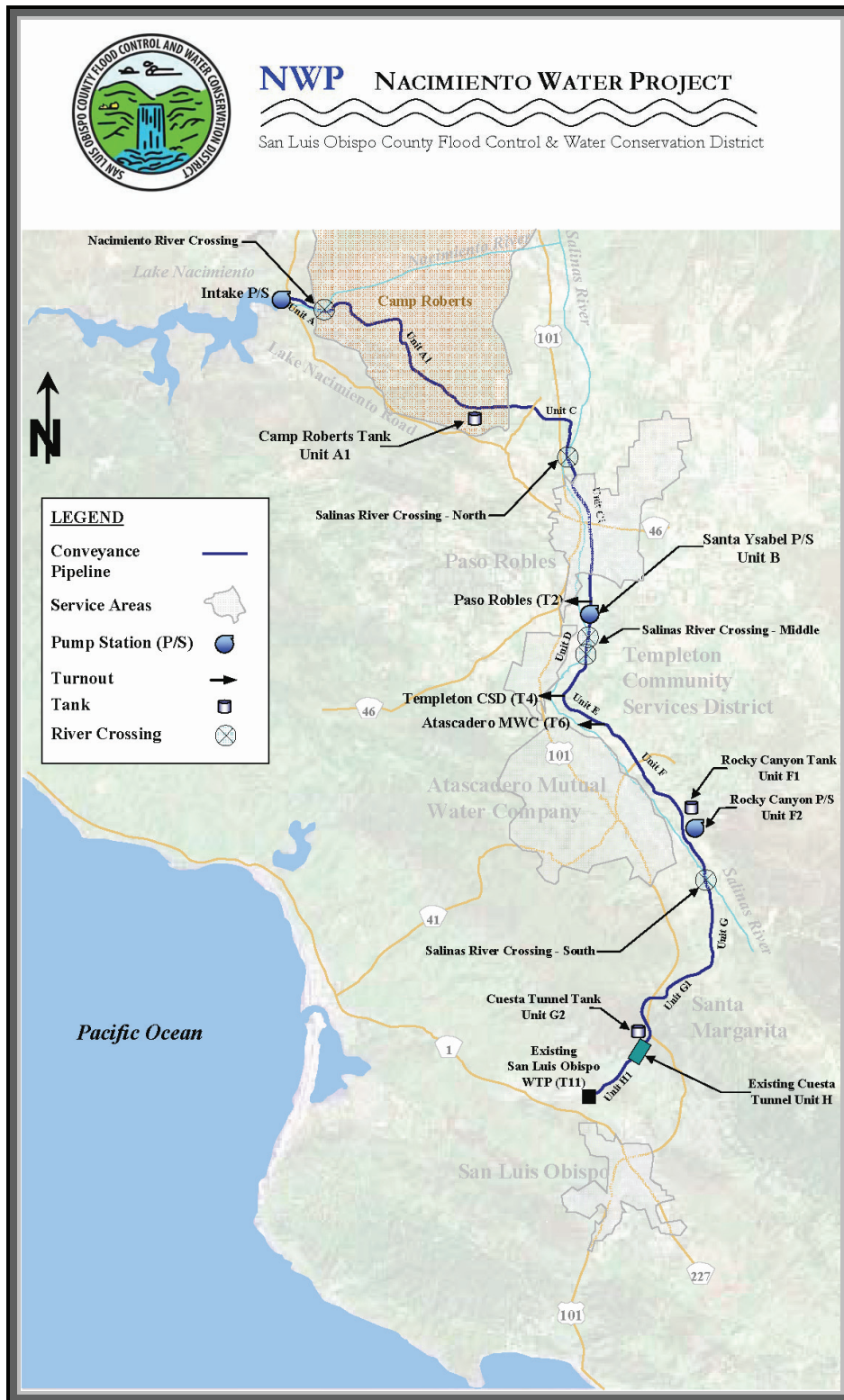
- City of Atascadero, Mayor and City Council
- San Luis Obispo County, Board of Supervisors

All responses shall be submitted to the Presiding Judge at the Superior Court of California by **August 18, 2008**. Please provide a copy to the Grand Jury as well. The mailing addresses for delivery are:

Presiding Judge	Grand Jury
Presiding Judge Martin Tangeman Superior Court of California 1035 Palm, Room 385 San Luis Obispo, CA 93408	San Luis Obispo County Grand Jury P.O. Box 4910 San Luis Obispo, CA 93403

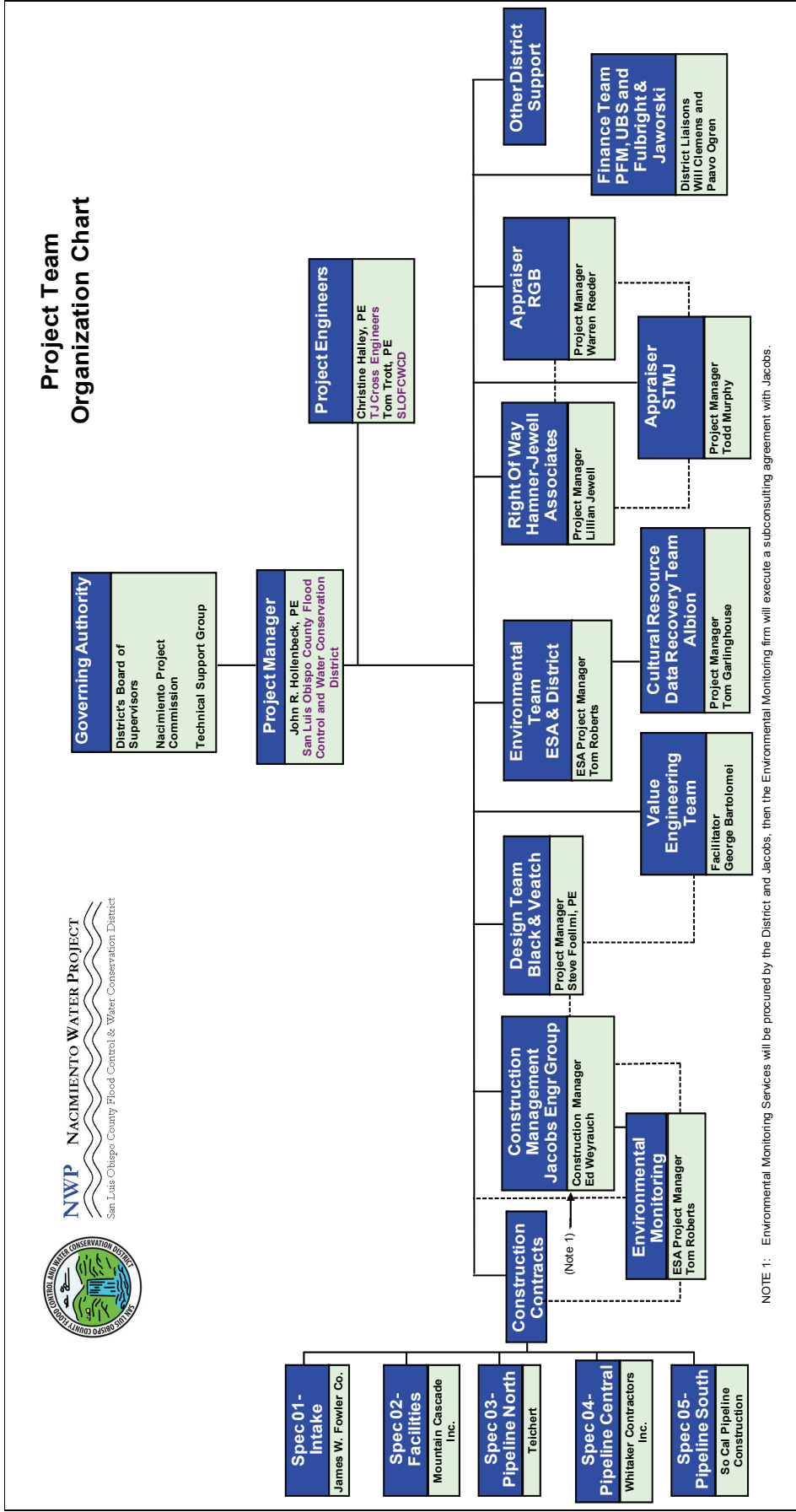
ATTACHMENT A

NACIMIENTO WATER PROJECT MAP



ATTACHMENT B

NACIMIENTO WATER PROJECT – PROJECT TEAM



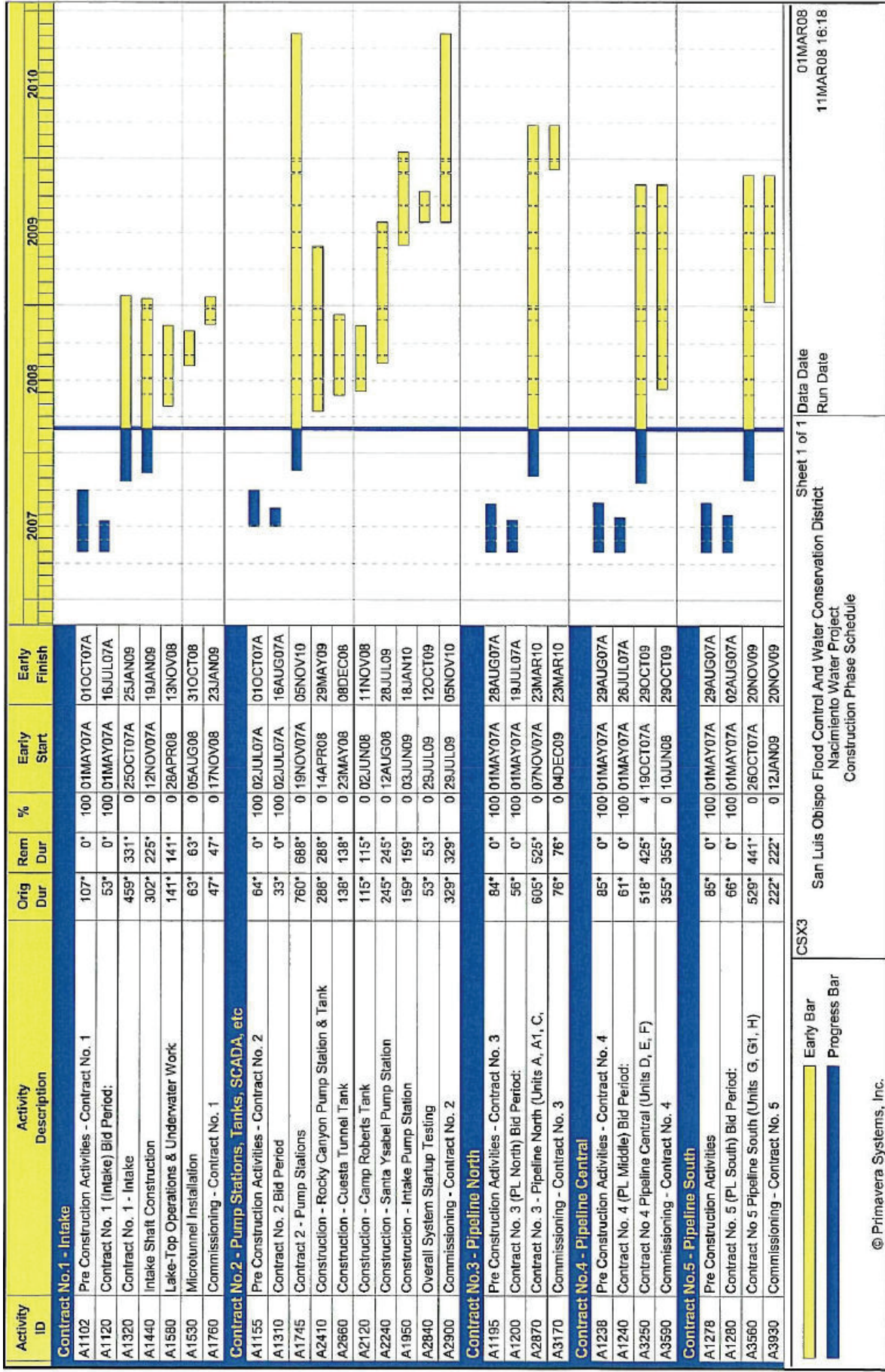
ATTACHMENT C

Nacimiento Project Budget (as of February 26, 2008)

	Revised Budget Approved August 2007	Cost to Date thru 01/31/08	Remaining Budget	Projected Total Cost as of 8/8/07	Comments
Design Phase Costs					
Project Management	\$2,341,564	\$2,298,385	\$43,178	\$2,341,564	Includes County Project Manager, VE, support staff, TJCross support, finance team, legal fees, and County overhead allocation during Design Phase. Adjusted to better align with actual costs to date.
AD-15 Process (Preparation for Bidding)	\$93,000	\$137,359	(\$44,359)	\$93,000	Reproduction and mailing of Contract Docs, addenda, and other bid phase correspondence, utilizing ASAP Reprographics.
Environmental	\$1,415,000	\$1,117,730	\$297,270	\$1,415,000	ESA-Includes design assistance, permit applications, agency coordination. Amendments authorized for EIR Addendum and extended
PG&E Service Extension	\$100,000	\$5,170	\$94,830	\$100,000	Estimate to extend power to proposed facilities. Loadshedding approach less capital costly.
Right of Way Consulting Services	\$1,375,000	\$863,722	\$511,278	\$1,375,000	Hamner-Jewell contract plus allowance for appraisal, title reports by others, and Special Counsel. Includes court hearings for orders of possession.
Property Acquisition	\$2,500,000	\$442,156	\$2,057,844	\$2,500,000	8/06-Revised acquisition budget.
Construction Mgt/Constructability Review	\$650,000	\$627,081	\$22,919	\$650,000	Initial CM services authorization est Nov 2006 @ \$735,000. Reduced to \$650,000 Aug 2008 as est of expenditures during the Design Phase.
Engineering Design (Includes geotechnical, survey & Design CM)	\$9,088,800	\$9,090,872	(\$2,072)	\$9,088,800	Black and Veatch Corporation 11/06-Revised projected total. 8/07-revised back up to original budget pending Design Amendment.
Finance	\$0	\$0	\$0	\$0	PFM, UBS, and Fulbright & Jaworski support services coded to Project Management line item above.
New Participant Contribution	(\$50,000)	(\$49,040)	(\$961)	(\$50,000)	11/06-CSA 10A buy-in fee per Article 29 of the WDEC.
Design Phase Budget Reserve (NOTE 1)	\$1,386,637		\$1,386,637	\$1,386,637	
SUMMARY - DESIGN PHASE	\$18,900,001	\$14,533,435	\$4,366,564	\$18,900,001	
Construction Phase Costs					
Project Management	\$4,688,563	\$365,719	\$4,322,844	\$4,688,563	Includes District staff, County Counsel, intern support, TJ Cross support, and operator support during construction. Also includes premium for District-provided Builder's Risk Insurance and County overhead allocation.
Environmental Mitigation	\$4,500,000	\$20,311	\$4,479,689	\$4,500,000	Estimated as \$100,000 per mile for pipeline realignments, special construction techniques, and other costs incurred due to unforeseen environmental issues.
Construction Management, including Materials Testing & Surveying	\$5,835,000	\$79,188	\$5,755,812	\$5,835,000	Based on Jacobs construction management services fees.
Post-Design Services by Designer	\$3,200,000		\$3,200,000	\$3,200,000	Black & Veatch's construction phase services.
Environmental Monitoring (this work is added into Jacob's CM Agreement)	\$2,400,000		\$2,400,000	\$2,400,000	In cludes cost for cultural and biological monitors during construction including Jacobs' mgt. fee. Value negotiated with ESA per revised memo from TJ Cross (8/16/07).
Construction Contracts	\$123,876,769	\$270,000	\$123,606,769	\$123,876,769	Based on construction bidding
District Controlled Contingency Construction Phase Contingency and Reserve (NOTE 1)	\$11,113,363	\$0	\$11,113,363	\$11,113,363	Recommended contingency for construction change orders, prof. service changes, and other Project reserve. Excludes the carryover of unused Design Phase reserves.
SUMMARY - CONST. PHASE	\$155,613,695	\$735,218	\$154,878,477	\$155,613,695	
Prior Expenses					
Advance Expenditures	\$513,000	\$513,000	\$0	\$513,000	
Cuesta Tunnel	\$1,031,000	\$1,031,000	\$0	\$1,031,000	Includes construction of NWP pipeline section through Cuesta Tunnel and cost for 2003 EIR.
TOTAL PROJECT	\$176,057,696	\$16,812,652	\$159,245,041	\$176,057,696	

NOTE 1: When the Design Phase is closed, the reserves will be transferred to the Construction Phase Reserves.

ATTACHMENT D – Project Construction Schedule



CSX3
 San Luis Obispo Flood Control And Water Conservation District
 Nacimiento Water Project
 Construction Phase Schedule

Sheet 1 of 1
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