NIPOMO COMMUNITY SERVICES DISTRICT

AGENDA

NOVEMBER 15, 2000

REGULAR SESSION 10:30 A.M.
BOARD ROOM 148 S. WILSON STREET NIPOMO, CA

BOARD MEMBERS
ROBERT BLAIR, **PRESIDENT**
AL SIMON, **VICE PRESIDENT**
RICHARD MOBRAATEN, **DIRECTOR**
ALEX MENDOZA, **DIRECTOR**
MICHAEL WINN, **DIRECTOR**

STAFF
DOUGLAS JONES, **GENERAL MANAGER**
DONNA JOHNSON, **SECRETARY TO THE BOARD**
JON SEITZ, **GENERAL COUNSEL**

NOTE: All comments concerning any item on the agenda are to be directed to the Board Chairperson.

A. CALL TO ORDER AND FLAG SALUTE

B. ROLL CALL

C. PUBLIC COMMENTS PERIOD

PUBLIC COMMENTS

Any member of the public may address and ask questions of the Board relating to any matter within the Board's jurisdiction, provided the matter is not on the Board's agenda, or pending before the Board. **Presentations are limited to three (3) minutes or otherwise at the discretion of the Chair.**

D. ADMINISTRATIVE ITEMS (The following may be discussed and action may be taken by the Board.)

D-1) COUNTY'S ANNUAL RESOURCE MANAGEMENT SYSTEM (RMS)
County presentation of RMS and growth issues (Bryce Tingle & John Hand)

D-2) PROPERTY TAX EXCHANGE FOR PROPOSED ANNEX. NO. 18
Approving property tax exchange with SLO County for Annex. No. 18

D-3) REQUEST FOR ANNEXATION - TRACT 2325
Consideration to annex Tract 2325, a 55-lot development on Willow Rd. across from Black Lake Golf Course

D-4) REQUEST FOR SERVICE - APN 092-142-034
Request for water & sewer service for a 20-unit apartment development at Ave. de Amigos

D-5) REQUEST FOR SERVICE - APN 092-142-036
Request for water & sewer service for a 22-unit apartment development at Ave. de Amigos

D-6) REQUEST FOR SERVICE - D000076D/80V (GILL)
Request for water & sewer service for 6.7 acre commercial/light industrial/residential development at S. Frontage & Story

E. OTHER BUSINESS

E-1) SUPPLEMENTAL WATER SUPPLY STUDY
Review proposals to evaluate a supplemental water source for the District

E-2) DISTRICT METER FEE
Review the effective date of the increased meter fee

E-3) RIVER BLUFFS DEVELOPMENT SERVICES
Review proposed homeowners association to operate the water & sewer systems for the development

F. CONSENT AGENDA *The following items are considered routine and non-controversial by staff and may be approved by one motion if no member of the Board wishes an item be removed. If discussion is desired, the item will be removed from the Consent Agenda and will be considered separately. Questions or clarification may be made by the Board members without removal from the Consent Agenda. The recommendations for each item are noted in parenthesis.*

F-1) WARRANTS [RECOMMEND APPROVAL]

F-2) BOARD MEETING MINUTES [RECOMMEND APPROVAL]
Approval of Minutes of November 1, 2000 Regular Board meeting

F-3) INVESTMENT POLICY QUARTERLY REPORT ENDING 9/30/00 [RECOMMEND RECEIVE & FILE]

G. MANAGER'S REPORT

G-1) REFUSE COLLECTION

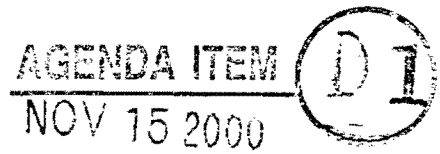
H. DIRECTORS COMMENTS

CLOSED SESSION

CONFERENCE WITH LEGAL COUNSEL GC§54956.9
a. SMVWCD vs NCSD Santa Clara County Case No. CV 770214 and all consolidated cases.
b. NCSD vs. State Dept of Health Services CV 990706, GC§54956.9
c. Litigation CPUC Appl. No. A 00-03-029 (Gov. Code §54956.9)

ADJOURN

A Special Meeting will be held November 17, 2000 at 8:30 a.m. (CONSULTANT'S WATER & WASTEWATER RATE STUDY)
Next regularly scheduled District Board meeting will be held on December 6, 2000.



TO: BOARD OF DIRECTORS

FROM: DOUG JONES

DATE: NOVEMBER 15, 2000

SLO COUNTY'S ANNUAL RESOURCE MANAGEMENT SYSTEM (RMS)

ITEM

Review of County's proposed Annual Resource Summary Report for the year 2001.

BACKGROUND

The District has received a request from Bryce Tingle to discuss the County's Resource Management System and possible growth management issues with your Honorable Board.

Attached is the RMS water quality criteria indicating the three levels of severity in which the County implements its resource management system.

RECOMMENDATION

After your Honorable Board hears the presentation from the County, they may direct staff how they may wish to proceed in this matter.

Bd2000\rms.doc

Subject: Request for agenda time on Dec. 15
To: ncsd@ix.netcom.com
Cc: jhand@co.slo.ca.us,
vholanda@co.slo.ca.us
From: btingle@co.slo.ca.us
Date: Thu, 9 Nov 2000 09:33:58 -0800
X-MIMETrack: Serialize by Router on Swan/CountyofSLO(Release 5.0.5 |September 22, 2000) at 11/09/2000 09:34:12 AM

Doug, thanks to you and John Seitz for meeting with county staff yesterday about water resource and permit issues affecting the Nipomo CSD. It was the beginning of a much needed dialog and we look forward to continuing to work together on some pretty tough issues facing the NCSD and the county.

Per our discussion late yesterday at the end of our meeting, I would like to request time on the agenda for your Board's meeting on NOV. 15. The topic would be "Presentation and discussion of County Resource Management System & Growth Management Issues." John Hand and I would be making the presentation. The purpose of our request is to have the opportunity to discuss water resource and growth issues with your Board in advance of the public hearing to be held by the County Board of Supervisors for the annual review of our Resource Management System report and the setting of the allowable growth rate for calendar year 2001.

As of this morning, the Board hearing we have advertised for Nov. 21 will be continued to December 12, 2000. This will allow staff some additional time to evaluate the issues and formulate our recommendations to the Board. Hopefully this will also allow the NCSD Board time to participate in a discussion with county staff so your concerns can be addressed in the public hearing on Dec. 12.

Please let me know if you can accommodate this late request. Thanks for your cooperation.

RESOURCE MANAGEMENT SYSTEM

ANNUAL RESOURCE SUMMARY REPORT

SAN LUIS OBISPO COUNTY DEPARTMENT OF PLANNING & BUILDING

Water

RMS WATER SUPPLY CRITERIA

Level of Severity I: *When projected water demand over the next nine years equals or exceeds the estimated dependable supply.*

Level of Severity II: *When projected water demand over the next seven years equals or exceeds the estimated dependable supply.*

Level of Severity III: *When the existing water demand equals or exceeds the dependable supply.*

TO: BOARD OF DIRECTORS

FROM: DOUG JONES

DATE: NOVEMBER 15, 2000

AGENDA ITEM D 2
NOV 15 2000

PROPERTY TAX EXCHANGE FOR PROPOSED ANNEX. NO. 18
2.5 ACRES (CYLCONE AND GRANDE)
NEWDOLL

ITEM

Approving property tax revenue exchange with SLO County for Annex. No. 18

BACKGROUND

The District has received a request to annex Tract 2392, an 8-lot 2½ acre development at Cyclone & Grande Streets. This proposed annexation will be presented for review and consideration at the next regular Board meeting.

With any proposed annexation to the District, the State Revenue & Taxation Code Sec. 99 requires the District and the County to negotiate the property tax exchange for the property being annexed into the District. Different areas have a slightly different tax rate percentage with respect to taxation. Therefore, an average of the area around the proposed annexation was taken. The percent of property tax increment that would be transferred to the District for Annexation #18 would be 6.2124%.

The District has requested LAFCO to continue this item which is scheduled for their Thursday, November 16th meeting. If the proposed annexation does not proceed, the Resolution approving the property tax exchange becomes dull and void.

Attached is Resolution 00-tax exchange is presented to your honorable Board for consideration.

RECOMMENDATION

Staff recommends that your honorable Board adopt Resolution 00-tax exchange accepting the SLO County/NCSD exchange of property tax revenues and annual tax increments for Annexation #18 at 6.2124%.

RESOLUTION NO. 00-tax neg

**RESOLUTION OF THE BOARD OF DIRECTORS
OF THE NIPOMO COMMUNITY SERVICES DISTRICT
ACCEPTING NEGOTIATED EXCHANGE OF PROPERTY TAX REVENUE
AND ANNUAL TAX INCREMENT FROM COUNTY OF SAN LUIS OBISPO
TO NIPOMO COMMUNITY SERVICES DISTRICT
FOR ANNEXATION NO. 18 (NEWDOLL)**

WHEREAS, in the case of a jurisdictional change other than a city incorporation or district formation which will alter the service area or responsibility of a local agency, Revenue and Taxation Code Section 99(b) requires that the amount of property tax revenue to be exchanged, if any, and the amount of annual tax increment to be exchanged among the affected local agencies shall be determined by negotiation; and

WHEREAS, when an independent special district is involved, the negotiations are conducted by the Board of Supervisors of the County and the Board of Directors of the District pursuant to Revenue and Taxation Code Section 99.(b)(5); and

WHEREAS, Revenue and Taxation Code Section 99.(b)(6) requires that each local agency, upon completion of negotiations, adopt resolutions whereby said local agencies agree to accept the negotiated exchange of property tax revenues and annual tax increment and requires that each local agency transmit a copy of each such resolution to the Executive Officer of the Local Agency Formation Commission; and

WHEREAS, no later than the date on which the certificate of completion of the jurisdictional change is recorded with the County Recorder, the said Executive Officer shall notify the County Auditor of the exchange of property tax revenues by transmitting a copy of said resolutions to him and the County Auditor shall thereafter make the appropriated adjustments as required by law; and

WHEREAS, the negotiations have taken place concerning the transfer of property tax revenues and annual tax increment between the County of San Luis Obispo and the Nipomo Community Services District pursuant to Section 99(a)(1) for the jurisdictional change designated as LAFCo File 9-R-00: Annexation No. 18 (Newdoll) to the Nipomo Community Services District; and

WHEREAS, the negotiating parties, to wit: Jim Grant, Assistant Administrative Officer, County of San Luis Obispo and Doug Jones, General Manager of the Nipomo Community Services District have negotiated the exchange of property tax revenue and annual tax increment between such entities as hereinafter set fourth; and

WHEREAS, it is in the public interest that such negotiated exchange of property tax revenues and annual tax increment was consummated by the Board of Supervisors on November 7, 2000; and

WHEREAS, revenue and taxation code Section 99(b)(7) provides for a 15-day renegotiation period if a proposal is modified by LAFCO.

NOW, THEREFORE, BE IT RESOLVED, DETERMINED AND ORDERED BY THE BOARD OF DIRECTORS OF THE NIPOMO COMMUNITY SERVICES DISTRICT, STATE OF CALIFORNIA, AS FOLLOWS:

1. That the recitals set forth above are true, correct and valid.

2. That the Nipomo Community Services District agrees to accept the following negotiated exchange of property tax revenues and annual tax .

   a. No base property tax revenue shall be transferred from the County of San Luis Obispo to the Nipomo Community Services District.

   b. Annual tax increment in an amount to be determined by the County Auditor, based upon the following percentage agreed to by the negotiating parties, 6.2124 percent, before the ERAF calculations, shall be transferred from the County of San Luis Obispo to the Nipomo Community Services District in the fiscal year 2001-2002 and each fiscal year thereafter.

3. Upon receipt of a certified copy of this resolution and a copy of the recorded certificate of completion, the County Auditor shall make the appropriate adjustments to property tax revenues and annual tax increment as set forth above.

4. That the Secretary to the Board of Directors is authorized and directed to transmit a certified copy of this resolution to the Executive Officer of the San Luis Obispo Local Agency Formation Commission, who shall then distribute copies thereof in the manner prescribed by law.

On the motion of Director _____ and seconded by Director _____ and on the following roll call vote, to wit:

AYES:
NOES:
ABSENT:
ABSTAIN:

the foregoing resolution is hereby adopted this 15th day of November 2000.

_____
Robert L. Blair, President
Nipomo Community Services District

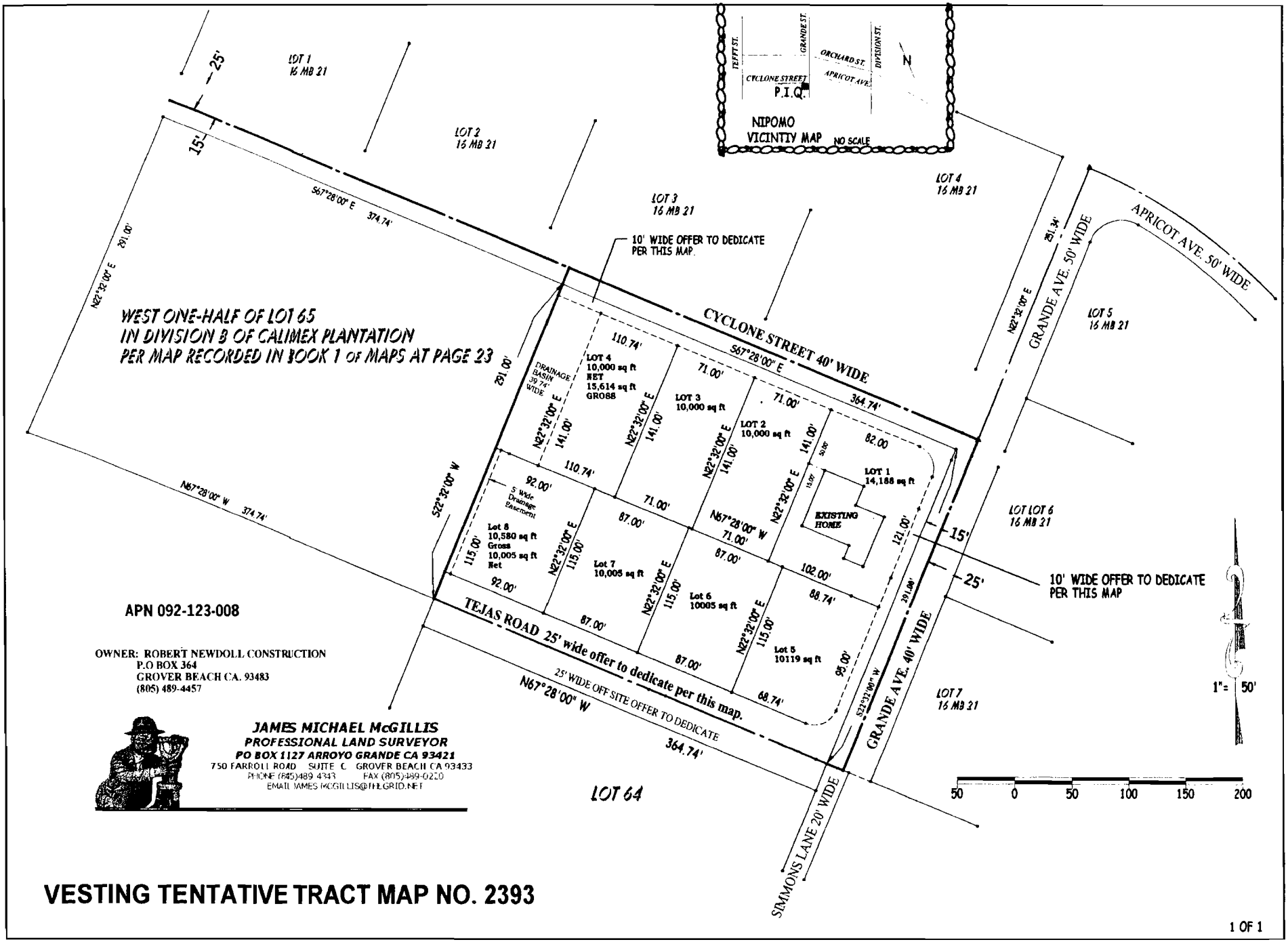
ATTEST:

_____
Donna K. Johnson
Secretary to the Board

APPROVED AS TO FORM:

_____
Jon S. Seitz
General Counsel

C:W:RES\00-tax neg.doc



APN 092-123-008

OWNER: ROBERT NEWDOLL CONSTRUCTION
P.O BOX 364
GROVER BEACH CA. 93483
(805) 489-4457

JAMES MICHAEL McGILLIS
PROFESSIONAL LAND SURVEYOR
PO BOX 1127 ARROYO GRANDE CA 93421
750 FARROLL ROAD SUITE C GROVER BEACH CA 93433
PHONE (805)489 4343 FAX (805)489-0220
EMAIL JAMES.MCGILLIS@FELGRID.NET

VESTING TENTATIVE TRACT MAP NO. 2393

1 OF 1

FIDELITY TITLE 123306

COUNTY OF SAN LUIS OBISPO BOARD OF SUPERVISORS
AGENDA ITEM TRANSMITTAL

(1) DEPARTMENT	(2) MEETING DATE	(3) CONTACT/PHONE
Administrative Office	November 7, 2000	Jim Grant, Assistant Administrative Officer (805) 781-5011

(4) SUBJECT

Submittal of a resolution accepting the exchange of property tax revenue and annual tax increment for Annexation No. 18 to the Nipomo Community Services District (Tract 2392).

(5) SUMMARY OF REQUEST

As a prerequisite to any jurisdictional change, Revenue and Taxation Code Section 99 requires affected jurisdictions to negotiate an exchange of property tax revenues. A 60-day negotiation period commended on September 26, 2000. The County Administrative Office and the Nipomo Community Services District have negotiated on behalf of their respective agencies. A resolution agreeing to the negotiated exchange of property tax revenue is presented to your Board for approval.

The affected territory is located on the southwest corner of Cyclone Street and Grande Avenue, in the community of Nipomo (map attached).

The resolution is for Annexation No. 18 to the Nipomo Community Services District (Tract 2393); LAFCO File No.: 9-R-00.

(6) RECOMMENDED ACTION

Approve the resolution accepting the exchange of property tax revenue and annual tax increment for Annexation No. 18 to the Nipomo Community Services District (Tract 2393). (Recommend Approval and Instruct Chairperson to Sign.)

(7) FUNDING SOURCE(S)	(8) CURRENT YEAR COST	(9) ANNUAL COST	(10) BUDGETED?
N/A	N/A	N/A	☐ YES ☒ N/A ☐ NO

(11) OTHER AGENCY/ADVISORY GROUP INVOLVEMENT (LIST):

The Nipomo Community Services District

(12) WILL REQUEST REQUIRE ADDITIONAL STAFF? ☒ No ☐ Yes, How Many? _____
☐ Permanent _____ ☐ Limited Term ____ ☐ Contract _____ ☐ Temporary Help _____

(13) SUPERVISOR DISTRICT(S)	(14) LOCATION MAP
1st, 2nd, 3rd, 4th, 5th, All	☒ Attached ☐ N/A
(15) AGENDA PLACEMENT	**(16) EXECUTED DOCUMENTS**
☒ Consent ☐ Hearing (Time Est. _____) ☐ Presentation ☐ Board Business (Time Est._____)	☒ Resolutions (Orig + 4 copies) ☐ Contracts (Orig + 4 copies) ☐ Ordinances (Orig + 4 copies) ☐ N/A
(17) NEED EXTRA EXECUTED COPIES?	(18) APPROPRIATION TRANSFER REQUIRED?
☐ Number: _____ ☐ Attached ☒ N/A	☐ Submitted ☐ 4/5th's Vote Required ☒ N/A

(19) ADMINISTRATIVE OFFICE REVIEW

County of San Luis Obispo

COUNTY GOVERNMENT CENTER, RM. 370 • SAN LUIS OBISPO, CALIFORNIA 93408 • (805) 781-5011

DAVID EDGE
COUNTY ADMINISTRATOR

TO: **BOARD OF SUPERVISORS**

FROM: **JIM GRANT, ASSISTANT ADMINISTRATOR OFFICER**

DATE: **NOVEMBER 7, 2000**

SUBJECT: **SUBMITTAL OF A RESOLUTION ACCEPTING THE EXCHANGE OF PROPERTY TAX REVENUE AND ANNUAL TAX INCREMENT FOR ANNEXATION NO. 18 TO THE NIPOMO COMMUNITY SERVICES DISTRICT (TRACT 2392)**

Recommendation

Approve the resolution accepting the exchange of property tax revenue and annual tax increment for Annexation No. 18 to the Nipomo Community Services District (Tract 2393)).

Discussion

As a prerequisite to any jurisdictional change, Revenue and Taxation Code Section 99 requires affected jurisdictions to negotiate an exchange of property tax revenues. A 60-day negotiation period commended on September 26, 2000. The County Administrative Office and the Nipomo Community Services District have negotiated on behalf of their respective agencies. A resolution agreeing to the negotiated exchange of property tax revenue is presented to your Board for approval.

The affected territory is located on the southwest corner of Cyclone Street and Grande Avenue, in the community of Nipomo (map attached).

The resolution is for Annexation No. 18 to the Nipomo Community Services District (Tract 2393); LAFCO File No.: 9-R-00.

Other Agency Involvement/Impact

The Nipomo Community Services District is the annexing agency.

Financial Considerations

The County will transfer 6.212400 percent of property tax increment, before the Educational Revenue Augmentation Fund (ERAF) calculation. There will not be a transfer of base.

Results

To agree to a fair and equitable exchange of property tax revenue as a result of annexations of property.

IN THE BOARD OF SUPERVISORS
COUNTY OF SAN LUIS OBISPO, STATE OF CALIFORNIA

____ day_____, 2000

PRESENT: Supervisors

ABSENT:

RESOLUTION NO. _____

RESOLUTION ACCEPTING NEGOTIATED EXCHANGE OF PROPERTY TAX REVENUE AND ANNUAL TAX INCREMENT BETWEEN THE COUNTY OF SAN LUIS OBISPO AND THE NIPOMO COMMUNITY SERVICES DISTRICT

The following resolution is hereby offered and read:

WHEREAS, in the case of a jurisdictional change other than a city incorporation or district formation which will alter the service area or responsibility of a local agency, Revenue and Taxation Code Section 99(a)(1) requires that the amount of property tax revenue to be exchanged, if any, and the amount of annual tax increment to be exchanged among the affected local agencies shall be determined by negotiation; and

WHEREAS, when a city is involved, the negotiations are conducted between the City Council and the Board of Supervisors of the County; and

WHEREAS, when a special district is involved, the negotiations are conducted by the Board of Supervisors of the County on behalf of the district or districts, unless otherwise requested by said district or districts pursuant to Revenue and Taxation Code Section 99(b)(5); and

WHEREAS, Revenue and Taxation Code Section 99(b)(6) requires that each local agency, upon completion of negotiations, adopt resolutions whereby said local agencies agree to accept the negotiated exchange of property tax revenues, if any, and annual tax increment and requires that each local agency transmit a copy of each such resolution to the Executive Officer of the Local Agency Formation Commission; and

WHEREAS, no later than the date on which the certificate of completion of the jurisdictional change is recorded with the County Recorder, the Executive Officer shall notify the County Auditor of the exchange of property tax revenues by transmitting a copy of said resolutions to him and the County Auditor shall thereafter make the appropriate adjustments as required by law; and

WHEREAS, the negotiations have taken place concerning the transfer of property tax revenues and annual tax increment between the County of San Luis Obispo and the Nipomo Community Services District pursuant to Section 99(a)(1) for the jurisdictional change designated as Annexation No. 18 (Tract 2393) ; and

WHEREAS, the negotiating party, to wit: Jim Grant, Assistant Administrative Officer, County of San Luis Obispo, on behalf of the County and Doug Jones, on behalf of the Nipomo Community Services District have negotiated the exchange of property tax revenue and annual tax increment between such entities as hereinafter set forth; and

WHEREAS, it is in the public interest that such negotiated exchange of property tax revenues and annual tax increment be consummated.

NOW, THEREFORE BE IT RESOLVED AND ORDERED by the Board of Supervisors of the County of San Luis Obispo, State of California, as follows:

1. That the recitals set forth above are true, correct and valid.

2. That the County of San Luis Obispo agrees to accept the following negotiated exchange of base property tax revenues and annual tax increment.

(a) No base property tax revenue shall be transferred from the County of San Luis Obispo to the Nipomo Community Services District.

(b) Annual tax increment shall be transferred from the County of San Luis Obispo to the Nipomo Community Services District in the fiscal year 2001-2002 and each fiscal year thereafter in the amount of 6.212400 percent before ERAF.

3. Upon receipt of a certified copy of this resolution and a copy of the recorded certificate of completion, the County Auditor shall make the appropriate adjustments to property tax revenues and annual tax increments as set forth above.

4. That the County Clerk is authorized and directed to transmit a certified copy of the resolution to the Executive Officer of the San Luis Obispo Local Agency Formation Commission, who shall then distribute copies in the manner prescribed by law.

Upon motion of Supervisor _____, seconded by Supervisor _____, and on the following roll call, to wit:

AYES:

NOES:

ABSENT:

ABSTAINING:

the foregoing resolution is hereby adopted.

_____
Chairperson of the Board of Supervisors

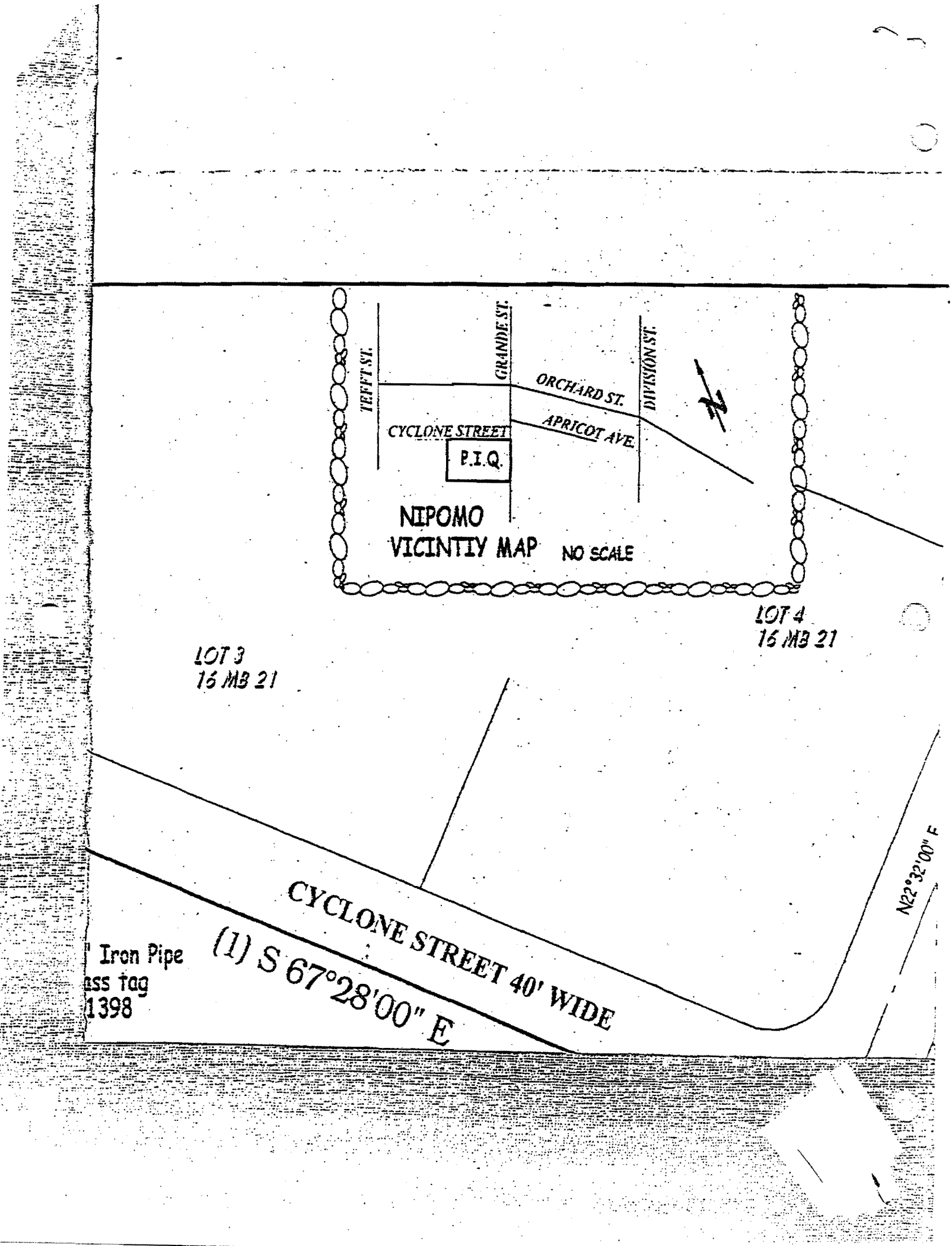
ATTEST

_____
Clerk of the Board of Supervisors

By: _____
Deputy Clerk

APPROVED AS TO FORM AND LEGAL EFFECT
JAMES B. LINDHOLM, JR.
County Counsel

By: _____
Deputy County Counsel



TO: BOARD OF DIRECTORS

FROM: DOUG JONES

DATE: NOVEMBER 15, 2000

AGENDA ITEM D 3
NOV 15 2000

REQUEST FOR ANNEXATION - TRACT 2325

ITEM

Consideration to annex Tract 2325, a 55-lot development on Willow Rd. across from Black Lake Golf Course between Sundale and Westwind. This Tract would be annexed into the Town Water Division.

BACKGROUND

The District received a request from John Martin of Martin Fellows Homes, Inc. requesting consideration of annexation into Nipomo Community Services District for Tract 2325, a 55-lot development on 160 acres fronting Willow Rd. across from Black Lake Golf Course.

The developer has presented two possible options for District service:

1. Annex to District for services. Overlying water rights would be released to the District; or
2. Developer would contract with the District for emergency fire protection for the development, whereas there would be no water consumption except during the possible emergency of a fire.

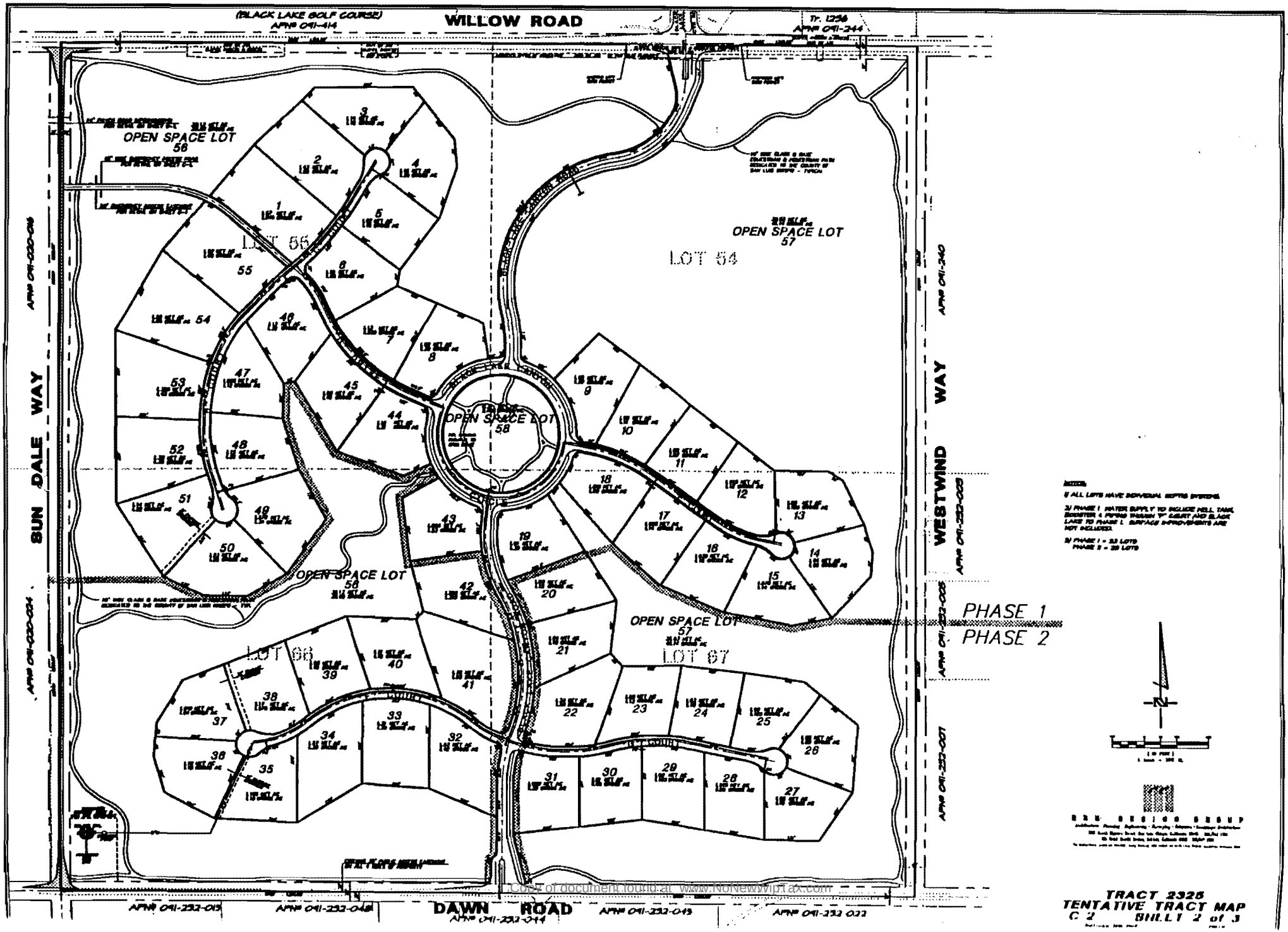
Present District policy requires applicant to bring a source of water supply with the annexation. The issue of offering overlying water rights for a water source would have to be reviewed with water counsel. There may not be available retrofits for this or future annexations, therefore the Board may direct staff to investigate the possibility of establishing an in-lieu retrofit fee.

For either option, annexing or providing fire service, would have to be approved by LAFCO.

RECOMMENDATION

Staff recommends that your Honorable Board look favorably on annexing this area to the District and evaluate the concept of dedicating overlying water rights or having a retrofit in lieu fee with respect to water usage.

Board 2000\Annex 2325.DOC



TRACT 2326
TENTATIVE TRACT MAP
C 2 SHEET 2 of 3

Martin•Farrell
Homes, Inc.

330 E. Canon Perdido St., Suite F
Santa Barbara, CA 93101

Telephone (805) 962-8299
Facsimile (805) 962-2919

September 28, 2000

Mr. Doug Jones
Nipomo Community Services District
148 South Wilson Street
Nipomo, CA 93444

RE: Tract 2325

Dear Doug,

I am writing to request your consideration of water service or at least of emergency water service availability for the subject tract. This project consists of 55 one-acre lots on 160 acres bounded by Willow, Sundale, Dawn and Westwind. The project was approved by the County in June, 2000. The water system is proposed to be a private community system and wastewater disposal is proposed to be from septic tanks.

I have attached a letter from County Environmental Health regarding their concern of our using a private water system when we are adjacent to the NCSD service area boundary. They would very much like us to join NCSD if at all possible. If it is not possible, the County will in no way attempt to block us from using our own well, but they will require a letter from you stating that service is not available through NCSD.

As you and I have discussed in the past, we would very much like to connect to NCSD rather than install our own water system. Unfortunately, the NCSD policy is to allow annexations only if the property brings with it a water source. As you know, our property has no historic water use although it is clearly in a geographic area where groundwater is readily available to us. In our situation, the result of the historic use policy is, in my view, undesirable for NCSD because it is better for a public water district to serve new development that will otherwise be drawing water from the same source NCSD receives it.

I propose two items for your consideration, and I would appreciate it if you would schedule this request before your Board at your earliest opportunity:

1. Consider an amendment to your policy that would allow properties that overly the basin and are adjacent to the District boundary to annex subject to the property owner releasing his overlying-owner's water rights to the District. We would like to join the District if we are given the opportunity and if conditions of annexation are reasonable.

2. If the above is not possible, allow this project to contract with the District for an emergency tie-in for the purpose of allowing fire protection standards to be met without the large on-site storage capacity that would otherwise be necessary.

Thank you for your consideration of this proposal. We are in the process of preparing our final engineering at this time, including the on-site water system design. I would appreciate your prompt response.

Sincerely,

JON MARTIN

cc: Laurie Salo, County Environmental Health
Tim Walters, RRM Design

9-45

COUNTY OF SAN LUIS OBISPO
HEALTH AGENCY
PUBLIC HEALTH DEPARTMENT
Environmental Health Division
2156 Sierra Way • P.O. Box 1489
San Luis Obispo, California 93406-1489
Phone: (805) 781-5544 FAX: (805) 781-4211

Susan G. Zepeda, Ph.D.
Health Agency Director

Gregory Thomas, M.D., M.P.H.
Health Officer

Curtis A. Batson, R.E.H.S.
Director

August 13, 1999

AUG 16 1999

RRM Design Group
3701 S. Higuera Street, Ste #200
San Luis Obispo, CA 93401

ATTN: ALLISON DONATELLO
RE: TENTATIVE TRACT MAP 2325 (HANDEL)/L.U. #788

Water Supply

This office is in receipt of on-site water well information, compiled by Timothy Cleath. Said information is considered satisfactory **preliminary** evidence of water for the above referenced tract.

Comprehensive water well testing information will be required prior to approving the map for recordation.

Please be advised that this office has concerns via the proposal to create a new mutual water company in close proximity to existing Nipomo Community Service District facilities.

Wastewater Disposal

Individual wastewater disposal systems, designed and installed to meet local and State requirements, should adequately serve the parcels. Soil borings and percolation tests will be required on each lot.

Also, be advised that this office does have concerns with the proposal to utilize individual wastewater disposal systems, again, where the Nipomo Community Service District sewer facilities are located so close to the project.

Tract 2325 is approved for Environmental Health subdivision map processing.

Laurie Salo

LAURIE A. SALO, R.E.H.S.
Senior Environmental Health Specialist
Land Use Section

c: Jay Johnson, Co, Planning

TO: BOARD OF DIRECTORS

FROM: DOUG JONES

DATE: NOVEMBER 15, 2000

AGENDA ITEM D 4
NOV 15 2000

REQUEST FOR SERVICE
APN 092-142-034

ITEM

Request for water & sewer service for a 20-unit apartment development at Ave. de Amigos

BACKGROUND

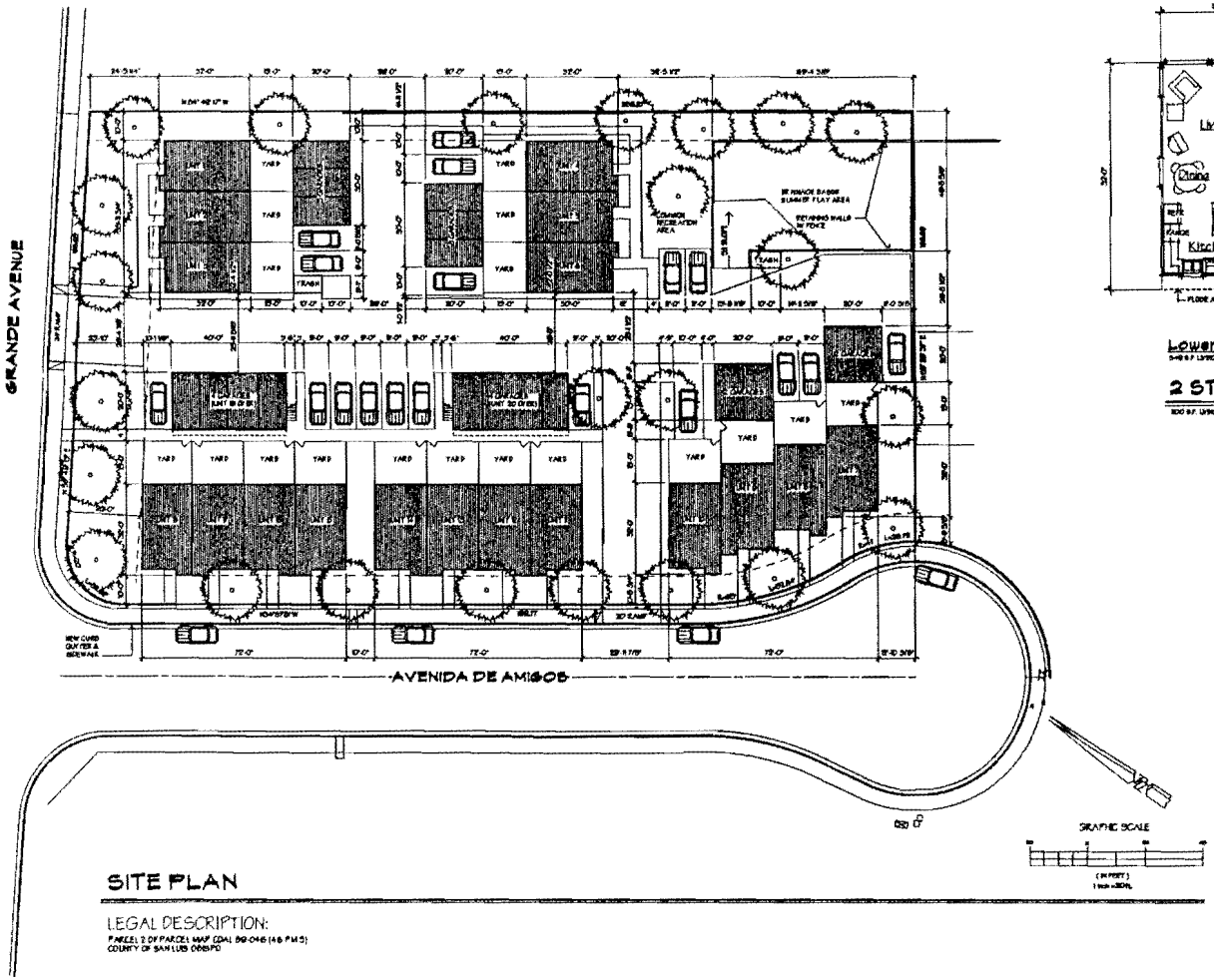
The District has received a request from Mark Vasquez from Norman and Vasquez and Assoc. for water and sewer service to a 20-unit apartment complex on Ave de Amigos off of Division Street. The Board may issue an Intent to Serve letter with the following conditions:

1. Enter into a Plan Check and Inspection Agreement and pay the appropriate fees.
2. Submit improvement plans in accordance with the District Standards and Specifications for review and approval.
3. Pay all appropriate District water, sewer and other fees associated with this development.
4. Construct the improvements required and submit the following:
   a. Reproducible "As Builts" - A paper copy and digital format disk (Auto Cad) which includes engineer, developer, tract number and water improvements
   b. Offer of Dedication
   c. Engineer's Certification
   d. A summary of all water and sewer improvement costs
5. This Intent-to-Serve Letter will expire two years from date of issuance.

RECOMMENDATION

Staff recommends that your honorable Board approve an Intent to Serve letter for the 20-unit apartment complex on Ave de Amigos off of Division Street, known as APN 092-142-034.

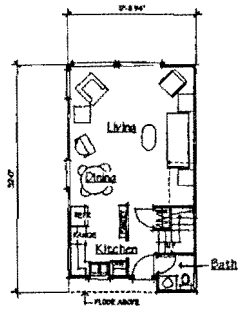
Board 2000\Intent 092-142-034.DOC



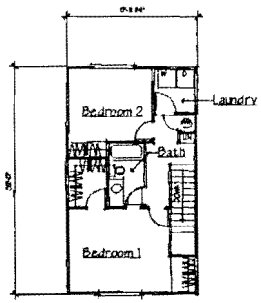
SITE PLAN

LEGAL DESCRIPTION:

PARCEL 2 OF PARCEL MAP (DAL 89-046 (46 P.M.S)
COUNTY OF SAN LUIS OBISPO

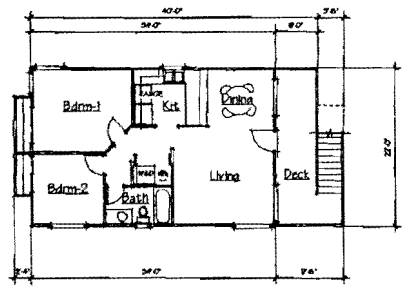


Lower Floor Layout



Upper Floor Layout

2 STORY UNIT LAYOUT 1/8" = 1'-0"



SINGLE LEVEL UNIT LAYOUT 1/8" = 1'-0"

PROJECT DATA

ZONING	RESIDENTIAL MULTI-FAMILY MEDIUM INTENSITY
LOT AREA	48,709 S.F.
MAXIMUM BLDG. AREA:	40% (22,000 S.F.)
BUILDING AREA SHOWN:	40% (19,582 S.F.)
MAXIMUM HEIGHT	35 FT.
HEIGHT SHOWN	33 FT. (APPROX.)
PARKING REQUIRED:	
1.5 SPACES PER UNIT = 1 &	31 SPACES
1 COVERT SPACE PER 4 UNIT	9 SPACES
PARKING SHOWN:	18 SCAR GARAGES & 22 OPEN SPACES
MINIMUM OPEN AREA:	40% (22,000 S.F.)
OPEN AREA SHOWN:	60% (29,040 S.F.)
SETBACKS REQUIRED:	FRONT = 20 SIDE = 5 & 10 REAR = 10
SETBACKS SHOWN:	FRONT = 20 SIDE = 10 REAR = 10

REVISIONS | BY

Norman & Vasquez Associates
Commercial Developments and Planned Residential Specialists
371 West Branch - Suite D
Arroyo Grande, CA 93420
James E. Norman, Architect
(805) 489-

A 20 Unit Apartment Complex

Arroyo de Amigos, Nipomo, California

Owner

Date: OCT '00
Scale: 1" = 20'
Drawn:
Approved:
Job: 20002
Sheet: A-0

Norman & Vasquez Associates
101 West Branch Street, Suite 12
Arroyo Grande, California 93420
(805) 481-5645

James R. Norman, Architect
Mark Vasquez Associate

Nipomo Community Services District
148 S. Wilson
Nipomo, California 93444
(805) 929-1133
ATTN: Mr. Doug Jones

Oct 24, 2000

RE: 20 Unit Apartment Complex, Avenida De Amigos APN 092-142-034

Mr. Jones,

Attached is the preliminary design plan for this project and reductions for your use at Board level. Please review the enclosed documents and provide a Intent to serve letter for our use in County Development Permit approvals.

If you have any further questions, please do not hesitate to contact me to discuss the project.

Sincerely,

Mark Vasquez, Project Coordinator

Attachments: 1 set Project plans
1 set 8 1/2 x 11 reductions

RECEIVED
OCT 25 2000

TO: BOARD OF DIRECTORS

FROM: DOUG JONES

DATE: NOVEMBER 15, 2000

AGENDA ITEM D 5
NOV 15 2000

REQUEST FOR SERVICE
APN 092-142-036

ITEM

Request for water & sewer service for a 22-unit apartment development at Ave. de Amigos

BACKGROUND

The District has received a request from Mark Vasquez from Norman and Vasquez and Assoc. for water and sewer service to a 22-unit apartment complex on Ave de Amigos off of Division Street. The Board may issue an Intent to Serve letter with the following conditions:

1. Enter into a Plan Check and Inspection Agreement and pay the appropriate fees.
2. Submit improvement plans in accordance with the District Standards and Specifications for review and approval.
3. Pay all appropriate District water, sewer and other fees associated with this development.
4. Construct the improvements required and submit the following:
   a. Reproducible "As Builts" - A paper copy and digital format disk (Auto Cad) which includes engineer, developer, tract number and water improvements
   b. Offer of Dedication
   c. Engineer's Certification
   d. A summary of all water and sewer improvement costs
5. This Intent-to-Serve Letter will expire two years from date of issuance.

RECOMMENDATION

Staff recommends that your honorable Board approve an Intent to Serve letter for the 22-unit apartment complex on Ave de Amigos off of Division Street, known as APN 092-142-036.

Board 2000\Intent 092-142-036.DOC

Norman & Vasquez Associates
101 West Branch Street, Suite 12
Arroyo Grande, California 93420
(805) 481-5645

James R. Norman, Architect
Mark Vasquez Associate

Nipomo Community Services District
148 S. Wilson
Nipomo, California 93444
(805) 929-1133
ATTN: Mr. Doug Jones

Oct 24, 2000

RE: 22 Unit Apartment Complex, Avenida De Amigos APN 092-142-036

Mr. Jones,

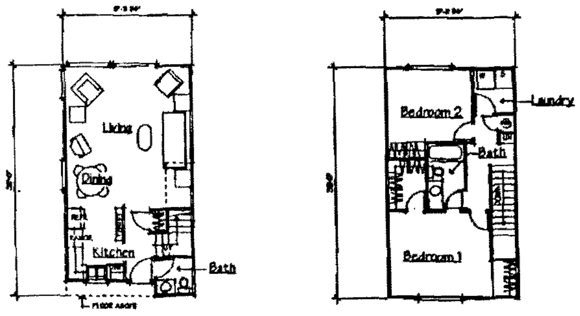
Attached is the preliminary design plan for this project and reductions for your use at Board level. Please review the enclosed documents and provide a intent to serve letter for our use in County Development Permit approvals.

If you have any further questions, please do not hesitate to contact me to discuss the project.

Sincerely,

Mark Vasquez, Project Coordinator

Attachments: 1 set Project plans
1 set 8 1/2 x 11 reductions



Lower Floor Layout

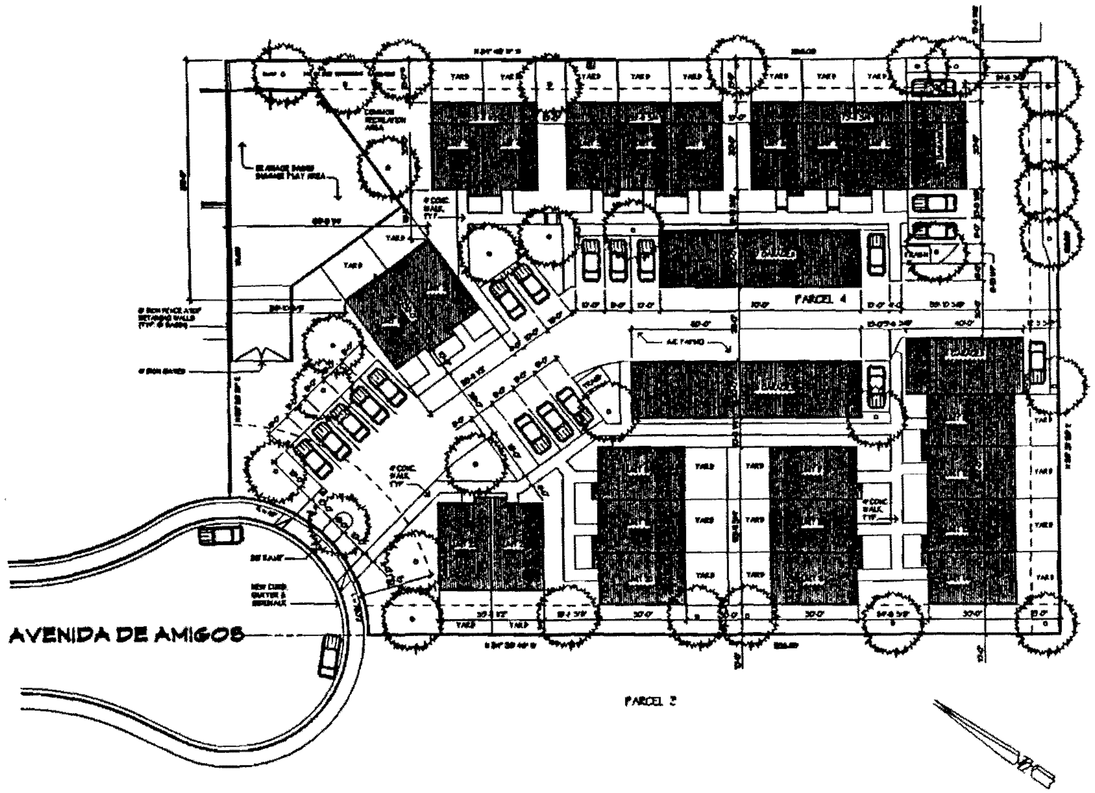
Upper Floor Layout

UNIT LAYOUT

1/8" = 1'-0"

PROJECT DATA

ZONING:	RESIDENTIAL MULTI-FAMILY MEDIUM INTENSITY
LOT AREA:	[illegible] S.F.
MAXIMUM BLDG. AREA:	[illegible]
BUILDING AREA SHOWN:	[illegible]
MAXIMUM HEIGHT:	35 FT.
HEIGHT SHOWN:	25 FT. (APPROX.)
PARKING REQUIRED:	
1.5 SPACES PER UNIT +1 &	[illegible] SPACES
1 GUEST SPACE PER 4 UNITS	[illegible] SPACES
PARKING SHOWN:	[illegible] GARAGES & [illegible] OPEN SPACES
MINIMUM OPEN AREA:	[illegible]
OPEN AREA SHOWN:	[illegible]
SETBACKS REQUIRED:	FRONT - [illegible] SIDE - [illegible] REAR - [illegible]
SETBACKS SHOWN:	FRONT - [illegible] SIDE - [illegible] REAR - [illegible]



SITE PLAN

LEGAL DESCRIPTION:

Norman & Vasquez Associates

Commercial Development and Planned Residential Specialists

A 22 Unit Apartment Complex

Avenida de Amigos, Nipomo, California

OCT 00

1" = 20'

20002

A-0

TO: BOARD OF DIRECTORS

FROM: DOUG JONES

DATE: NOVEMBER 15, 2000

AGENDA ITEM D 6
NOV 15 2000

REQUEST FOR SERVICE - D000076D/80V (GILL)

ITEM

Request for water & sewer service for 6.7 acre commercial/light industrial/residential development at S. Frontage & Story

BACKGROUND

The District has received a request from Gordon Gill for a 6.7 acre development on S. Frontage at Story St. The proposed development has seven (7) residential lots and seven (7) buildings for commercial or light industrial use. The Board may issue an Intent to Serve letter with the following conditions:

1. Enter into a Plan Check and Inspection Agreement and pay the appropriate fees.
2. Submit improvement plans in accordance with the District Standards and Specifications for review and approval.
3. Pay all appropriate District water, sewer and other fees associated with this development.
4. Construct the improvements required and submit the following:
   a. Reproducible "As Builts" - A paper copy and digital format disk (Auto Cad) which includes engineer, developer, tract number and water improvements
   b. Offer of Dedication
   c. Engineer's Certification
   d. A summary of all water and sewer improvement costs
5. This Intent-to-Serve Letter will expire two years from date of issuance.

RECOMMENDATION

Staff recommends that your honorable Board approve an Intent to Serve letter for the 6.7 acre commercial/light industrial/residential development at S. Frontage & Story with the above mentioned conditions.

Board 2000\Intent D000076D/80V (GILL).DOC

GORDON GILL ASSOCIATES

October 24, 2000

Mr. Douglas Jones, General Manager
Nipomo Community Services District
148 S. Wilson Ave.
Nipomo, CA 93449

Re: 6.7 Acre Commercial Services/Light Industrial/
Single Family Home Development on
South Frontage Road, Nipomo
SLO Co Planning Projects: D0000760 and D000080V

Dear Mr. Jones:

We have submitted a Land Use Application to the County of San Luis Obispo and Variance Form fro the development of this site. The County has requested a Will Serve Letter for water and sewer service. No engineering has been started as we are not sure how the County will react to our Variance Application because of a billboard on the site.

Attached is a Preliminary Site Plan showing development of approximately 67,370 SF of commercial floor space and seven residential lots.

Once we have a variance approval on the billboard, we will start our engineering on the site.

Thank you for your assistance.

Sincerely,

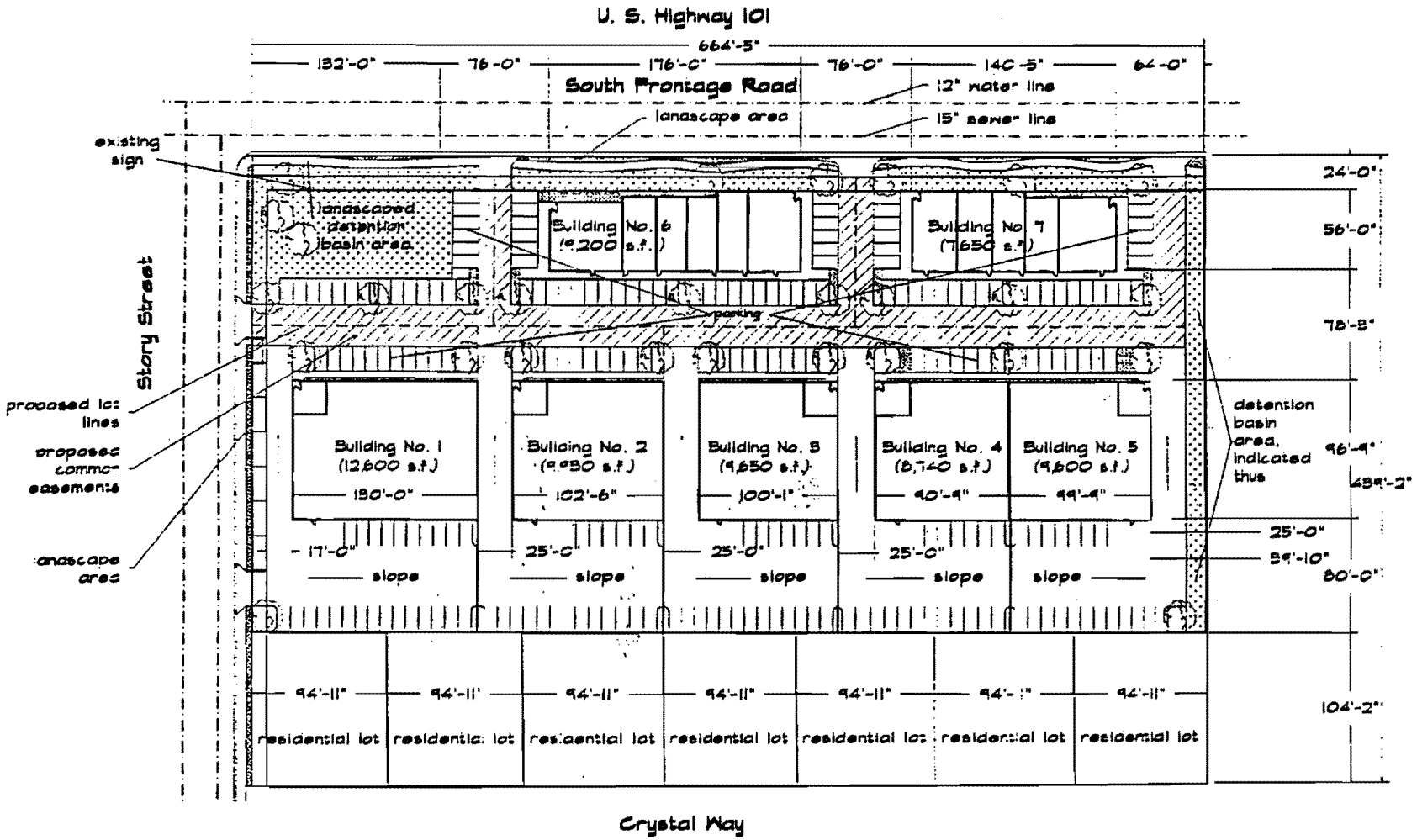
Gordon Gill
President

GG:aeg

Attachment

OCT 2000

1010 SO. BROADWAY, SUITE G • SANTA MARIA, CALIFORNIA 93454 • PHONE/FAX (805) 922-2445

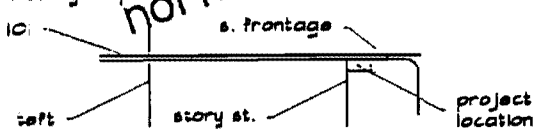


Schematic Site Plan

Summary:
Commercial Service & Light Industrial: 67,370 s.f.
Parking: 297
Residential lots: 7 (approx. 10,000 s.f. ea.)
Site area: approx. 6.7 acres

Legal Description:
Parcel No.: PTN Lot 22
Zoning: C-3 Commercial

Vicinity Map



not for construction

pacific architecture

Meyer Asset Mang't.

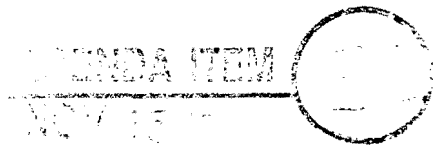
Site Plan

P5.g

TO: BOARD OF DIRECTORS

FROM: DOUG JONES

DATE: NOVEMBER 15, 2000



SUPPLEMENTAL WATER SUPPLY STUDY

ITEM

Review proposals to evaluate a supplemental water source for the District

BACKGROUND

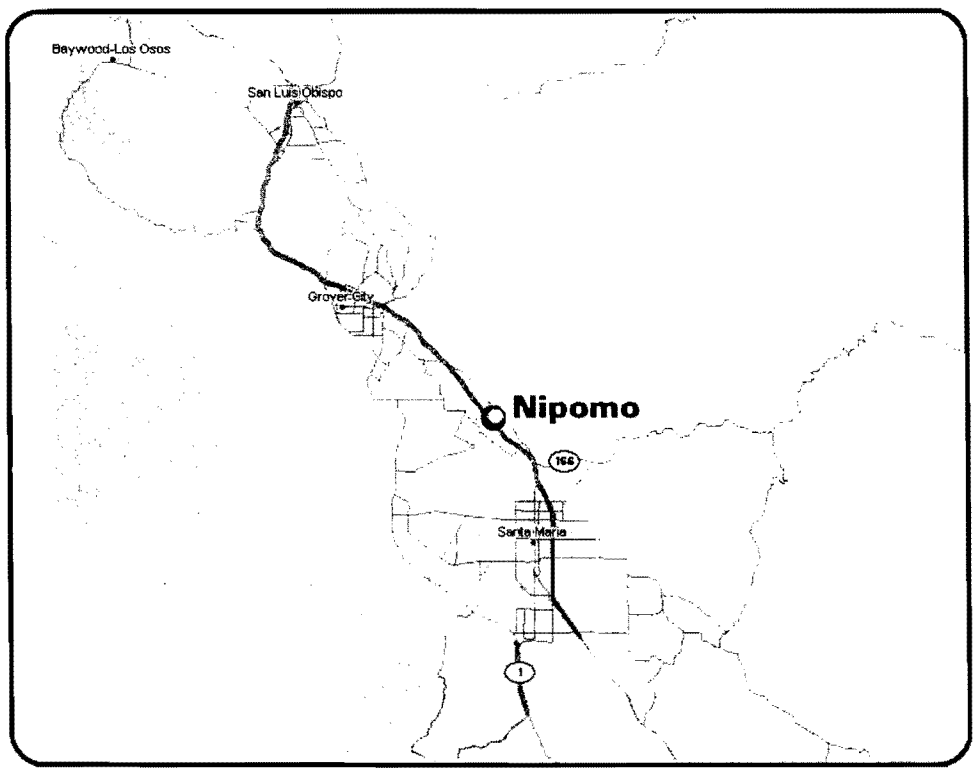
Proposals were sent to 10 engineering firms to evaluate the availability of supplemental water supply for the District. Proposals were received from Kennedy/Jenks Consultants for $34,400 and Boyle Engineering for $49,980.00. Correspondence was received from several engineering firms declining to submit proposals. The water committee, Director Blair and Director Simon received copies of the proposals for review and comment.

RECOMMENDATION

Staff recommends that your honorable Board award the contract to Kennedy/Jenks Consultants to perform the evaluation of the availability of supplemental water supply for the District.

Board 2000/Award water study.DOC

Evaluating a Supplemental Water Supply



Nipomo Community Services District

October 30, 2000

Kennedy/Jenks Consultants

Engineers & Scientists

Kennedy/Jenks Consultants

Engineers and Scientists

1000 Hill Road, Suite 200
Ventura, California 93003
805-658-0607
FAX 805-650-1522

27 October 2000

Mr. Doug Jones
General Manager
Nipomo Community Services District
148 South Wilson Street
P.O. Box 325
Nipomo, CA 93444

Subject: Proposal for Consulting Services
Evaluation of a Supplemental Water Supply

Dear Mr. Jones:

In response to the Nipomo Community Services District's (District) Request for Proposal, Kennedy/Jenks Consultants is pleased to submit this proposal to prepare an Evaluation of a Supplemental Water Supply.

We believe that our proposal offers the following benefits to the District:

- **Local Knowledge:** Kennedy/Jenks has added Jim Garing, of Garing, Taylor and Associates to our team. Jim has been the District's District Engineer since 1992 and will help facilitate the preparation of the evaluation and offer the insights of local issues to the various supply sources identified.

- **Specialized Technical Expertise:** Our project team has recognized local and state expertise in the key technical areas of State Water Project, reclaimed water, desalination, oil-field reclaimed water and water supply studies. This in-depth expertise is available from Kennedy/Jenks' employee base, not from sub-consultants.

- **Interactive Decision-Making:** We have scheduled workshops at key decision points that will facilitate communication between the District and Kennedy/Jenks and keep the District actively involved in the progress of the evaluation.

- **Effective Project Management:** In addition to our team's familiarity with local issues and our depth of technical expertise, our proven project management tools and commitment to ongoing communication will provide the project control necessary to meet schedule and budget objectives and provide a comprehensive evaluation.

We appreciate this opportunity to submit our proposal to the District and look forward to meeting with you to discuss our qualifications and proposal. Please contact Sachi Itagaki, Project Manager at 650-852-2817 or me at 805-658-0607 if you have any questions.

Very truly yours,

KENNEDY/JENKS CONSULTANTS

Lynn M. Takaichi
Chairman

Enclosure

cc: Jim Garing, GTA
Sachi Itagaki, K/J

Nipomo Community Services District
Evaluation of Supplemental Water Supply

Kennedy/Jenks Consultants
1000 Hill Road, Suite 200
Ventura, California 93003
Lynn Takaichi, Project Director
Sachi Itagaki, Project Manager
October 27, 2000

Table of Contents

PROJECT UNDERSTANDING

Nipomo Community Services District (District) currently delivers approximately 2,200 acre-feet (AF) a year of groundwater from the Santa Maria Groundwater Basin to its customers. The Santa Maria Groundwater Basin is in a state of overdraft and is undergoing the adjudication process. The District anticipates the need for at least an additional 2,000 AF/year of water to meet future needs. The last water supply study was conducted in 1994.

The District has identified four potential water sources that could meet their water supply needs including:

1) State Water Project water,
2) Reclaimed municipal wastewater from the South County Sanitation District in Oceano or other sources,
3) Desalinated Water
4) Oilfield produced water

Other potential water sources include water conservation, in-lieu conjunctive use and groundwater recharge.

The District wants a planning-level, feasibility evaluation of the four potential sources as well as any that are identified by Kennedy/Jenks. The evaluation will include consideration of:

1. Availability and water quality
2. Time and cost associated with permitting and approval process
3. Infrastructure requirements for production and transmission to the District
4. Estimated cost of the water, purchase, operation and maintenance based on cost per acre-foot.

We understand that this evaluation will be utilized for decision-making purposes so that more detailed evaluations of the preferred alternative can be performed.

By working in partnership with the District, Kennedy/Jenks will evaluate potential local water sources to determine the most feasible and cost-effective supplemental water supply for the District.

PROJECT APPROACH

Kennedy/Jenks' approach to conducting the Evaluation of Supplemental Water Supply is in four tasks as summarized and described in greater detail below.

- Task 1 is data gathering and review and will result in a list of the potential specific alternatives to be considered as well as evaluation matrix.
- Task 2 is a workshop at the District, which will result in conformation of the alternatives to be considered, evaluation matrix, prioritization of alternatives and selection of the up to six potential specific projects to be evaluated in greater detail.
- Task 3 is preparation of the detailed evaluation of the alternatives using the approved evaluation matrix.
- Task 4 is preparation of a draft report and presentation to the District Board in a study session and preparation of a final report and presentation to the District Board in a regular session.

By using workshops and study sessions, the projects evaluated will have been developed using the input of District staff and in partnership with the District.

Task 1- Data Gathering and Review

Kennedy/Jenks will review the following information available from the District:

- Central Coast Water Authority (CCWA) budget of State Water Project contractors
- 1991 Mission Hills Community Services District Oil Field Reclamation Report
- 1994 Bookman-Edmonston Report "Evaluation of Alternative Water Supplies for NCSD"

We will work with Jim Garing of GTA to identify additional reports and resources, such as water master plans, urban water management plans, geologic studies, etc., that may be available for review and useful to the study. In addition, the Kennedy/Jenks team will provide information on the Cambria Community Services District seawater desalination facility for which we have provided pre-design services as well as other Kennedy/Jenks desalination, reclaimed water, oilfield reclamation and SWP projects relevant to the evaluation of the water supply alternatives. Kennedy/Jenks will also contact South County Sanitation District and John Wallace and Associates for a copy of the water reclamation study currently in progress.

An initial brainstorming session will be conducted with Jim Garing of GTA to identify potential sources for reclaimed water, oil field reclaimed water, and brackish or salt water for desalination. The internal brainstorming session will also include consideration of other potential water supplies including water conservation, conjunctive use (e.g. provide reclaimed water for use at golf courses and parks in the area to offset the groundwater use at the golf course), and groundwater recharge through spreading basins or injection wells.

Based on the review of the available information and internal brainstorming, a summary list and map will be made of the potential sources of water for use in Task 2. This task will also include development of an evaluation matrix and cost-estimating parameters for review in Task 2 and use in Task 3.

Task 2 – Evaluation Criteria and Project Identification Workshop

When the list of potential water sources and type (SWP, reclaimed, oil field reclaimed, saline/brackish, other) are identified and background information has been compiled, a workshop will be held with Lynn Takaichi and Sachi Itagaki of Kennedy/Jenks, Jim Garing of GTA, the District's General Manager, and any

other individuals invited by the District. The purpose of the workshop is:

- Presentation of the various water sources identified.
- Prioritization of potential water source alternatives that will be reviewed in greater detail in Task 3. For budgetary purposes, it has been assumed that no more than six alternatives will be evaluated in greater detail in Task 3. Additional alternatives can be evaluated for additional scope and budget.
- Review and confirmation of the evaluation matrix and cost-estimating parameters developed in Task 2.

The results of Task 2 will be documented in the report prepared in Task 4.

Task 3 – Evaluation of Selected Alternatives

The selected alternatives will be evaluated in greater detail using the evaluation matrix approved in Task 3. The major aspects of the evaluation will include:

Physical Issues

- Water quantity and quality, cost of water
- Reliability of the water supply
- Need and cost for treatment
- Need and cost for conveyance and storage (pipelines, pump stations, and reservoirs)

Institutional Issues

- Permitting for project construction and estimated schedule for completion,
- California Environmental Quality Act (CEQA) compliance and estimated schedule for completion,
- Level of negotiations required to produce agreements with various potential sources,
- Opportunities for funding from State and Federal sources for the alternative,
- Qualitative advantages and disadvantages of the alternatives, and
- Evaluation of whether a larger project involving more parties will provide an opportunity for cheaper water.

Planning-level estimates of the comparative capital and operations and maintenance costs for the infrastructure required to acquire, treat, and deliver the water will be prepared and normalized to a cost per acre-foot based on 2,000 acre-feet of water delivered. In addition, an estimate of the relative hours and the expected duration of time required to develop and complete the institutional issues will be provided on a cost per acre-foot basis based on 2,000 acre-feet of water delivered.

Based on the results of the costs and the matrix evaluation, the six alternatives will be ranked to identify the most feasible and cost-effective supplemental water supply for the District.

Task 4 – Report Preparation and Presentations to Board

The results of Task 3 will be documented in a draft report and seven copies of the draft report will be provided to the District. In addition, the results of the draft report will be presented to the Board in a study session. Following receipt of the comments on the draft report from the District and based on the discussion in the study session, a final report will be prepared. Ten copies of the final report will be provided to the District and a presentation will be made to the Board.

Budget and Schedule

Section 3

BUDGET

The proposed hour and dollar budget is shown in the table below.

Task	Hour Estimate	Dollar Estimate
1. Data Gathering and Review	20	$ 2,600
2. Evaluation Criteria and Project Identification Workshop	25	$ 4,100
3. Evaluation of Six Selected Alternatives	97	$12,300
4. Report Preparation and Presentations to Board	104	$14,500
Project Management	7	$ 900
Total	253	$34,400

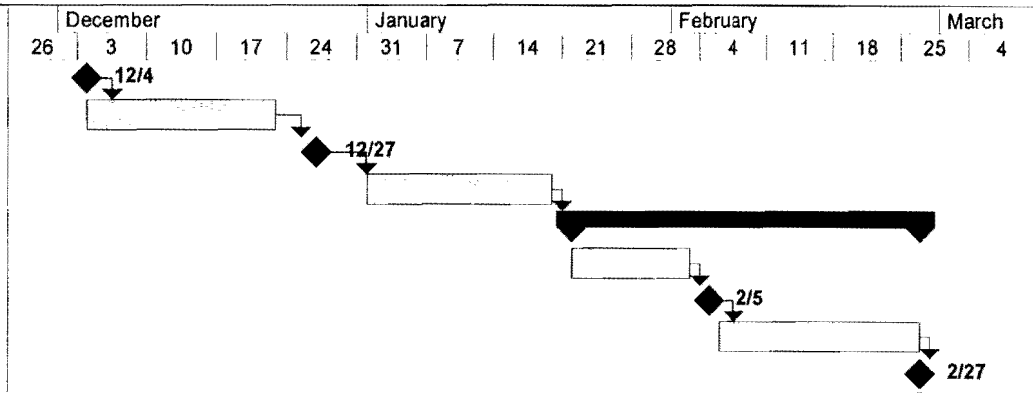
SCHEDULE

A proposed schedule for the project follows on the next page.

Nipomo Community Services District
Evaluation of Water Supply Alternatives
Propos Schedule
28 October 2000

Kennedy/Jenks Consultants

ID	Task Name	Duration
1	**Notice to Proceed**	0 wks
2	**TASK 1: Background Data Collection and Review**	3 wks
3	**TASK 2: Evaluation Criteria and Project Identification Workshop**	0 wks
4	**TASK 3: Evaluation of Six Alternatives**	3 wks
5	**TASK 4: Report Compilation and Presentation**	5.2 wks
6	Draft Report Compilation	2 wks
7	Study Session	0 wks
8	Edits for Final Report Preparation	3 wks
9	Presentation at Board Meeting	0 wks



Project: schedulenipomo
Date: Thu 10/26/00

Task
Split
Progress
Milestone
Summary
Project Summary
External Tasks
External Milestone
Deadline

PROJECT TEAM

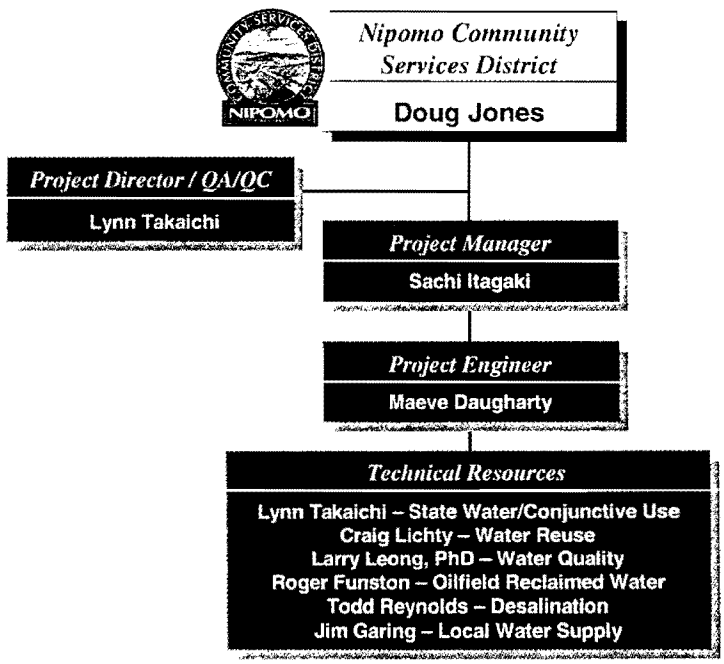
Kennedy/Jenks Consultants is bringing together an experienced team for the Evaluation of Supplemental Water Supply for Nipomo Community Services District (District). The benefits that the District will receive from this team are local knowledge and in-depth water resources expertise in the areas of the following:

- State Water Project (SWP) issues,
- Water recycling,
- Desalination, and
- Produced water reclamation.

As shown on the organization chart here, Mr. Lynn Takaichi, as Project Director, will lead the project. Lynn will provide general direction for the project as well as providing overall quality control. He has extensive experience in managing water resource evaluations. Recently, he prepared market assessments for treated produced water from the San Ardo (Monterey County) and Belridge (Kern County) oilfields and managed pre-design evaluations and pilot studies of seawater desalination for the Cambria Community Services District. He has also managed comprehensive water resource studies for the Antelope Valley and Lakehaven Utility District in the state of Washington. Previously, he managed groundwater management plans for the Kettleman Plain and Sunflower basins (Kings/Kern County), Charnock and Santa Monica Sub-basins (Los Angeles County), and Warren Valley basin (San Bernardino County).

Lynn also managed the preparation of a Groundwater Contamination Containment Plan for the Water Replenishment District of Southern California. He is currently managing a water resources study for the City of Santa Paula and water banking alternatives for the Castaic Lake Water Agency. Lynn serves as the Agency Engineer for the Castaic Lake Water Agency, a State Water Project contractor, and has performed numerous evaluations of State water issues.

Project Team
Supplemental Water Supply Evaluation



Ms. Sachi Itagaki will assist Lynn Takaichi. As project manager, she will be responsible for day-to-day communication among the project team, assembling and preparing the evaluation, and maintaining consultant efforts within negotiated budgets. She has extensive experience in water resource evaluations, for both groundwater and surface water sources. She recently developed a stochastic model of chloride discharges in the Calleguas Creek Watershed, conducted a safe yield analysis of the groundwater underlying the Devils Den Water District, and evaluated the aquifer storage

and recovery potential for the Antelope Valley Water Resources Study.

Previously, she performed a feasibility analysis of a diversion from the Napa River and conducted a hydrology study of the Salton Sea. She has experience with a wide variety of numerical models commonly used for water resource evaluations, including chemical transport models.

Ms. Maeve Daugharty will assist Sachi Itagaki. As Project Engineer, Maeve will conduct the evaluation based on the input of the specialized technical resources described below.

Kennedy/Jenks has also assembled a team of specialized technical resources who will be used to evaluate the specific issues associated with the various water supply options.

Technical Resources

Jim Garing - Garing, Taylor and Associates (GTA) - Local Water Supply Resource

Jim Garing of GTA has been the District Engineer for the Nipomo Community Services District since 1992. He will provide a local perspective to the project.

Craig Lichty - Kennedy/Jenks Consultants Recycled Water Technical Resource

Craig Lichty has 18 years of consulting experience with specialized expertise in water recycling. This experience encompasses master planning, hydraulic modeling, feasibility studies, pilot plant work, facilities plans and alignment studies, trenchless pipeline construction evaluations, corrosion assessments, pipeline rehabilitation, regulatory and funding assistance, preliminary and final design, and construction administration and management. These projects have addressed a wide variety of regulatory and user issues associated with urban/residential areas, agriculture regions, and specific commercial/industrial applications, including cooling towers and paper recycling. Work has included determining specific use patterns and onsite retrofit/conversion requirements. Craig is an active member of the WateReuse Association, and the Water Reuse Committees of the American Water Works Association and Water Environment Federation.

Roger Funston – Kennedy/Jenks Consultants Oilfield Reclaimed Water Technical Resource

Roger Funston has over 20 years of experience planning, implementing and managing environmental and regulatory compliance projects, including nine years as the Environmental Manager for a mid-sized crude oil production company. His expertise includes permitting and compliance assistance, property transfer due diligence, site investigation and remediation, environmental audits, strategic environmental management and development of environmental management systems. He has extensive experience working with both upper management and operating personnel to develop innovative and cost-effective solutions to environmental issues. He has excellent working relationships with regulatory agencies and has been proactively involved in shaping the outcome of emerging regulatory issues through active participation in the rule development process.

Larry Leong, Ph.D. – Kennedy/Jenks Consultants Oilfield Reclaimed Water And Water Quality Technical Resource

Dr. Larry Leong has over 20 years of experience examining the fate and transport of environmental contaminants in air, water and soil. He has significant experience in three technical areas: water quality, air quality, and laboratory consulting.

Larry's professional experience includes the current chairmanship of the Air Quality Impacts Committee, Editorial Advisory Board for Water Environment Federation Laboratory Solutions, and being a member of the Reuse Committee for the Water Environment Federation. He recently

served on a WEF task force that published the Special Publication entitled "Emissions of Toxic and Related Air Pollutants from Wastewater Facilities," was on the organizing committee and a session moderator for the Second WEF Speciality Conference, Control of Odors and VOC Emissions, and co-chair of the WEF pre-conference workshop, "Complying with Clean Air Act Accidental Chemical Release Prevention Regulations." He has published over 20 articles, and participates in the two Standard Methods committees.

Todd Reynolds – Kennedy/Jenks Consultants
Desalination Technical Resource

Todd Reynolds has 10 years of engineering and management experience and 5 years of consulting experience in membrane treatment, including microfiltration, ultrafiltration and seawater and brackish water desalination. This experience encompasses hydraulic modeling, feasibility studies, facilities plans, corrosion assessments, regulatory issues, preliminary and final design, and construction administration and management.

Complete resumes for the project team are found at the end of this proposal.

Table 1-1
Relevant Project Experience

Kennedy/Jenks Consultants	
STATE WATER PROJECTS	
Utilization of the Saugus Aquifer for State Water Project Firming Castaic Lake Water Agency Santa Clarita, California	The State Water Project (SWP) can currently only deliver approximately half of its designed yield on a dependable basis. Therefore, depending on the hydrology, shortfalls in future deliveries are anticipated. To minimize the impact on the Castaic Lake Water Agency, Kennedy/Jenks Consultants recently prepared a feasibility study of utilizing a portion of the yield of the Saugus aquifer to level the variable availability of State Water. Based on earlier estimates of the Saugus recharge capability, the extent of groundwater extraction and transmission facilities was evaluated. Connective operations with the three water purveyors that also utilize the aquifer was also evaluated.
Water Importation Optimization Study Casitas Municipal Water District Oakview, California	Kennedy/Jenks Consultants is currently investigating concepts to initiate and optimize State water importation into the Santa Clara River Valley and the Oxnard Plain in Ventura County. Goals of the investigation include increasing the reliability and quality of water supplies throughout the County. The investigation includes groundwater banking, blending surface waters and groundwater to improve the overall quality, and conjunctive use of existing facilities to improve yield and reliability of the facilities.
Groundwater Management Plan Devil's Den Water District Kern and Kings Counties, California	Kennedy/Jenks Consultants is currently preparing a groundwater management plan for the Devil's Den Water District. In 1989, the Castaic Lake Water Agency acquired the District and its 12,700 acre-foot per year agricultural entitlement to State water to supplement the Agency's M & I water supply in the Santa Clarita Valley. However, the District overlies groundwater basins that are believed to have a safe yield of up to 7,000 acre-feet per year. The objectives of this plan are to evaluate groundwater quality and recommend treatment alternatives, determine the safe yield of the Basin, determine the condition of the District wells which show high TDS levels, and meet the requirement of AB 3030 regarding preparation of a plan prior to the formation of a groundwater management agency.
Evaluation of Alternative Future Water Supply Strategies City of Port Hueneme, California	Kennedy/Jenks Consultants was retained by the City of Port Hueneme to evaluate alternative future water supply strategies. The City had participated in several studies evaluating specific strategies and tasked Kennedy/Jenks Consultants with comparing the previously studied alternatives, as well as developing any additional viable alternatives. The alternatives evaluated included use of local groundwater with varying degrees of treatment from disinfection to softening and desalination, use of imported water through the State Water Project or through Metropolitan Water District of Southern California, and use of desalinated seawater. Because the assumptions utilized as the bases of the previous studies varied, it was necessary to establish basic assumptions upon which the alternatives could be compared. Each alternative was evaluated with regard to project costs, water quality, reliability, ease of implementation, and institutional issues. The strategy recommended for implementation by the City was annexation into Calleguas Municipal Water District, a member agency of Metropolitan Water District. The recommended project includes a transmission line, most of which would be constructed by Calleguas Municipal Water District, and disinfection facilities at City wells. An implementation plan and schedule were prepared for the recommended project.

Table 1-1
Relevant Project Experience

Kennedy/Jenks Consultants

RECYCLED WATER PROJECTS

Castaic Lake Water Agency Reclaimed Water Master Plan and Phase 1 Design

Over a five-year period, Kennedy/Jenks completed a Recycled Water Master Plan, and designed a Reuse Pump Station and Phase I Distribution System for the Castaic Lake Water Agency. The Master Plan included preparation of the environmental documentation (CEQA), computer modeling (KYPIPE2), facility site plans, cost estimates, and phasing plans for a new recycled water system serving golf courses, an amusement park, tree farms and nurseries, commercial landscaping, and street and highway landscaping, over a 50-square mile service area. Ultimately, 25,000 gpm of recycled water will be pumped from two treatment facilities into a distribution system that will include over 200,000 LF of 8- to 30-inch-diameter pipelines, 12 storage reservoirs and six pump stations. Preliminary permitting work was performed with the Army Corps of Engineers, California Department of Fish and Game, and some twenty additional agencies. A market assessment was performed to identify potential large users of recycled water and to establish site-specific use patterns and retrofit requirements. Facilities Plan was prepared for the Phase I System which would serve a golf course, tree farms and the Six Flags Magic Mountain Amusement Park.

Following planning, the Phase I system was designed. Facilities included a 15,000-gpm Reuse Pump Station, a 4,500-gpm booster pump station, 3.1-MG welded steel tank, and approximately 22,000 LF of 24- and 30-inch-diameter pipeline. The Reuse Pump Station is designed to operate at 188 psi and is located on Los Angeles County Sanitation District's Valencia Wastewater Treatment Plant site. During design, a Technical Memorandum was prepared that summarized the final approach to phasing and siting of new facilities on the site. To meet operating requirements, a control strategy and P&ID's were developed for two modes of treatment facility operations: equalized and non-equalized operations. A SCADA system was designed to provide control and remote control at the Agency's water treatment plant, with status information available at the District's onsite distributed control system. The design and bidding documents allowed for construction phasing in 3,000-gpm increments.

A potholing report was prepared during design to resolve a substantial number of conflicts with existing utilities. Several boring and casing crossings of roadways and state highways were required, and a bridge suspended crossing of the Santa Clara River was designed to meet special environmental requirements. To minimize aesthetic impacts, the reservoir was screened by excavating the pad into a cross-slope hillside and planted berms were created around its perimeter. The booster pump station was screened with a Spanish-style block wall that matched the theme of the surrounding community.

Table 1-1
Relevant Project Experience

Kennedy/Jenks Consultants

Recycled Water Master Plan, West Basin Water District/ City of Los Angeles, Department of Water and Power

In Southern California reliable water supplies are critical to the region. Curtailments of imported water supplies and recent droughts have emphasized the importance of water resource management to meet future needs. West Basin Municipal Water District and sister agency Central Basin Municipal Water District have implemented the first phases of a major effort to ultimately deliver over 100,000 acre-feet of recycled water per year. The City of Los Angeles, Department of Water and Power (DWP) have also initiated development of the Terminal Island Recycled Water Project in the Los Angeles Harbor area.

Kennedy/Jenks Consultants is currently developing a Master Plan for the expansion West Basin and DWP's recycled water facilities. The following elements are being studied and evaluated in the development of the Master Plan:

- **Market Assessment:** A comprehensive customer database to lay the groundwork for the master plan and for ongoing marketing efforts. A variety of information sources are used to develop a customer database that not only identifies potential recycled water customers but also relevant information on the customers. Potential customers are evaluated and prioritized based on demands, water quality needs, retrofit cost, customer stability and other factors relevant to the cost and likelihood of the customer connecting. This evaluation and prioritization will develop the customer database into a practical tool for further development of the master plan and for on-going marketing efforts.
- **Institutional Issues:** West Basin wholesales recycled water to local water utilities including DWP. As such, it is appropriate that the local water utility be informed and encouraged to participate in any contact or discussions with customers in their service area. When direct communication with customers is necessary, it is handled in a professional manner, is informative to the customer, and avoids leaving the customer with false expectations.
- **Water Quality:** The Terminal Island Advanced Water Treatment Facility and West Basin's Carson Regional Water Recycling Facility, are the two primary sources of recycled water available in the Carson/Los Angeles Harbor area. In addition, recycled water quality ranging from conventional Title 22 to advanced treatment will be available. The customers' water quality needs in relation to the available sources of recycled water is being evaluated to identify the "highest and best use" of the water. In addition, potential interconnections between these two sources, with the Central Basin and/or Long Beach recycled water systems are taken into consideration.
- **Revenue-Based Phasing Plan:** The economic evaluation of expanding the recycled water system is taking several financial factors into consideration. In addition to the common factors such as construction and operations cost, and revenue from water sales, other factors including deferred capital improvements to local water or wastewater systems, changes in regional water supplies, and improvements in overall reliability will be considered.

When complete the Recycled Water Master Plan will establish the "road map" for the ultimate expansion that will enable West Basin and DWP to meet their recycled water use objectives. When implemented these projects will reduced the regions dependence on imported water by 50% and will significantly increase the reliability of the water supply.

Table 1-1
Relevant Project Experience

Kennedy/Jenks Consultants	
Malibu Creek Avoidance Study Las Virgenes Municipal Water District	EPA's recent agreement with Heal the Bay, Santa Monica BayKeeper, and the National Resources Defense Council highlights the project Kennedy/Jenks is leading for the Las Virgenes Municipal Water District (LVMWD). The project ties together three watersheds: the Malibu Creek Watershed, the Los Angeles River Watershed, and the Calleguas Creek Watershed. The EPA agreement forces a local, more de-centralized focus on watershed management, and particularly on non-point sources of pollutants. The project's objective is to find new beneficial uses of the reclaimed water from LVMWD's Tapia Water Reclamation Water Facility (TWRF). The Los Angeles Regional Water Quality Control Board (LARWQCB) has reissued the NPDES permit and prohibited the current practice of discharging into the Malibu Creek between May 1 and October 31. Although LVMWD sells most of its effluent during this period, the "shoulder period" (May and October) is a period when demand for effluent is slightly below supply. The District usually discharges about 1 mgd. Our project is currently completing the second of four phases. In addition, the project is fast-forwarding to some real-time solutions. The second phase of the project concludes an evaluation of approximately 100 alternatives within such categories as new customers and new uses, subsurface storage, above ground storage for seasonal attenuation of supply, additional treatment to complement particular reuse options, and inter-basin transfers. K/J evaluated potential reuse options for recycled water at LVMWD's 900-acre property. The next phases will include more intense evaluations of the narrowed-range of alternatives and then preparation of an EIR/EIS. Completion is slated for November 2000. Perhaps the most unique element of our approach to the project was the emphasis upon the stakeholder outreach program and the substantial environmental coverage.
South Bay Water Recycling Master Planning and Conceptual Design	As a subconsultant to program manager Montgomery-Watson, Kennedy/Jenks has played the lead role in evaluating potential pipeline routes and locations for reservoirs and pump stations for the Phase II master planning for the South Bay Water Recycling (SBWR) program. In this role, K/J also has had lead responsibility for dealing with issues related to system reliability and the impact of changing Title 22 regulations on the operation of the Joint Water Pollution Control Plant. The desire to include more non-irrigation users in the system, has lead to a need to provide recycled water reliability similar to that of a conventional water distribution system. Drawing on the firm's experience in numerous Northern California wastewater recycling and water distribution systems, K/J has been working with key staff from the various SBWR member agencies to plan extensions of the existing pipeline network. A fundamental understanding of the initial system hydraulics and its limitations has been instrumental in K/J's development of proposed facilities that will improve system reliability, system operability, and enable extension to a broader service area. In executing this work, K/J proposed pipeline alignments and evaluated major installation conflicts with transportation corridors and other utilities during concept design.

Table 1-1
Relevant Project Experience

Kennedy/Jenks Consultants	
Santa Clara Valley Water District Indirect Potable Reuse Feasiblity Study	Kennedy/Jenks Consultants, in association with Black & Veatch, is preparing a feasibility study for an indirect potable reuse (IPR) pilot project in Santa Clara County. This work is being performed in parallel with an update to SCVWD's Integrated Water Resources Plan, which has identified a long-term water supply shortfall. IPR is one of several alternatives that the SCVWD wishes to continue reviewing as a supplemental source of water that could be used conjunctively through groundwater spreading/injection and reservoir augmentation. The $500K study is being approached as applied research by a neutrally positioned team of regulatory specialists, scientists, engineers and public affairs consultants. Our team will engage the public through a two-pronged public participation and public outreach program to identify their concerns relative to the research. The project approach is designed to allow the public to help shape the direction of the research that is envisioned to focus not only on regulated contaminants but also on emerging contaminants, such as nitrosodimethylamine (NDMA), endocrine disrupters, and pharmaceutically active residuals. The scope of work includes a characterization of existing groundwater and surface waters, raw wastewater, treated secondary wastewater and Title 22 quality recycled water. Modeling of the unconfined groundwater basin and Anderson Reservoir will be performed to determine potential constraints. Alternatives will be constructed around two basic sets of alternatives that use raw wastewater or Title 22 recycled water as a source of supply. Facilities siting options may include de-centralized satellite treatment plants or traditional treatment facilities. Treatment technology investigations will include submerged membrane bioreactors, reverse osmosis, ultraviolet light (UV) and advanced oxidation processes, such as UV combined with or without peroxide or ozonation, or ozonation alone followed by granular-activated carbon adsorption. These technologies will be evaluated using a combination of bench and mini-pilot systems, and testing at full-scale operational plants in California and Arizona during the research program. The outcome of the research will be to determine if the public and the SCVWD Board support taking the next step towards implementing an IPR Pilot/Demonstration Project of about 2 MGD in size.
The Presidio Trust San Francisco Presidio Water Reclamation System Master Plan	Kennedy/Jenks Consultants is preparing a recycled water master plan at the Presidio. The Plan is intended to showcase the use of innovative and energy-efficient treatment technologies to create an economically viable and sustainable project for the future. The Presidio has a significant landscape that will be irrigated. However, the Trust is most interested in using recycled water for more progressive uses, such as internal toilet flushing, environmental/wetlands enhancements, and for industrial cooling at the proposed Lucas Films Letterman complex and 1-mW micro co-generation plant. In addition, a regional project will be investigated with the City and County of San Francisco, which is interested in irrigating large tracts of land, such as Golden Gate Park, Lincoln Park, and other landscapes adjacent to the Presidio. A satellite treatment facility will be planned to skim flows from large wastewater interceptors, and advanced treatment technologies, such as a submerged membrane (MF) bioreactor combined with ultraviotet light (UV) for disinfection, will be used for treatment. Planning work will include establishing design criteria, identifying and evaluating project alternatives, hydraulic modeling and system optimization, investigation of partnering and funding opportunities, and preparation of a master plan and environmental assessment (CEQA/NEPA) documents.

Table 1-1
Relevant Project Experience

Kennedy/Jenks Consultants	
South Bay Water Recycling Program, City of Santa Clara Pipeline Projects Final Design Packages 1 - 8	The South Bay Water Recycling Program includes the design and construction of over $100 million in new facilities. To facilitate timely implementation, the program was divided into a number of separate construction projects, all on parallel schedules. Craig managed the final route selection, design and construction support services for eight separate design packages. The last design packages (5-8) were completed in April 1998 and are under construction. New facilities included over 70,000 LF of 8-, 12-, 24-, and 30-inch-diameter recycled water pipelines; six bore and jacked crossings of railways and highways; two bridge suspended creek crossings of streams; a storm drainage relocations. Significant coordination was required during design to incorporate the Program's design requirements into the design and to establish the size and location of services for urban landscape and industrial customers. Recycled water users include schools, parks, Great America Amusement Park, the San Francisco 49ers training facility, golf courses, Santa Clara University, California Paperboard Recycling Plant, and Owens Corning Plant. Design work was completed under budget, and all construction work was completed ahead of schedule, and well below initial budget estimates. Bid prices were within !5% of the Engineers Estimate. Construction change orders for Design Packages 1-4 varied from –5% to +1% of the bid price.
Las Gallinas Valley Reclaimed Water Distribution System Projects Marin Municipal Water District	Kennedy/Jenks completed a comprehensive recycled water program for the Marin Municipal Water District (MMWD). Project elements included the facilities planning, environmental documentation support, recycled water market analysis, transmission and distribution systems planning and design, pilot testing, design and construction of advanced wastewater treatment facilities, and plant upgrades to the MMWD's Las Gallinas Valley Reclamation Plant. This project has enabled the MMWD to pump, treat and distribute effluent for reclamation reuse throughout northern Marin County and is a key element in the District's overall water conservation and reuse program. The recycled wastewater distribution system consists of a 5-MGD distribution pump station and over 81,000 linear feet of recycled water pipeline. To encourage competitive bidding, Kennedy/Jenks designed and constructed the pipelines in six bid packages at a total cost of $4.6 million. Financing of the pipeline projects was provided through State Funds for reclamation projects. Kennedy/Jenks prepared the facilities plan report and loan application to the State to receive a low interest loan.
City-Wide Water Recycling Program EOA, Inc./City of Sunnyvale, California	Kennedy/Jenks completed design and construction management for the City of Sunnyvale's initial reclaimed water distribution system. Over 114,000 LF of 8- to 36-inch diameter pipeline has been designed at an estimated construction cost of $9 million. To encourage competitive bidding, the pipelines were designed as six separate construction packages. Special design considerations included several bore-and-casing crossings of rivers and freeways, resolving utility conflicts to cross the Lockheed Missile System Site and Moffett Field Naval Air Station, an aerial crossing of Native American burial grounds, phased construction sequencing to accommodate play at a golf course and a baseball playing field, and mitigation of construction impacts to endangered species, such as the burrowing owl and damselfly. K/J also completed the design of the Tertiary Plant Improvements Project for the City of Sunnyvale Wastewater Treatment Plant and 24-inch diameter transmission pipelines. The pipeline design included crossings of US Highway 101, the Santa Clara County Light Rail System, and the San Francisco Water Department Hetch Hetchy water transmission pipelines. Alternative pipeline rights-of-way were evaluated including paralleling a Santa Clara Valley Water District flow control channel, paralleling a Pacific Gas & Electric power transmission line, within city streets, and in private easements. A combination of all of these provided the best combination of constructability and ease of obtaining rights-of-way.

Table 1-1
Relevant Project Experience

Kennedy/Jenks Consultants

DESALINATION PROJECTS

Cambria Seawater Desalination Project **Cambria Community Services District**	After the seawater desalination project was designed and bid for $16 million, the Cambria Community Services District and ratepayers wanted a reassessment of the project concepts and criteria. Kennedy/Jenks performed a value engineering evaluation that modified the original project to provide up to 40 percent in cost savings. The modified Cambria Desalination Project includes a slant-drilled subsurface intake system, blending of 300-gpm reverse osmosis permeate with 150 gpm of groundwater and a pipeline disinfection contactor. Based on this evaluation, Kennedy/Jenks is currently pilot testing the subsurface intake concept and is preparing thirty-percent design documents for the modified project.
Brackish Water Reclamation Demonstration Facility **City of Port Hueneme, California**	Kennedy/Jenks designed a new 3-mgd Brackish Water Reclamation Demonstration Facility (BWRDF) for the Port Hueneme Water Agency (PHWA). PHWA is a new water agency formed by a joint powers authority by the City of Port Hueneme (City) and Channel Islands Beach Community Services District (CIBCSD). Because the plant is a demonstration facility, the U.S. Bureau of Reclamation provided part of the funds for the new brackish water treatment plant. The plant provides desalinated water to the City, CIBCSD and two nearby Naval Bases, which previously relied on poor quality local and imported groundwater supplies that have questionable reliability. The plant began full-time operation in January 1999. The BWRDF treats brackish groundwater with total dissolved solids (TDS) as high as 1,300 mg/L and produces a treated water with a TDS below 370 mg/L. This innovative water treatment plant includes three 1-mgd membrane processes operating in parallel. The three membrane treatment trains at the PHWA BWRDF are: 1) reverse osmosis, 2) nanofiltration, and 3) electrodialysis reversal. The PHWA BWRDF provides potable water supply to the public and serves as a research facility to evaluate the cost effectiveness of the three alternative membrane treatment systems. The PHWA will operate and collect data on the chemical usage, power consumption, and other operation and maintenance costs, including labor, for each of the three brackish water membrane treatment systems at the BWRDF. These data will be used both to verify that the equipment provided by the membrane equipment suppliers meets performance guarantees and also to conduct long-term evaluation of the relative efficiency of the three alternative brackish water treatment technologies. The BWRDF also includes state-of-the-art pilot-scale membrane treatment units to evaluate additional desalination membrane types. The design objectives of this desalter is to produce permeate water of the following quality: ▪ TDS concentration less than 370 mg/L ▪ Total hardness less than 150 mg/L ▪ pH values between 7.5 and 8.0 ▪ 75% permeate flow rate The design and construction of the facility was performed on a fast-track schedule. Design of appurtenant structures included: ▪ A new 15.5 MGD pump station ▪ 4,000 feet of 24-inch-diameter pipeline ▪ Blending facilities for State Project Water, brine discharge, and treated water ▪ Pretreatment chemical systems (dechlorination using sodium bisulfate, filtration, pH adjustment with sulfuric acid and anti-scalant) ▪ Finished water treatment systems (disinfection with hypochlorite and ammonia, pH adjustment with sodium hydroxide and hydrofluosilicic acid addition).

Table 1-1
Relevant Project Experience

Kennedy/Jenks Consultants	
Potlatch Beach Reverse Osmosis Desalination System, Skagit County PUD No. 1, Mount Vernon, Washington	Kennedy/Jenks Consultants designed a direct seawater reverse osmosis system for a small community on Guemes Island. A private community was facing problems with salt water intrusion in its existing potable water supply wells. At the community's request, Skagit PUD took over its system and will operate it as a separate satellite facility. In isolated communities like Potlatch Beach, the PUD works with local homeowners to form local utility districts (LUD) and acts as the lead agency to sell tax-free bonds to fund the projects. Skagit County PUD No. 1 determined that the most reliable source of water for this community would be seawater. Kennedy/Jenks Consultants was hired to design the system. The selected design consisted of a 20-gpm reverse osmosis treatment plant with a 60-foot infiltration trench for seawater intake. A pre-design study recommended a direct seawater RO plant as the best long-term option for the community. Kennedy/Jenks worked with the PUD to specify and pre-purchase a package RO unit. The design of the facility was then completed. The facility includes an infiltration trench in the beach, a well pump to pump seawater up to the treatment plant, a passive calcite contactor to lessen the corrosion potential of the reclaimed water, and a sodium hypochlorite disinfection system. The RO unit and other treatment elements are in a small building designed to fit in with the existing homes situated on a bluff overlooking Bellingham Channel and Cypress Island. One challenge facing the design team was the lack of three-phase power on the island. The design incorporates a variable frequency drive unit to convert single-phase power into three-phase power to drive the high pressure RO feed pumps. The PUD built the treatment plant building and the infiltration trench in June when permit conditions and sufficiently low tides occur during daylight hours. The plant went into operation in 1998.
Development of Capacitive Deionization Lawrence Livermore National Laboratory Livermore, California	Kennedy/Jenks Consultants assisted the Lawrence Livermore National Laboratory develop a new desalting technology known as Capacitive Deionization (CDI). For this project, Kennedy/ Jenks coordinated funding assistance opportunities, participated in a roundtable forum to identify regulatory issues associated with testing and use of CDI, coordinated staff and laboratory resources to achieve commercial opportunities, and provided testing assistance, including development of sampling protocol, and field operations.
Upgrade Water Processing System at Naval Construction Battalion Center Port Hueneme, California	Kennedy/Jenks Consultants designed the reverse osmosis treatment plant facility for the Naval Construction Battalion Center. This 2.1-MGD facility was designed to treat brackish groundwater to meet federal secondary drinking water standards. Our work was done under a subcontract to Jaykim Engineers for the Parametric Estimating and Programming (PEP) Study. Preliminary phases of the project included field reconnaissance, survey and utility investigations. We developed the equipment list and facility operational requirements. Our design responsibilities included: ▪ Intergovernmental and utility coordination ▪ Preparation of preliminary engineering analysis ▪ Development of site plans ▪ Design of chlorination systems ▪ Preparation of water treatment process schematics ▪ Structural, mechanical, architectural, electrical, and instrumentation systems design ▪ Development of safety and regulatory issues of concern ▪ Capital and life cycle cost estimates Kennedy/Jenks reviewed the water quality in relation to a computer simulation of treatment and blending scenarios designed to achieve the desired finished water quality. We conducted an evaluation of alternatives for the disposal of the produced brine. We then prepared detailed design drawings, technical specifications and facility cost estimates.

Table 1-1
Relevant Project Experience

Kennedy/Jenks Consultants

OILFIELD RECLAIMED WATER PROJECTS

Department of Energy/ARCO Produced Water Reclamation Project
Department of Energy
Newhall, California

The goal of this project is to convert an unusable oil production by-product, produced water, into a valuable drinking water resource. Kennedy/Jenks performed all project investigations from project elements funding and development through pilot testing and cost estimating for a new 1.9 MGD capacity reverse osmosis water treatment plant.

The project site was the Placerita Oil Field located in Santa Clarita, California. The key project included:

- **Literature Review:** Conducted a search of all the applicable water treatment technologies, including patents, used to desalt produced water to approved potable quality.
- **Bench Testing:** We performed preliminary bench-scale studies to develop planning level cost estimates for the pilot phase of the project.
- **Pilot Testing:** We developed the protocols, work plan and analytical procedures for a 100 gpm pilot study. K/J conducted the engineering design, field operations, sampling and data analysis of the pilot plant. We used the results of the pilot testing for the conceptual design development and cost estimating of full-scale facilities.

US Department of Energy, ARCO Western Energy, Kennedy/Jenks Consultants, Southern California Edison, Electric Power Research Institute, and the National Water Research Institute funded this 18-month study. The pilot study examined the feasibility to treat produced water to present and anticipated federal drinking water standards.

The pilot plant consisted of the following seven water treatment processes:

- Walnut shell filtration
- Precipitative warm softening
- Heat exchange cooling and pH adjustment as needed
- Trickling filtration (for biological oxidation of organics and ammonia)
- Filtration
- Ion exchange softening (to remove residual hardness)
- Reverse osmosis

Three operational scenarios and cost estimates were developed for the new treatment plant:

1. Industrial water reuse facility for a steam flood enhanced oil operation.

This conceptual design would require a warm precipitation using a DensaDeg, a filter press to reduce the solids that would be hauled to a landfill, flow equalization, and a pump station delivering the water at a pressure of 100 psig.

2. Drinking water, flange to flange, operations.

Conceptual design includes warm precipitative softening without magnesium, cooling, equalization storage, booster pumping, mult-media filtration, upward pH adjustment, cartridge (automatic bag) filtration, reverse osmosis, ammonium selective ion exchange, and disinfection

3. Blend of treated produced water with an impaired drinking water resource.

This conceptual design option includes warm precipitative softening with magnesium, cooling, equalization storage, booster pumping, mult-media filtration, cartridge (automatic bag) filtration, reverse osmosis at pH 9.5, and disinfection.

Table 1-1
Relevant Project Experience

Kennedy/Jenks Consultants	
Aera Energy Produced Water Project **Kern County, California**	Aera Energy (Aera) retained Kennedy/Jenks Consultants to perform a feasibility study to evaluates options for marketing of treated produced water generated by the San Ardo and Belridge oilfields and the potential permitting, regulatory and jurisdictional hurdles associated with the beneficial re-use of this treated produced water. Kennedy/Jenks was also asked to review and validate Aera's findings concerning treatment options already identified internally by Aera. The Belridge oilfield, located in northwestern Kern County, currently generates approximately 330,000 barrels per day of produced water from two different production zones that is not re-used in thermally enhanced oil recovery operations. Approximately 220,000 barrels per day of produced water, that has an electrical conductivity (EC) concentration ranging between 11,000 andd 12,000 µmhos/cm, is generated from the deeper Tulare formation. Approximately 110,000 barrels per day of produced water, that has an EC concentration ranging between 26,000 and 28,000 µmhos/cm, is generated from the shallower Diatomite formation. Produced water is currently routed to percolation/evaporation ponds. Permitted Class II wastewater disposal wells exist on the property, but are not currently used for produced water disposal. The San Ardo oilfield, located in Monterey County, currently generates approximately 130,000 barrels per day of produced water that has an EC concentration ranging between 6,000 and 8,000 µmhos/cm. Produced water is currently injected into permitted on-site Class II wastewater disposal wells. The purpose in conducting the feasibility study is to identify potential buyers of treated produced water, evaluate demand and price forecasts, economics and major hurdles associated with each alternative identified, and provide recommendations for options warranting further study. Aera identified the following three tasks to meet project objectives: ▪ Produced Water Market Assessment ▪ Validate Aera's Findings Concerning Produced Water Treatment Options ▪ Identification of Potential Permitting and Regulatory Concerns The purpose of the first task is to identify potential buyers of treated produced water from the San Ardo and Belridge oilfield. Two to three potential proximate users and potential exchange users were to be identified for each oilfield. Water requirements, current and projected water costs, and water quality requirements were to be identified for each identified candidate. For each of the selected potential purchaser groups, we were to identify potential regulatory and institutional obstacles to developing purchase or exchange agreements. We were also to identify potential risks and uncertainties of water marketing arrangements. Based on this market assessment, a general marketing strategy was to be identified, a candidate market structure recommended, and a work plan developed to accomplish the proposed strategy. Potential funding opportunities and their impact on the recommended strategy will also be identified. The objective of the second task is to review and validate preliminary engineering evaluations already conducted by Aera on water treatment cost and options. Identification of data gaps was also to be a part of the objectives for this task. The purpose of the third task is to identify permitting, regulatory and jurisdictional hurdles to selling water to target buyers, including potential government agency and public reactions. This task also included making informal inquiries with regulatory agencies that would have jurisdiction over application of treated produced water to land and management of waste generated by the wastewater treatment process.

Table 1-1
Relevant Project Experience

Kennedy/Jenks Consultants

WATER SUPPLY STUDIES

Conjunctive Use Program / Water Bank
Kern County Water Bank Authority
San Joaquin Valley, California

Kennedy/Jenks staff formulated a conjunctive use (combined groundwater and surface water supply) plan for the Kern County Water Bank Authority whereby water surplus to the State Water Project (SWP) needs will be imported in wet years and recharged into the groundwater basin. In dry years, when supplies to the Authority from the SWP are reduced, the groundwater will be recovered for use by Authority member units. The work included analysis of sources of water supply, formulation of the program, development of cost estimates for the water supply, conveyance systems, recharge ponds and extraction wells. Analysis of the effects on groundwater levels using the USGS two-dimensional finite difference groundwater model was also part of this project, and performed by a subconsultant.

Water banking has offered several advantages over importing or storage in reservoirs. Water banking is less costly, more flexible, and has less impact on the environment because the water is stored underground. Aquifers don't loose water to evaporation like surface reservoirs.

Kennedy/Jenks currently is expanding Kern Water Bank's recharge options. In the first two years of operation, the Water Bank has recharged half a million acre-feet of water and plans to recharge 300,000 acre feet this year. The Water Bank's aquifers have an estimated storage capacity of one million acre-feet, making this the largest underground water storage and recovery facility in the world.

This expansion will double recharge operations. Kennedy/Jenks is designing conveyance facilities, which include a canal system that can operate in two directions. It will be able to receive water for recharge from either the Kern River or California Aqueduct and deliver water back to the Aqueduct when water is extracted by wells from the groundwater basins.

This is a unique project. Not many canal systems are designed to run two ways. Kennedy/Jenks designed 6.5 miles of canal that will take water from either end of the canal. One end will connect to the Kern River, and the other to the California Aqueduct 6.5 miles away. The Water Bank will recharge in wet years whenever excess water is available. In dry years, the Water Bank will pump extracted water to the Aqueduct for use by participating districts.

To protect endangered species on the property, a state and federal habitat conservation plan was developed. It lays out in advance how to construct and manage the project and maintain the environment so the project can go forward without a lot of additional regulatory hurdles to overcome. Half of the 20,000 acres are set aside for natural habitat and to protect endangered species.

Prior to this project, Kennedy/Jenks performed the pre-feasibility study for the Original Kern Water Bank project and designed recharge facilities for the West Kern Water District, City of Bakersfield, Berrenda Mesa Water District, and Kern County Water Agency.

The current project deals with conveyance structures for the Water Bank, including turnouts from the Kern River and California Aqueduct, channel and highway crossings, one pump station, a metering structure, and 6.5 miles of canal. Kennedy/Jenks will also oversee development of the extraction wells and the canal and pipeline collection system.

Table 1-1
Relevant Project Experience

Kennedy/Jenks Consultants	
Antelope Valley Water Resources Study **Antelope Valley Water Group** **Antelope Valley, California**	In conjunction with the U.S. Geological Survey, Kennedy/Jenks Consultants is currently performing a comprehensive water resources study of a 2,400 square mile area of Southern California. The primary objective of the water resource study is to develop consensus on a water resource management plan that addresses the need of the M&I purveyors to reliably provide the quantity and quality of water necessary to serve the growth projected by the planning agencies while concurrently addressing the need of agricultural users to have adequate supplies of reasonable cost irrigation water. The areas for which Kennedy/Jenks Consultants are responsible include the feasibility of aquifer storage and recovery, availability of water resources, reliability of surface water and imported water supplies, feasibility of reclaimed water use, effects of changes in groundwater levels, water conservation, and water management alternatives. During the study, we also chair the Antelope Valley Water Group Technical Advisory Committee, which is composed of the cities and agencies funding the study.
Long-Term Water Program **Castaic Lake Water Agency** **Santa Clarita, California**	Kennedy/Jenks Consultants performs an ongoing water resource assessment for the Castaic Lake Water Agency. The objective of the assessment is to evaluate potential supplemental water resources on an annual basis that will meet the water demands projected to the year 2010. Elements of the program include development of conjunctive use of the groundwater basin, reclaimed water development, water transfer from an agricultural water district, water conservation, expansion and modification of the Agency's water treatment plants, and water-banking. A subsequent report on the conjunctive use plan for the Saugus aquifer has been completed. The recommended project includes drilling of conjunctive use wells in three well fields and construction of transmission facilities to convey the pumped water to the Agency's existing transmission facilities. The project would provide up to 2,000 acre-feet of supplemental water per year. Preparation of a reclaimed water masterplan is underway. The proposed plan will deliver 10,000 acre-feet of reclaimed water per year to a variety of users, including Christmas tree farms, a cogeneration plant, an amusement park, a cemetery, a number of golf courses, and a number of users for landscape irrigation. The sources of the reclaimed water are two wastewater treatment plants owned and operated by the County Sanitation Districts of Los Angeles County. The effluent from these plans is currently discharged to an unlined river. Water conservation is an ongoing activity for the Agency. A public education program is currently under development. A six-acre xeriscape garden is under construction at the Agency's new water treatment plant and a water conservation exhibit program based on the state of the art computer graphics is being developed. Kennedy/Jenks Consultants is coordinating and administering these water conservation programs. Facilities plans for the Agency's existing water treatment plant as well as for a new water treatment plant have been completed. These plans outline the steps necessary to increase the Agency's treatment capacity from 25 million gallons per day (mgd) to 140 mgd. A unique wheeling agreement with the Metropolitan Water District of Southern California was developed and executed in 1993. This agreement will provide raw water conveyance to the Agency's new 30-mgd water treatment plant which is currently under construction. Construction is scheduled for completion in early 1994. Kennedy/Jenks Consultants has also evaluated several water-banking alternatives for the Agency. The objective of the water-banking plan is to increase the reliability of the Agency's water supply, which is currently limited to state water. Alternatives under consideration include in-lieu water exchanges with Ventura County or storage in the Central Valley.

Table 1-1
Relevant Project Experience

Kennedy/Jenks Consultants	
Evaluation of Alternative Future Water Supply Strategies **City of Port Hueneme, California**	Kennedy/Jenks Consultants was retained by the City of Port Hueneme to evaluate alternative future water supply strategies. The City had participated in several studies evaluating specific strategies and tasked Kennedy/Jenks Consultants with comparing the previously studied alternatives, as well as developing any additional viable alternatives. The alternatives evaluated included use of local groundwater with varying degrees of treatment from disinfection to softening and desalination, use of imported water through the State Water Project or through Metropolitan Water District of Southern California, and use of desalinated seawater. Because the assumptions utilized as the bases of the previous studies varied, it was necessary to establish basic assumptions upon which the alternatives could be compared. Each alternative was evaluated with regard to project costs, water quality, reliability, ease of implementation, and institutional issues. The strategy recommended for implementation by the City was annexation into Calleguas Municipal Water District, a member agency of Metropolitan Water District. The recommended project includes a transmission line, most of which would be constructed by Calleguas Municipal Water District, and disinfection facilities at City wells. An implementation plan and schedule were prepared for the recommended project.
Pilot Demonstration Program for Cadiz Groundwater Storage and Dry Year Supply Program **Metropolitan Water District of Southern California**	As a subconsultant to Geoscience Support Services, Kennedy/Jenks provided preliminary engineering services in conjunction with the Pilot Demonstration Program for Cadiz Groundwater Storage and Dry Year Supply Program for the Metropolitan Water District of Southern California and Cadiz. The work performed included: ▪ Feasibility-level design and cost estimates for the program spreading basin facilities. The final report presented two alternative configurations for the proposed spreading basin facilities and addressed stormwater flows, maintenance, operations and capital costs. ▪ Peer review and assistance with the performance of mixing analysis and laboratory soil column studies using CRA water and local groundwater.
Little River Interim Water Supply Study **Humboldt Bay Municipal Water District** **Eureka, California**	Kennedy/Jenks Consultants investigated an interim source of water supply for the Humboldt Bay Municipal Water District. The purpose of the study was to identify a source of supply capable sustaining the District's projected water needs until the completion and operation of the Butler Valley Dam. Three possible water projects on Little River were investigated. The scope of work included a soils and geological reconnaissance survey of the proposed dam sites; a hydrological study of the Little River Drainage Basin; an engineering and economic analysis of alternate dam sites, including preliminary design of appurtenant equipment and distribution pipelines from the dams sites to existing transmission pipelines; collection and analysis of water samples to establish reservoir silting capacity requirements and domestic water treatment processes and cost; hydroelectric potential investigation; and an analysis of secondary benefits and effects of the proposed alternate reservoirs.
Washoe County Regional Water Supply and Quality Study **Washoe County, Nevada**	Kennedy/Jenks Consultants identified and evaluated water resources to serve projected population growth through 2012 and 2042. Alternatives included combinations of imported groundwater, transfer of agricultural water to municipal/industrial, conjunctive management of surface water and groundwater, water conservation and wastewater reclamation. Parties that were continuously involved in the technical review and policy development included Washoe County, Cities of Reno and Sparks, Pyramid Lake Paiute Tribe, environmental organizations, Westpac Utilities, U.S. Fish and Wildlife and the various state agencies regulating water resources and quality protection.

Table 1-1
Relevant Project Experience

Kennedy/Jenks Consultants	
Carson Water Subconservancy District **Carson City, Nevada**	Kennedy/Jenks Consultants was active in the State Legislature in the formation of the Carson Water Subconservancy District comprised of 21 municipal systems in four counties and the formation of a Regional Water Authority for the Carson River basin. As the District's engineer we have identified available water rights for transfer, population and water demand projections, evaluation of the feasibility and cost of alternative water supply sources, hydrologic modeling of selected alternatives; analysis of groundwater basins and the feasibility of importation to and from the basins; and review of the surface water and groundwater hydrology of the basin.
Water Importation Optimization Study **Casitas Municipal Water District** **Oakview, California**	Kennedy/Jenks Consultants investigated concepts to initiate and optimize State water importation into the Santa Clara River Valley and the Oxnard Plain in Ventura County. Goals of the investigation included increasing the reliability and quality of water supplies throughout the County. The investigation included groundwater banking, blending surface waters and groundwater to improve the overall quality, and conjunctive use of existing facilities to improve yield and reliability of the facilities.
Implementation Plan for Wholesale Reclaimed Water Service **Calleguas Municipal Water District** **Ventura County, California**	Kennedy/Jenks Consultants is currently preparing an implementation plan for Calleguas Municipal Water District addressing wholesale reclaimed water service to the Simi Valley and Las Posas Valley areas in southern Ventura County. Currently, the District is a wholesaler of potable water imported from the Metropolitan Water District of Southern California. Coordination with other agencies within the study area is an important element of this project; several of these agencies already have conceptual plans for constructing reclaimed water systems. These include projects proposed by the Simi Valley County Sanitation District, the City of Moorpark, and the County of Ventura. Calleguas Municipal Water District intends to provide a backbone reclaimed water system to deliver wholesale water to these agencies. Potential users of reclaimed water include agricultural users and municipal and industrial users. Groundwater recharge with reclaimed water is an important element of this project. Kennedy/Jenks Consultants is evaluating the feasibility of using reclaimed water to recharge the North Las Posas Groundwater Basin through in-lieu use, surface spreading, or direct injection. Both seasonal storage and long-term storage is being considered. The evaluation includes discussions with the Fox Canyon Groundwater Management Agency regarding accrual of groundwater entitlement credits through recharge, a review of the Regional Water Quality Control Board's Basin Plan for the area, an analysis of the impacts on basin water quality and other basin water users, and a review of the regulatory requirements associated with groundwater recharge with reclaimed water. In addition, coordination with Metropolitan Water District of Southern California is necessary because the District is also considering storage of potable water in the Basin.
Alternative Water Supply Analysis **City of Calistoga, California**	The City of Calistoga, Napa County, a growing community faced with impending water shortages, retained Kennedy/Jenks Consultants to identify and evaluate alternative water supplies to supplement its existing sources. The city currently utilizes three sources of water: surface water from Kimball Reservoir and the North Bay Aqueduct and groundwater from a local well field. Kennedy/Jenks Consultants assessed the City's present and future water demands and identified eight alternatives for increasing its supply. These included increased storage at Kimball Reservoir; acquiring more water from the North Bay Aqueduct system; and development of additional local well fields and springs. Improvements required at the Kimball Water Treatment Plant to meet the new Surface Water Treatment Rules and to ensure continued use of that primary source were also evaluated. For each alternative, we assessed the environmental and institutional feasibility and developed estimates of unit cost per acre-foot of expected yield.

Table 1-1
Relevant Project Experience

Kennedy/Jenks Consultants	
Warren Valley Basin Management Plan **Warren Valley Basin Watermaster** **Yucca Valley, California**	The Warren Valley Basin provides groundwater for the community of Yucca Valley in San Bernardino County. With a safe yield of only 200 acre-feet per year (AFY) and extraction rates of approximately 3,600 AFY, the basin has a severe overdraft. Under directives from the Superior Court for the County of San Bernardino, the Watermaster retained Kennedy/Jenks Consultants to prepare a basin management plan under the direction of a Watermaster Board committee. The plan assessed the current overdraft of this adjudicated basin and evaluated the potential impacts of alternatives, water reclamation including greywater use, stormwater recharge, groundwater banking, conjunctive use of the basin, and water conservation. A basin operating plan was developed and a public education program were recommended. From these recommendations, an implementation plan which eliminates the overdraft by 1995 was presented. The plan was accepted by the Court and is currently being implemented.

Appendix
Project Team Resumes

Arranged in alphabetical order

Maeve Daugharty
Roger Funston
Jim Garing
Sachi Itagaki
Larry Leong, PhD
Craig Lichty
Todd Reynolds
Lynn Takaichi

Maeve K. Daugharty, EIT

Staff Engineer

Education

B.S., Civil & Environmental Engineering, University of California at Davis, 1997
B.A., English Minor, University of California at Davis, 1997

Registration

Engineer-in-Training, California

Professional Summary

Ms. Daugharty is a water resources engineer with experience in the design, construction support, and modeling of hydraulic and hydrologic systems. She has provided hydrologic and hydraulic support for water resources, wastewater, environmental, water supply, hydropower, and transportation projects. She is experienced in the design of storm drains, sanitary sewers, water quantity and quality treatment facilities, and salmonid restoration habitats. Ms. Daugharty has performed hydrologic/hydraulic analyses with software including FLDWAV, HEC-RAS, HEC-HMS, HEC-1, Hydra, XP-SWMM, Cybernet, H20NET, HY-8, and hydraulic model development on Excel.

Representative project experience follows:

- *Stanford University, Stanford University Domestic Water Distribution Model.* Updated existing Cybernet model of water distribution system to incorporate current reservoir and fire flow data. Created several scenarios that varied pipe size and valve configuration in order to achieve target system pressure ranges. Conducted water age analysis for water quality evaluation. Results were incorporated into a technical memorandum outlining recommended system improvements and justification.
- *Stanford University, Felt Lake Water Transmission Pipe.* Constructed Cybernet model of proposed replacement transmission line and proposed site construction topography. Adjusted system parameters such as grading and reservoir operation levels to maximize use of pre-designated replacement pipe size and material while maintaining acceptable pressures, particularly along a pipeline high point which produced pressures low enough to cause cavitation within some scenarios. Summarized recommended configuration in color-coded Cybernet map for construction planning.
- *City of Salinas, Update of Storm and Sanitary System Models.* Updated a Hydragraphics model of the storm and the sanitary system to Hydra6. Worked extensively with Pizer staff throughout the model conversion process to achieve convergence. Debugged model while preserving initial model input and evaluated reasonability of model results. Available capacity of existing pipes was presented in a color-coded AutoCAD map for future improvements planning.
- *City of Richmond, Hydraulic Software Comparison.* Conducted comparison of SewerCAD, Hydra, SWMM, and Mouse software packages for recommendation for modeling of Richmond Municipal Sewer District system. Considerations included intended use of model and hydraulics of system. Parameters such as software cost,

Roger S. Funston, QEP

Senior Scientist

Education

B.S., Soil Science, California State University at Humboldt, 1977
Certificate in Hazardous Materials Management, University of California at Irvine, 1989

Registrations

Qualified Environmental Professional, California, 1993
Registered Environmental Assessor, California, #0881, 1989

Professional Summary

Mr. Funston has over 20 years of experience planning, implementing and managing environmental and regulatory compliance projects including nine years as the Environmental Manager for a mid-sized crude oil production company. His expertise includes permitting and compliance assistance, property transfer due diligence, site investigation and remediation, environmental audits, strategic environmental management and development of environmental management systems. He has extensive experience working with both upper management and operating personnel to develop innovative and cost effective solutions to environmental issues. He has excellent working relationships with regulatory agencies and has been proactively involved in shaping the outcome of emerging regulatory issues through active participation in the rule development process. His specific project experience includes:

Project Feasibility Studies

- Project Manager for a study to evaluate beneficial re-use options for treated oilfield produced water.
- Project Manager for a study to evaluate the engineering, economic and regulatory feasibility of alternative pipeline routings to deliver crude oil produced at an offshore platform located in Santa Barbara County to market.
- Project Manager for a similar study evaluating alternative pipeline connections for natural gas projection facilities located in Louisiana.

Environmental Management System Development

- Developed, implemented and deployed, at the field operations level, a proactive, easily understood and practical environmental compliance program for an oilfield operator that significantly reduced non-compliance situations and potential environmental liabilities and that enhanced the client's reputation as a responsible corporate citizen with regulatory agencies and the public

Regulatory Agency Interface

- Obtained several variances from the South Coast Air Quality Management District and the San Joaquin Valley Unified Air Pollution Control District that allowed operations to continue while non-compliance issues were being addressed.

- Prepared environmental disclosure documents and worked closely with buyers of several oilfield properties being divested to ensure an orderly transition to the new operator.

Pollution Prevention

- Key member of a pollution prevention team that identified and implemented four pollution prevention projects at oil and gas operations, each of which had a six- to twelve-month return on investment.

Site Remediation

- Negotiated a clean up strategy with the Central Coast Regional Water Quality Control board staff that allowed for on-site reuse of crude oil impacted soils as base material under roadways and parking lots for a commercial redevelopment of an oilfield. This on-site reuse resulted in a cost savings of $250,000 versus off-site disposal as well as reducing future potential liabilities associated with off-site landfilling.
- Negotiated numerous clean up levels with the staffs of both the Los Angeles and Central Valley Regional Water Quality Control Boards for the closure of several oilfields that allowed residual crude oil impacted soil to be left in place. Received "No Further Action: letters for these low risk sites.
- Developed remedial cost estimates and clean-up strategies and managed the remediation and closure of the site for property owners who wanted to clean-up the oilfield for residential, commercial or industrial re-use.
- Project Manager for a controversial urban municipal landfill removal project associated with the Century Freeway construction project. Successfully addressed the concerns of the Department of Toxic Substance Control and the community while achieving the clean-up objectives.
- Project Manager for a large underground tank project program for a Southern California based aerospace company. Managed all business aspects of this multi-phase project including preparation of proposals, scheduling resources, budgeting, cost control, supervision of field engineers and project troubleshooting.
- Proposed a proactive remedial action plan for the closure of several unlined wastewater pits to the Central Valley Regional Water Quality Control Board that allowed the client to avoid the issuance of a Clean Up and Abatement Order.

Superfund Site Investigation

- Planned, implemented and managed a logistically complex CERCLA remedial investigation at a military base. Managed four subcontractors and six to twelve professional employees performing numerous simultaneous tasks. Completed a high quality project on time and on budget.

R. JAMES GARING

EDUCATION	California Polytechnic State University, San Luis Obispo, California – B.S. in Mechanical Engineering, 1967.
TECHNICAL SOCIETIES	American Public Works Association American Water Works Association
REGISTRATION	Licensed Professional Engineer, Civil: California
SPECIAL PANELS	ZONE 3 ADVISORY COMMITTEE, DELEGATE AT LARGE ZONE 3 TECHNICAL COMMITTEE Operation and Maintenance of Lopez Water Treatment Plant, Distribution System, Advising San Luis Obispo County Board of Supervisors PALONIO PASS WATER TREATMENT PLANT TECHNICAL COMMITTEE Representing San Luis Obispo County on technical matters regarding State Water Project design and construction.
ARBITRATION	Certified Arbitrator on the State Hazardous Waste Cleanup Panel
PROFESSIONAL HISTORY	Appointed President of Garing, Taylor & Associates, Inc., in June of 1981. Civil Engineer, Garing, Taylor & Associates, Inc., Arroyo Grande, California.
CURRENTLY SERVING **City and District Engineer**	City Engineer, Grover Beach, since 1981 District Engineer, Cayucos Sanitary District, since 1990 District Engineer San Miguelito Mutual Water Company, since 1992 District Engineer, Nipomo Community Services District, since 1992 District Engineer, Crestview Mutual Water Company, since 1993 Project Engineer for various municipal design projects including master drainage studies, water acquisition, storage and pumping systems, sewer systems, streets, storm drains, wastewater treatment plants and water treatment plants.

Sachiko Itagaki, P.E.

Water Resources Engineer

Education

MS in Civil Engineering (Water Resources with Emphasis in Groundwater Hydrology), Stanford University, 1991

BS in Ocean Engineering, Stanford University, 1984

Registration

Professional Engineer in California

Professional Summary

Ms. Itagaki has over 10 years of water resources engineering experience, specifically in conducting water resource planning and management programs, surface water and groundwater investigations, especially hydrogeological and groundwater basin investigations, stormwater management, water quality and hazardous waste investigations.

She has performed numerous groundwater yield studies which involved the evaluation of available hydrogeological data, such as lithologic logs, water level and water quality data, determination of historic and current pumpage quantities, identification of recharge areas, and evaluation of sustainable aquifer yields.

Ms. Itagaki is also experienced with the FASTCHEM hydrogeochemical flow and transport model, MODFLOW groundwater model, VS-2D vadose zone model, and GEOSTAT toolbox geostatistical program.

- *Devil's Den Groundwater Safe Yield Study, Castaic Lake Water Agency, Castaic Lake, California.* Gathered and evaluated data such as precipitation, streamflow, cropping patterns, evaporation, groundwater inflows, and groundwater pumping to conduct water balance for a safe yield analysis. Directed selection of locations for new monitoring wells based on existing hydrogeologic information.
- *Aquifer Storage and Recovery Feasibility Analysis, Antelope Valley Water Resources Study, Antelope Valley, California.* Evaluated existing hydrogeologic and water quality data for Antelope Valley aquifers. Selected potential surface infiltration and subsurface injection sites based on surface and subsurface geology and location of potential source waters. Directed other technical staff in evaluation of water quality. Compared water quality of potential source waters to existing groundwater as part of feasibility analysis. Assessed overall feasibility of surface infiltration and subsurface injection program. Determined additional data needs to further evaluate specific sites.
- *Salton Sea Hydrologic Study, Confidential Client, Salton Sea, California.* Identified the availability of and evaluated the chemical composition of groundwater in a southern California basin to determine whether quantities would be sufficient to serve both municipal and industrial supply and agricultural uses. Assessed groundwater quality and yield by analyzing groundwater well logs, water-level and water quality data. Also assessed characteristics of groundwater in a three-layer aquifer

system to evaluate the suitability of individual water-bearing zones to serve both domestic and agricultural supply.

- Developed two-dimensional groundwater and vadose zone flow and transport models for landfill and waste pond sites in the Midwest, Southwest, and South of the U.S. using FASTCHEM hydrogeochemical flow and transport computer model. The project involved using site-specific hydrogeological information to generate finite element grids for solving pressure/total head values in the modeled domain and to track pathlines from the waste impoundment to the affected surface waters. The project also involved verification of model results with analytical solutions and conducting sensitivity analysis of model results to changes in hydrogeologic parameters.
- *Investigation of Groundwater Contamination Problems in Central Valley, California* for confidential client,. Reviewed groundwater information such as well logs, water levels, and chemical analyses. Assessed soil vapor sampling data. Identified soil and water monitoring locations and depths.
- *Napa River Diversion Feasibility Study, Napa, California.* Tasks included analysis of surface water hydrology to develop drainage area-runoff correlations and to assess availability of excess winter time flows; development of water rights data base, and assessment of existing and proposed storage sites. A groundwater recharge potential evaluation included review of available USGS reports and County information to assess whether or not the existing hydrogeologic information was adequate to develop a feasibility-level groundwater conjunctive use project. The project would involve the release of stored surface water supplies for groundwater recharge purposes and the installation of M&I extraction wells in lieu of a water treatment plant facility upgrade and several miles of water transmission mains. Hydrogeologic reports, including well logs, lithologic cross-sections, historic pumpage quantities, rates of stream recharge and water quality, were reviewed and assessed to evaluate groundwater recharge and extraction potential.
- *City of Tracy Growth Management Plan, Infrastructure Analysis for Reclaimed Water Use, Tracy, California.* Analyzed innovative wastewater treatment systems, including wetlands, marsh/forest treatment and traditional wastewater treatment. Developed application rates and storage needs for reclaimed water use in the planned development. Evaluated storage and distribution systems for irrigation of parks and other public areas with reclaimed water. Developed conceptual cost estimates for reclamation facilities. Prepared draft general plan element for City of Tracy General Plan on reclaimed water.
- *Fast-track Storm Drainage Pipeline and Pump Station Design, City of Richmond, California.* Project Manager for preparation of plans and specifications for pipeline and pump station. Prepared sub-contractor agreements with geotechnical and surveying subcontractors; prepared and obtained permits from US Army Corps of Engineers, Bay Conservation and Development Commission, California Regional Water Quality Control Board, and California Department of Fish and Game, successfully meeting schedule and budget for project.

- *Stormwater Management Plan, City of Fairfield, California.* Developed and implemented a comprehensive stormwater runoff control program to reduce pollutant loadings to the San Francisco Bay.
- *Water Filtration Plan Operations Plan, Calleguas Municipal Water District, Thousand Oaks, California.* Directed preparation of operations plan to comply with California Department of Health Services Surface Water Treatment Rule, including evaluating compliance with State and Federal drinking water standards, review of sanitary survey for watershed for sources of contaminants, descriptions of treatment processes, and monitoring of distribution system.
- *Watershed Sanitary Surveys for North Coast County Water District and City of Ukiah.* Project Manager/Engineer on project which included conducting field and file surveys for potential pollutants that could affect drinking water quality of two different water purveyors, and preparing survey report and maps documenting findings.
- *Domestic Water Distribution Model Project, Stanford University, CA.* Updating Stanford University's domestic water system model using Cybernet software, which includes features to utilize geographical locations for the pipes, nodes, valves and other system features. The major elements of the project are model layout, demand development for diurnal and extended period simulation, calibration, water quality simulation for chloramine disinfection, and training of University Utilities staff in modifying and maintaining the model. There are three pressure zones in the Stanford University model and approximately 500 pipes.

Ms. Itagaki recently rejoined Kennedy/Jenks after a two-year tenure with the East Bay Municipal Utility District. While with EBMUD, she was affiliated with the Seismic Improvement Program (SIP), a $189-million program with an annual budget of $14-$18-million to ensure that the District's system of reservoirs and pipelines would be operational following an earthquake. As one of the project managers, she was responsible for planning and management of reservoir outages, pipe fault crossing projects, CEQA documentation for the Southern Loop pipeline, and long-range program planning. Specific tasks included the following:

- *Hydraulic Modeling and Reservoir Outage Planning*: Managed consultant for preparation of hydraulic models and outage plan reports; scheduled and coordinated specific reservoirs for outage based on other work to be conducted within the SIP and the District; coordinated with other District departments to implement reservoir outages; prepared documentation for approval to remove a reservoir from service.
- *Technical Tasks*: Conducted trend analysis of reservoir water level and pumping plant data to assess maximum duration of reservoir outage; prepared storage and demand analysis within a pressure zone; prepared hydraulic model of pressure zone to assess impacts to customers and fire flow from taking reservoirs out of service; tested hydrants for flow and pressure; sized and located temporary fa-

good housekeeping measures; conducting inspections of sites during and after construction; collecting runoff samples and reviewing water quality data from sampling events during and after construction; reviewing runoff management plans for individual facilities. Projects included construction of tertiary wastewater treatment plant expansion and reclamation reservoir, construction of community college facility, assessment of runoff generated from subdivision, lumberyards, and municipal maintenance/ corporation yards.

- Project Head for Underground Tank Cleanups, Investigation of Toxic Sites on Military Bases and Solid Waste Disposal Site Investigation Program. Tasks included site selection and oversight of monitoring well installation, water quality sampling, analysis of groundwater monitoring data and geologic information to assess containment migration and review of remediation measures.
- Project Head for Solid Waste Disposal Site Investigation Program and Underground Tank Cleanups. Tasks included surface and ground water quality monitoring at site; assessment of closure measures which included adequate site drainage, revegetation and stabilization of disturbed soils, and maintenance of closed facilities; and assessment of contaminant migration and review of remediation measures.

Publications

Co-author with Patricia Dustman in American Water Works Research Foundation, *Case Study in Planned Outages of Water Supply Reservoirs*, 1997.

Contributor to Electric Power Research Institute, *Applications Handbook for FASTCHEM™, Volume 1: Flow Modules*, September 1992.

Co-author with Jill C. Bicknell for American Society of Civil Engineers, Urban Storm Water Quality Session: *Implementation of the NPDES Storm Water Regulations by Municipalities in the San Francisco Bay Area*, August 1992.

Presentations

Co-Presenter with Elizabeth Teien for American Society of Civil Engineers, North American Water and Environment Congress: *A Practical Approach to Watershed Sanitary Surveys*, 1996.

American Water Works Association California/Nevada Section Conference on *Preparation of Watershed Sanitary Surveys*, Fall 1995.

Lawrence Y.C. Leong, Ph.D.

Director, Advanced Technologies Group

Education

Ph.D., Environmental Health Sciences, University of California, Berkeley, 1974
M.S., Environmental Health Sciences, University of California, Berkeley, 1970
B.A., Biology, Lawrence University, 1968

Registration

Environmental Assessor in California
Qualified Environmental Professional

Professional Summary

Dr. Leong has over 20 years of experience examining the fate and transport of environmental contaminants in air, water and soil. He has significant experience in three technical areas: water quality, air quality, and laboratory consulting.

His professional experience includes the current chairmanship of the Air Quality Impacts Committee, Editorial Advisory Board for Water Environment Federation Laboratory Solutions, and being a member of the Reuse Committee for the Water Environment Federation. He recently served on a WEF task force that published the Special Publication entitled "Emissions of Toxic and Related Air Pollutants from Wastewater Facilities," was on the organizing committee and a session moderator for the Second WEF Speciality Conference, Control of Odors and VOC Emissions, and co-chair of the WEF pre-conference workshop, "Complying with Clean Air Act Accidental Chemical Release Prevention Regulations." He has published over 20 articles, and participates in the two Standard Methods committees.

Water Quality Summary

Dr. Leong has worked on over 25 projects evaluating the performance of biological and physical/chemical unit processes to remove/inactivate parameters of public health concern with total billings of more than $15 million. He has studied over 50 drinking water wells ranging from 25 to 6,000 gpm with a total capacity of 40 mgd in Egypt, Indonesia and six states in the US for trace metals, synthetic organics, taste and odor, iron bacteria or microbial contamination problems. His experience includes pilot and full-scale ultra pure water, potable water, wastewater and tertiary treatment plants. His process experience includes storage coagulation, filtration, settling, filtration, carbon adsorption, resin adsorption, air stripping, ozonation, chlorine dioxide, chlorination, reverse osmosis, activated sludge and high rate oxidation ponds. His specific water quality experience includes the following:

- *DOE/ARCO Produced Water Reclamation Project*, Project Manager. Project tasks included conducting a literature search of technologies for treating produced water from oil fields to drinking water standards, estimating treatment costs for a number of competitive processes, conducting bench-scale warm softening experiments to evaluate boron, silica, and TOC removal, design and construction of a 10-gpm pilot

- *USEPA: Behavior of Microbes of Sanitary Significance when Altering Disinfection Processes to Meet the THM MCL.* Project Manager on an EPA-funded study examining 4 treatment plants and their distribution systems for indicator bacteria, bacteriophage, and enteric viruses to evaluate changes in the disinfection practices to meet THM regulations. A high volume MPN technique was developed to increase the sensitivity of the coliform test 100 times. Periodic breakthrough of coliform bacteria was detected using this method.
- *Association of California Water Agencies.* Project Scientist to determine the cost of compliance for public water supplies in California to meet 5 proposed arsenic MCLs. The project included evaluating three major water quality databases for over 16,000 sources of water within the state of California. A maximum likelihood estimator was used to assign arsenic values to sources with below detection limit results within 12 geological units. Over 400,000 data points were used to develop the background technical information prior to estimating the cost of compliance for the 5 arsenic MCLs.
- *Army Corps of Engineers, Baltimore District.* Laboratory Director during the Experimental Estuary Water Treatment Plant Pilot Study. While Director of Montgomery Laboratories, over 200,000 water quality data points were generated in support of this 3-year, $9-million pilot plant study. The project included a weekly direct electronic transfer from the HP LIMS system to the project database that was VAX based. The study generated over 500,000 data points and was reviewed by the National Academy of Sciences to access the feasibility to produce potable water from a water source that consisted of 1/3 Potomac River and 2/3 secondary treated wastewater.
- *Orange County Water District.* Evaluated the performance of Water Factory 21, a 15-MGD tertiary plant, to remove enteric viruses, coliform and *Giardia.* The process evaluated were trickling filter and activated sludge effluents, high lime, multimedia filtration, RO, GAC, and chloramination.

Laboratory Consultant

Dr. Leong has project experience that includes planning studies, audits (operational and safety), and design/construction services for environmental laboratories. His operational experience includes 7 years as Director of Montgomery Laboratories, which had an annual billing of $3.5 million, before leaving this position. He has been responsible for the plans and specifications for over 25 water, wastewater, or hazardous waste laboratories, ranging in staffs with 1 to over 90 and from 200 to over 60,000 square feet in space. The analyses have included conventional wet chemistry to GC/MS and MPN coliform to mammalian mutagenic transformation testing.

- *Clark County Sanitation District.* Laboratory Consultant for Architect, Hanbury Evans Newill Vlattas on a concept design for the District. Laboratory support includes analyses of samples from water treatment plants, several wastewater treatment facilities, pretreatment, operations, construction, receiving waters, and compliance test-

from several professionals to over 60 and the space increased from 900 to over 7000 sf. Modifications were required to handle the increased workload of 2000/month and >10,000 analyses on these samples. The laboratory did simple gravimetric analysis such as total solids to heavy metals analyses by inductive coupled plasma emission, gravimetric oil and grease to GC/MS, and coliform to enteric viruses, Ames and mammalian transformation testing.

Air Quality Summary

Dr. Leong has managed 25 air quality projects totaling over $7 million in billings for POTWs (0.1-420 mgd), aerospace manufacturing, military bases, chemical manufacturing, mining and landfills. The activities have included emission inventory plans, source testing, emission estimates using emission factors and computer models, air dispersion modeling, and Health Risk Assessments (HRAs). These projects have included point and fugitive source testing for criteria pollutants, permanent gases and organic and heavy metal air toxics. His experience includes all aspects of service required by the California Air Toxics "Hot Spots" Inventory and Assessment Act (AB2588): emission inventory plans, source testing, emission estimates, reports, and HRAs. His projects have evaluated the impact of air toxics emissions from 7 large sites (100-200 acres) with a total of more than 500 point and area sources to residential, commercial and industrial communities. The zone of impact for these projects covered more than 30 square kilometers. His regulatory experience includes negotiations with 7 local air boards in California and two state-wide agencies. His specific air quality experience includes the following:

- Clark County Sanitation District, Las Vegas, NV. Technical Reviewer for a $300,000 odor and voc emissions estimation study. The treatment plant is a 66-MGD treatment plant that has over 13 odor control devices. Processes include primary clarification, activated sludge, secondary clarification, DAF, belt filter presses, and advance wastewater treatment. A compliance review was performed and permits to construct were obtained to bring the plant into compliance. Air emission modeling from the treatment plant was performed using EPA Water 7 and Toxchem.

- American Microsystems, Inc. Technical Manager for Title V compliance and emissions estimate. Developed strategy and reviewed the VOC and HAP emissions from a 5,000-plus wafer manufacturer. Negotiated emission estimation methodology with the Idaho Department of Environment resulting in getting the facility to be classified as a Tier II status. This status will allow the facility to almost triple in size before being required to submit a Title V air permit.

- Tennessee Eastman Kodak Chemical. Technical Manager for the air emissions estimating project for the 12,000 employee and 800 acre manufacturing facility at Kingport. The project requires source testing of the bar screens and pump stations in the industrial collection systems and at key points of the 20 mgd industrial wastewater treatment system. The focus of the project was to refine the SARA Title III TRI air emissions estimate from these sources and to calibrate their air Tennessee Eastman Kodak Chemical emission computer model in preparation for VOC's and air toxic emissions.

and 27 target compounds each. These reports were required as part of compliance with state and local air regulations and permits conditions.

Affiliations

Air and Waste Management Association
American Chemical Society
American Society for Microbiology
American Water Works Association
California Water Environment Association
International Association for Water Quality
Water Environment Federation: Chair, Technical Committee on Air Quality Effects, Member, Water Reuse Committee

Editorial Board

Water Environment Laboratory Solutions

Selected Publications/ Presentations

"Developing a New Water Resource from Oil Field Produced Water," with D.A. Fruth, G. Doran, and J.A. Drago. To be presented at 1997 AWWA Water Resources Specialty Conference, Seattle.

"Evaluation of Technologies to Treat Oil Field Produced Water to Drinking Water or Reuse Quality," with G. Doran, D.A. Fruth, and J.A. Drago. To be presented to the Society of Petroleum Engineers 1997 Annual Conference, San Antonio, TX

"Simultaneous Removal of Silica and Boron from Produced Water by Chemical Precipitation," with D.A. Fruth, G. Doran, and J.A. Drago. To be presented at the Engineer's Society of Western Pennsylvania 1997 International Water Conference, Pittsburgh.

"Treating Oil Field Produced Water to Drinking Water Standards: Pilot-Scale Evaluation," with D.A. Fruth, G. Doran, and J.A. Drago. Poster to be presented at the AWWA 1997 Water Quality Technology Conference, Denver, CO

"Developing a Cost Effective Environmental Solution for Produced Water and Creating a 'New' Water Resource," with D.A. Fruth, G. Doran, and J.A. Drago. South-Central Environmental Resource Alliance, University of Tulsa, and DOE 1997 International Petroleum Environmental Conference, San Antonio, TX

"Fecal Coliform Contamination of a Conjunctive Use Reservoir", with Mudd, J., Caskey, P.S., and Olson, B.H., Proceeding of the Water Quality Technology Conference, New Orleans, 1995

"Evaluation of the California Wastewater Reclamation Criteria using Enteric Virus Monitoring Data," with T. Asano, M.G. Rigby, and R.H. Sakaji, Proceeding of IAWQ 10th Biennial Conference, Washington, D.C., 1992.

Todd Reynolds, P.E.

Process Engineer

Education

MS in Environmental Engineering, University of California, Berkeley, 1995
BS in Nuclear Engineering, University of California, Berkeley, 1989

Registrations

Civil Engineer in California

Professional Summary

Mr. Reynolds has 10 years of engineering and management experience and 5 years of consulting experience for clients in the municipal and private sectors. His projects include both groundwater and surface water supply and treatment, membrane treatment including microfiltration, ultrafiltration and seawater and brackish water desalination, chemical feed systems and storage tanks. His experience includes feasibility studies, evaluation of treatment process alternatives, pilot plant studies, preparing pre-design reports, developing project contract documents, design drawings and specifications; preparing operations manuals and performing contract administration and construction management for a variety of projects. He has served as a Project Engineer for the planning, design and construction of numerous water and wastewater projects. He has authored water-related articles and papers for professional society magazines and conferences.

Water Supply, Treatment and Distribution

- *Cambria Seawater Desalination 30-Percent Design Report, Cambria Community Services District, Cambria, CA.* Project Engineer for the 10-percent and 30-percent design of 300-gallon-per-minute seawater reverse osmosis (RO) desalination plant. Kennedy/Jenks performed a value engineering study on an earlier RO plant design and recommended an alternative directionally drilled beach well seawater intake and an innovative post-treatment process to help reduce project costs. A pilot study was performed to demonstrate the natural filtration provided by the subsurface intake and to develop intake system design parameters. The 30-percent design also evaluated alternative energy recovery systems to help reduce the operating costs of the facility. Made numerous presentations to a Citizens Advisory Committee in preparation for a community ballot on the project. The lower cost Desalination Project was approved by nearly 60% of voters.
- *Seawater Reverse Osmosis Desalination Plant, Skagit County P.U.D. No. 1, Guemes Island, WA.* Participated in the evaluation and design of a small package seawater RO desalination plant with a 60-foot beach infiltration trench for seawater intake. The isolated community of Potlach Beach on Guemes Island (San Juan Islands) was experiencing salt water intrusion in their potable water supply well. The Washington State Department of Ecology ordered the community to cease pumping their well. Skagit County PUD No. 1 determined that the most reliable source of water for this

community would be seawater. The 30-gpm-capacity system has a low recovery (30-percent) to permit operation with no chemical pretreatment.

- *Brackish Water Reclamation Demonstration Facility Design, Port Hueneme Water Agency, CA.* Process Engineer for the design of chemical feed systems, filtration system and reverse osmosis (RO), nanofiltration (NF), and electrodialysis reversal (EDR) membrane treatment systems. Chemical systems included hydrochloric acid, anti-scalant, sodium hydroxide, sodium hypochlorite, sodium bisulfite, ammonia and fluoride. This $5.7-million, 3-MGD capacity facility blends desalinated brackish groundwater with imported surface water from the California State Water Project to provide local water users with a dependable, high-quality water supply. The BWRDF is an innovative desalination plant that uses three parallel 1-MGD- capacity desalting technologies to treat local brackish groundwater. In addition to supplying the public with a high-quality drinking water supply, the plant also serves as a full-scale research facility to evaluate the long-term performance characteristics and cost effectiveness of RO, NF and EDR membrane technologies.

- *Hollister Area Lessalt Membrane Filtration Plant, Hollister, CA.* Project engineer for the design of a 3-MGD capacity membrane filtration plant. The Lessalt Facility will treat low-salt, surface water from the San Luis Reservoir to augment the existing groundwater supply. The Lessalt Water Project will:

  - Reduce the salt loading into the groundwater basin from water softeners and therefore improve the overall quality of the San Benito Valley groundwater basin
  - Start to improve the taste and quality of the community's water supply
  - Augment the community's existing groundwater supply

  The Lessalt Membrane facility will consist of microfiltration (MF) or Ultrafiltration (UF) membrane filtration with caustic soda addition for corrosion control and sodium hypochlorite addition for disinfection. Provisions will be made for future addition of a coagulant feed system to reduce Total Organic Carbon (TOC) and a PAC or GAC taste and odor removal system. The facility will take advantage of the source water pressure to drive the water through the membranes and into the distribution system. Disinfection contact time will be provided with a highly efficient pipeline contactor. Washwater from the membrane filters will be put back into the Hollister Conduit, a non-potable water pipeline that serves mainly agricultural users.

- *Turbidity Reduction Facility, Humboldt Bay Municipal Water District, Eureka, CA.* Project Engineer for the design of a 14-MGD winter-time capacity, 21-MGD summer-time capacity, in-line filtration plant. The Turbidity Reduction Facility (TRF) is a seasonal facility to reduce turbidity in Ranney collector source water from the Mad River. The TRF includes a flow metering and rapid mix station, deep bed mono-media granular filtration, washwater recovery and pretreatment, sludge drying beds and a chemical storage and feed facility.

- *Hollister Area Water Treatment Plant Ultrafiltration/Microfiltration Pilot Study, City of Hollister, CA.* Project Engineer for a three-month pilot study of microfiltration (MF) and ultrafiltration (UF) membrane treatment for the City of Hollister, the Sunnyslope County Water District and the San Benito County Water District. The objective of the pilot study was to establish design criteria and verify costs for a proposed new 14-MGD water treatment plant for the Hollister area. Four different MF and UF systems were piloted on surface water from the San Luis Reservoir. The study evaluated water quality, organics removal, taste and odor removal and membrane flux rate. The pilot study report evaluated the capital and O&M costs for a 5-MGD, 7-MGD and 14-MGD MF and UF membrane filtration plant in comparison to conventional treatment technology.
- *Denniston Water Treatment Plant Ultrafiltration/Microfiltration Pilot Study, Coastside County Water District, Half Moon Bay, CA.* Project Engineer for a three-month pilot study of microfiltration (MF) and ultrafiltration (UF) membrane treatment. The objective of the pilot study was to determine system performance on this challenging water source for expansion of the Denniston WTP. Two different MF and UF systems were piloted on surface water from Denniston Creek. The study evaluated water quality, organics removal, taste and order removal and membrane flux rate. The pilot study report evaluated the capital and O&M costs for a 2-MGD, MF and UF membrane filtration plant in comparison to conventional treatment technology.
- *Stafford Water Treatment Plant Evaluation, North Marin Water District, Marin County, CA.* Process Engineer for the evaluation of a 40-year-old 6-MGD surface water treatment plant. The evaluation focused on an assessment of the plant's physical condition, ability to meet current and forthcoming water quality regulations, and identification of the most cost-effective treatment scheme for the facility. Three options were reviewed including rehabilitation with no process improvements, plant rehabilitation and retrofit with new process components, and retrofit with new process components, and a completely new plant. The District's operating and water quality staff was integrated into the evaluation team, and tours of several facilities were conducted to review process alternatives and discuss operating history with operators. Process alternatives were presented and screened in a workshop prior to performing detailed evaluations that included life-cycle cost comparisons of alternatives. Process components reviewed included ballasted clarification, ozonation, UF and MF membrane systems, serial filtration, UV, chloramination and others. Solids and washwater handling systems and clearwell improvements were identified. The culmination of the work was an Executive Summary report prepared for the District's Board of Directors that was supported by a series of detailed Technical Memorandum. Several presentations were made to the Board to discuss work progress and findings.
- *Mission San Jose Water Treatment Plant Scale Control Evaluation, Alameda County Water District, Fremont, CA.* Evaluated alternatives for controlling calcite scale in the sodium hypochlorite and ammonia chemical solution lines. Managed a

subcontractor who installed a softening system on the chemical carriage water system.

- *Ventura Avenue Water Treatment Plant Master Plan, City of San Buenaventura, CA.* Evaluated water quality data for the City's Master Plan. Participated in evaluating planned improvements to 57-year-old conventional water treatment plant. Reviewed compliance with existing, new and proposed Safe Drinking Water Act regulations. Improvements included filter backwash and spent washwater recovery systems. Washwater recovery system improvements included evaluation of membranes, alternative physical barriers and ozone disinfection.
- *Filter Underdrain and Media Replacement Project, San Geronimo Water Treatment Plant, Marin Municipal Water District, Marin County, CA.* Prepared Contract Documents including drawings and technical specifications for the demolition and replacement of filter underdrains and media. A low-profile, corrosion-resistant system was designed. Original pre-cast concrete underdrains were removed and new molded polyethylene underdrains were installed. Support gravel was eliminated through the use of a porous underdrain cap, which allowed the filter bed depth to increase by 14 inches. A new deep-bed anthracite media was specified. A Polymorphic resin coating system was used to protect wetted concrete surfaces. After one year of operation, the filter plant performance has improved significantly with respect to total turbidity reduction under all loading conditions. Filter run times have also increased improving production and reducing washwater handling requirements by 50%. Filter aid polymer is no longer required.
- *Brackish Water Reclamation Demonstration Facility Construction, Port Hueneme Water Agency, CA.* Project Coordinator. Coordinated Shop Drawing Reviews, addressed Requests for Information, and issued Clarifications and Change Orders for the BWRDF project. The year-long construction of the PHWA BWRDF involved administering multiple contracts and coordinating two separate Contractors on the project.
- *Water Treatment Plant Study, Humboldt Bay Municipal Water District, Eureka, CA.* Evaluated treatment process alternatives for a proposed 21-MGD surface water treatment plant. Process alternatives included contact clarification/filtration, high rate direct filtration and pressure filtration.
- *Korblex Baffled Water Storage Tank Construction, Humboldt Bay Municipal Water District, Eureka, CA.* Project Coordinator for the construction of a 2-MG Baffled water disinfection and storage tank.
- *Westmorland Water Treatment Plant Evaluation, City of Westmorland, CA.* Evaluated contact clarification-filtration process alternative for improvements to the 2-MGD facility, including evaluation of water quality, existing site layout constraints, and capital and operational costs. The Westmorland WTP treats Colorado River surface water from the All-American Canal. Pre-design improvements to the plant included modular contact clarification-filtration units, a

filter backwash pump station, new chemical feed and rapid mixing systems and a 700,000-gallon treated water storage tank.

- *Tolt Water Treatment Plant Proposal, City of Seattle, WA.* Process Engineer. Participated in the 20% design of a 120-MGD ozone facility with 5,000-ppd ozone generation equipment and VPSA oxygen generation equipment. Modeled ozone residuals and inactivation potential through an innovative contactor design to optimize the system. Design drawings and specifications were prepared for the Tolt WTP design-build proposal to a level of 20-percent completion.
- *Ventura Avenue Water Treatment Plant Master Plan, City of San Buenaventura, CA.* Evaluated water quality data for the City's Master Plan. Participated in evaluating planned improvements to 57-year-old conventional water treatment plant. Reviewed compliance with existing, new and proposed Safe Drinking Water Act regulations. Improvements included filter backwash and spent washwater recovery systems. Washwater recovery system improvements included evaluation of membranes, alternative physical barriers and ozone disinfection.

Wastewater Collection, Treatment and Disposal

- *Central Park Swim Lagoon Washwater Handling System Evaluation and Design, City of Fremont, CA.* Project Manager for the evaluation and design of a washwater management system for the City of Fremont's Central Park recreational public swim facility. The swim lagoon covers 2 acres and has a capacity of 3.3 million gallons. The swim facility operates a sand pressure filter, installed in 1973, and a sodium hypochlorite disinfection system, installed in 1994, to treat the lagoon water. Approximately 1 million gallons per day of lagoon water are filtered and disinfected with this system. The City of Fremont operates the swim lagoon facility for approximately 14 weeks in the summer, from a few weeks before Memorial Day to Labor Day. The washwater from the filtration system was being discharged to a wetlands area without the proper NPDES permit. A critical aspect of this project was the tight schedule: the swim lagoon had to be open for the public by Memorial Day on the 23rd of May 1998. The project team had less than four months to design and construct a washwater management system for the swim lagoon. Kennedy/Jenks evaluated several alternatives and determined that onsite storage of the washwater, settling of the solids and decanting of the supernatent back to the swim lagoon was the most economical and timely alternative. The washwater management system design included two 21,000-gallon above-ground rental storage tanks (rented only for the summer swim season), washwater and return piping to the existing filter, and controls for automated decanting of the settled washwater. The swim lagoon opened to large crowds on Memorial Day weekend and the City of Fremont is pleased with its washwater management system.
- *Novato and Ignacio Wastewater Treatment Plants Chlorination and Dechlorination Improvements, Novato Sanitary District, Novato CA.* Evaluated alternative chemicals and methods for chlorination and dechlorination of secondary treated effluent.

- *San Francisco Zoological Gardens, City and County of San Francisco, Department of Public Works, San Francisco CA.* Surveyed existing sewer lines and used HYDRA to model combined storm and sanitary sewer. Modeled the Zoo's new sewer system.

Affiliations

American Membrane Technology Association
American Society of Civil Engineers
American Water Works Association
California Water Environment Association
U.S. Naval Reserves

Lynn M. Takaichi, P.E.

Chairman and Water Resources Engineer

Education

MS in Civil Engineering (Sanitary), University of California, Berkeley, 1972
BS in Civil Engineering, University of California, Berkeley, 1971
Special Study in Environmental Impact Assessment, University of California
Study in City and Regional Planning, University of California
Study in Water Resources Planning Civil Defense Preparedness Agency, Certificate of Achievement in Multi-Protection Design, University of Hawaii

Registration

Civil Engineer in California

Professional Summary

Mr. Takaichi is responsible for major planning and design projects, particularly assignments involving complex institutional and financial arrangements. He has directed a wide range of water projects including water resource studies, water system master plans, water treatment investigations, water facilities design and utility management plans. In addition, he has managed the preparation of numerous environmental impact assessments.

As a consultant to AWWA's Safe Drinking Water Act TAW, Mr. Takaichi was the Officer-in-Charge of an evaluation of issues related to the reauthorization of the Safe Drinking Water Act and has recently been involved in the development of case studies throughout the U.S. to assess impact of the Safe Drinking Water Act regulations. He has also managed cost-of-compliance studies of the proposed radionuclide regulations for AWWA's Radionuclide TAW and the Association of California Water Agencies (ACWA). He is currently of Officer-in-Charge of a cost-of-compliance study of the proposed arsenic regulation for ACWA and two research projects funded by the AWWA Research Foundation: a critical assessment of radon removal systems and the development of protocols for cost of compliance studies (under subcontract to RCG/Hagler, Bailly).

Mr. Takaichi currently serves as the Agency Engineer of the Castaic Lake Water Agency and Port Hueneme Water Agency. He is also the water systems consultant for the City of Port Hueneme. In addition, he serves on the Los Angeles County Reclaimed Water Advisory Committee and the Technical Criteria Committee for the Urban Runoff Pilot Project of the Santa Monica Bay Restoration Project.

Mr. Takaichi has particular expertise in complex institutional arrangements and he works closely with specialized legal counsel, financial consultants, and water managers. His experience includes water agency formation, drafting of enabling legislation, negotiation of water supply and water service agreements, development of annexation policies and agreements, and management of a wide variety of water programs. He also has expertise in water system appraisals and has assisted numerous public agencies with the acquisition of investor-owned utilities.

Water Resource Studies

In the area of water resource studies, his experience includes the following studies:

- Groundwater management plan for the Kettleman Plain and Sunflower basins.
- Comprehensive water resource study of the Antelope Valley.
- Groundwater management plan for the Charnock and Santa Monica Sub-basins.
- Groundwater management plan for the Warren Valley Basin.
- Optimization study of state water importation into Ventura County.
- Evaluation of potential water resources for the Hidden Valley Municipal Water District.
- Water resources evaluation and environmental assessment of 200,000 acres in Hawaii for the Soil Conservation Service.
- Feasibility study of conjunctive use between groundwater and imported water for the Castaic Lake Water Agency.
- Feasibility study of additional groundwater utilization for the City of Santa Monica.
- Feasibility study of groundwater utilization for non-potable water uses for the City of Thousand Oaks.
- Feasibility study of using groundwater for irrigation uses for the Camrosa Water District.

Water Quality and Treatment

In the area of water quality and treatment, his experience includes:

- Stochastic model of chloride discharges to the Santa Clara River for the County Sanitation Districts of Los Angeles County.
- Stochastic model of chloride discharges within the Calleguas Creek Watershed for the Fox Canyon Groundwater Management Agency and Calleguas Municipal Water District.
- Preliminary evaluation of the potential use of dewatering water as a water supply for the City of Downey.
- Value engineering of a 300-gpm seawater desalination plant for the Cambria Community Services District.
- Planning, permitting and design of a 3500-gpm MTBE removal plant for the City of Santa Monica and several oil companies.
- Evaluation of THM reduction alternatives for the Naval Air Weapons Station, Point Mugu, California.

community would be seawater. The 30-gpm-capacity system has a low recovery (30-percent) to permit operation with no chemical pretreatment.

- *Brackish Water Reclamation Demonstration Facility Design, Port Hueneme Water Agency, CA.* Process Engineer for the design of chemical feed systems, filtration system and reverse osmosis (RO), nanofiltration (NF), and electrodialysis reversal (EDR) membrane treatment systems. Chemical systems included hydrochloric acid, anti-scalant, sodium hydroxide, sodium hypochlorite, sodium bisulfite, ammonia and fluoride. This $5.7-million, 3-MGD capacity facility blends desalinated brackish groundwater with imported surface water from the California State Water Project to provide local water users with a dependable, high-quality water supply. The BWRDF is an innovative desalination plant that uses three parallel 1-MGD- capacity desalting technologies to treat local brackish groundwater. In addition to supplying the public with a high-quality drinking water supply, the plant also serves as a full-scale research facility to evaluate the long-term performance characteristics and cost effectiveness of RO, NF and EDR membrane technologies.
- *Hollister Area Lessalt Membrane Filtration Plant, Hollister, CA.* Project engineer for the design of a 3-MGD capacity membrane filtration plant. The Lessalt Facility will treat low-salt, surface water from the San Luis Reservoir to augment the existing groundwater supply. The Lessalt Water Project will:
  - Reduce the salt loading into the groundwater basin from water softeners and therefore improve the overall quality of the San Benito Valley groundwater basin
  - Start to improve the taste and quality of the community's water supply
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  The Lessalt Membrane facility will consist of microfiltration (MF) or Ultrafiltration (UF) membrane filtration with caustic soda addition for corrosion control and sodium hypochlorite addition for disinfection. Provisions will be made for future addition of a coagulant feed system to reduce Total Organic Carbon (TOC) and a PAC or GAC taste and odor removal system. The facility will take advantage of the source water pressure to drive the water through the membranes and into the distribution system. Disinfection contact time will be provided with a highly efficient pipeline contactor. Washwater from the membrane filters will be put back into the Hollister Conduit, a non-potable water pipeline that serves mainly agricultural users.
- *Turbidity Reduction Facility, Humboldt Bay Municipal Water District, Eureka, CA.* Project Engineer for the design of a 14-MGD winter-time capacity, 21-MGD summer-time capacity, in-line filtration plant. The Turbidity Reduction Facility (TRF) is a seasonal facility to reduce turbidity in Ranney collector source water from the Mad River. The TRF includes a flow metering and rapid mix station, deep bed mono-media granular filtration, washwater recovery and pretreatment, sludge drying beds and a chemical storage and feed facility.

- Planning, design and construction management of a 3.0-MGD desalination demonstration plant for the Port Hueneme Water Agency. (Received 1999 CELSOC Honor Award for Engineering Excellence.)
- Evaluation of alternatives to the 100-cfs Stone Canyon Filtration Plant proposed by the Los Angeles Department of Water and Power.
- Planning, design and construction management of the 30-MGD Rio Vista Water Treatment Plant (expandable to 90 MGD) for the Castaic Lake Water Agency. (Received 1995 CELSOC Merit Award for Engineering Excellence.)
- Development of a groundwater contamination containment plan for the Water Replenishment District of Southern California.
- Proposal evaluation, contract assistance, and evaluation of operational problems to the City of Pomona for the turnkey construction of a 15 MGD nitrate removal plant (ion exchange).
- Facilities plan for expansion of the Earl Schmidt Filtration Plant from 25 to 50 MGD for the Castaic Lake Water Agency.
- 10,000-gpm air stripping facilities and expansion of the Arcadia Water Treatment Plant for the City of Santa Monica. (Received CEAC's 1992 Grand Award for Engineering Excellence.)
- Engineering report for a 32-MGD wellfield under the influence of surface water for the United Water Conservation District.
- Engineering report for a new 50 MGD water treatment plant for the Calleguas Municipal Water District.
- Facilities plan and design of the expansion of the Earl Schmidt Filtration Plant from 12.5 to 25 MGD for the Castaic Lake Water Agency.
- Feasibility study of a new water treatment plant for the City of Port Hueneme.
- Design of 2,000-gpm wellhead treatment plant to remove iron/manganese and hydrogen sulfide for the Goleta Water District.
- Impact assessment on water treatment facilities of 26 small water systems caused by the implementation of the Safe Drinking Water Act.
- Planning and design of a 50,000-gpd demineralization facility.
- Planning study of a new water treatment plant (2.4 MGD nominal capacity) to treat high color (75 units average), low turbidity (3 NTU average) water.

Water Systems Evaluations

In the area of water systems evaluations, his experience includes the following:

- Comprehensive water system master plan update for the City of Oxnard.
- Comprehensive water system plan update for the Lakehaven Utility District.

- Long-term capital improvement program for the City of Port Hueneme.
- Review of proposed concepts for replacement of Coldwater Reservoir for the City of Beverly Hills.
- Water master plan for the Santa Clarita Water Company
- Water system master plan for the City of Manhattan Beach
- Water master plan and facilities improvement plan for the San Juan Water District
- Comprehensive water plan and capital improvement program ($380 million) for the Castaic Lake Water Agency.
- City/District integration evaluation for the Pico Water District.
- Water master plan for the City of Chino.
- Water master plan update for the City of Upland.
- Water master plan for the City of Fillmore.
- Water quality improvement plan for the City of Port Hueneme.
- Water resources plan for the Irvine Ranch Water District.
- Water system evaluation for the City of Coachella.

Water Conservation Programs

He has been involved in the evaluation, development and implementation of several water conservation programs. These projects include:

- Water conservation element of the Antelope Valley Water Resource Study. The recommended programs included both urban and agricultural measures for a 2,400 square mile area.
- Development of six-acre xeriscape garden, water conservation exhibit program, and public education program for the Castaic Lake Water Agency.
- Urban water management plan for the Hi-Desert Water District. Recommended programs included a public information program, residential audits, residential xeriscape retrofit program, and meter replacement program.
- Water and wastewater rate studies for the City of Santa Monica. Inverted block rate structures were implemented for both water and wastewater utilities to encourage water conservation.
- Water rate study for the City of Tracy. Inverted block and seasonal rate structures were implemented to encourage water conservation.
- Plumbing retrofit program for Hi-Desert Water District. Potential water savings were evaluated based on the actual experience of comparable areas and were utilized to offset the impacts of new construction.

Water Reuse

In the area of water reuse, he has served as project engineer, project manager, or officer-in-charge on the following projects:

- Implementation plan for Wholesale Reclaimed Water Service for the Calleguas Municipal Water District.
- Facilities plan and design of a new reclaimed water system for the Goleta West Sanitary District.
- Feasibility study of a new reclaimed water system for the Castaic Lake Water Agency.
- Design of tertiary treatment facilities at the Moorpark Wastewater Treatment Plant.
- Feasibility study of reclaimed water use at landfills and golf courses for the Ventura Regional Sanitation District.
- Reclaimed water master plan for the Irvine Ranch Water District.
- Facilities plan of a reclaimed water system for the City of Lakewood.
- Feasibility study of a reclaimed water system extension for the City of Long Beach.
- Impact assessment of reclaimed water use at Mile Square Park for the County of Orange.
- Planning for the use of reclaimed water to be used as industrial cooling water for the West Basin Municipal Water District.
- Design of reclaimed water facilities for golf course irrigation and wetlands at Beale AFB.
- Feasibility study of reclaimed water use for sugar cane irrigation.

Water Transfer Evaluations

In the area of water transfer evaluations, he has served as project engineer, project manager, or officer-in-charge on the following projects:

- Purchase of agricultural land within the Devil's Den Water District and transfer of its State water entitlement to the Castaic Lake Water Agency.
- Evaluation of groundwater export from agricultural lands in Mono County.
- Transfer of groundwater banked in Kern County as a condition of annexation to an urban water agency.
- Evaluation of acquiring the excess State water entitlement of the San Luis Obispo County Flood Control and Water Conservation District.
- Evaluation of acquiring water from the San Bernardino Municipal Water District for the Hi-Desert Water District.

- Evaluation of transferring the City of Port Hueneme's State water allocation as a condition of annexation to the Metropolitan Water District of Southern California.
- Transfer of groundwater from the Devil's Den Water District to the Castaic Lake Water Agency.
- Transfer of treated, produced water from oilfield operations as a requirement of annexation.

Affiliations

American Society of Civil Engineers
American Water Works Association
National Society of Professional Engineers
Society of American Military Engineers
Water Environment Federation

Craig W. Lichty, P.E.

Civil Engineer

Education

BS in Civil Engineering, Colorado State University, 1982
Continuing Study in Engineering, Computer Applications, and Business Management, University of Colorado

Registrations

Professional Civil Engineer in California (C047536) and Colorado (25048)

Professional Summary

Mr. Lichty has 18 years of consulting experience with specialized expertise in water recycling. This experience encompasses master planning, hydraulic modeling, feasibility studies, pilot plant work, facilities plans and alignment studies, trenchless pipeline construction evaluations, corrosion assessments, pipeline rehabilitation, regulatory and funding assistance, preliminary and final design, and construction administration and management. These projects have addressed a wide-variety of regulatory and user issues associated with urban/residential areas, agriculture regions, and specific commercial/industrial applications including cooling towers and paper recycling. Work has included determining specific use patterns and onsite retrofit/conversion requirements. Mr. Lichty is an active member of the WateReuse Association, and the Water Reuse Committees of the American Waterworks Association and The Water Environment Federation. Representative projects include the following:

He has served as Project Manager for the following water recycling projects:

- *Indirect Potable Reuse Demonstration Project Feasibility Study, Santa Clara Valley Water District (SCVWD), Santa Clara County, CA.* In conjunction with an update to its Integrated Water Resources Plan, SCVWD selected the Kennedy/Jenks-Black & Veatch team to prepare a feasibility study for a potential Indirect Potable Reuse (IPR) Demonstration Project. The project is envisioned to consist of groundwater recharge and reservoir augmentation alternatives. This $500,000 study will engage the public through public participation and outreach programs. It will also perform applied research into the many issues surrounding the occurrence, health risk and treatment of emerging contaminants, such as nitrosodimethylamine (NDMA), endocrine disrupters and pharmaceutically active residuals.

  Work will include literature searches, background water and wastewater characterization, and a combination of bench, mini-pilot and full-scale preliminary testing at currently operating plants in California and Arizona to gain an understanding of how the SCVWD's project could be structured.

- *Presidio Water Recycling Master Plan, The Presidio Trust, San Francisco, CA.* Kennedy/Jenks Consultants is preparing a recycled water master plan at the Presidio. The Plan is intended to showcase the use of innovative and energy-efficient treatment technologies to create an economically viable and sustainable project for

- *Recycled Water Pipelines Design Packages 1 through 14, City of Santa Clara, CA.* Project Engineer responsible for the final route selection, design and construction of approximately 100,000 LF of 8- to 30-inch-diameter pipelines, ten bore-and-jacked crossings of railways and highways, two bridge-suspended creek crossings, an instrumentation and control system interface, turn-outs, service lines and pipeline appurtenances. Performed detailed feasibility work related to several final pipeline routes to determine potential utility conflicts, evaluate constructibility issues and permitting feasibility, and to refine construction costs. Coordinated and obtained permits and license agreements from CalTrans, Southern Pacific Transportation Co., Peninsula Corridor Joint Powers Board, Santa Clara County and others. Construction cost estimates were prepared at various levels of design. The contract documents for bidding incorporated the Program's State Revolving Fund and US Bureau of Reclamation funding requirements. Developed seven separate design packages tailored for conventional bid-build, and for construction by City forces. This project was part of a Program that was awarded the "Engineering Achievement of the Year" by the CWEA in April 1997.

- *Reclaimed Water Distribution System Master Plan, Castaic Lake Water Agency, Santa Clarita, CA.* Project Manager responsible for performing computer modeling (KYPIPE2) and developing facility site plans, cost estimates, and phasing plans for a new recycled water system that would serve golf courses, an amusement park, tree farms and nurseries, commercial landscaping, and street and highway landscaping over a 50-square-mile service area. Ultimately, up to 25,000 gpm of recycled water will be pumped from two treatment facilities into a distribution system that will include over 200,000 lineal feet (LF) of 8- to 30-inch-diameter pipelines, twelve storage reservoirs and six pump stations. Performed preliminary permitting work with the Army Corps of Engineers, California Department of Fish and Game, and some twenty additional agencies. Identified and interviewed potential large users of recycled water to establish demand and use patterns. Developed a detailed feasibility plan for the Phase I System which would serve a golf course, tree farms and the Six Flags Magic Mountain Amusement Park. In addition, submitted an application to the State Revolving Fund for funding assistance.

- *Moorpark Tertiary Treatment Facilities, County of Ventura, CA.* Project Manager during final design, construction and operational services for a new 3.0-mgd tertiary treatment facility that meets the most stringent requirements of California Code of Regulations Title 22. Facilities include a new gravity settler, continuously backwashing deep-bed sand filters, chlorine contact tanks, chemical storage and handling facilities, electrical and control system, control building, piping and site improvements. Evaluated feasibility and costs of several process alternatives during preliminary design. Prior to final design, Kennedy/Jenks performed pilot testing of the recommended alternative.

- *Forestville and Graton Water Quality Control Plant Improvements, Sonoma County, CA.* Conducted an independent Value Engineering Review of the planning and preliminary design of proposed Advanced Waste Treatment Facilities at two treat-

Board of Directors for 2001

Presentations

"Ethical Perspectives of Client-Consultant Relationships," American Water Works Association Annual Conference, Pre-Conference Workshop, June 1999.

"Full-scale Evaluation of Mechanical Surface Aeration for TCE Removal," American Water Works Association Annual Conference, Water Quality Division Section, June 1993.

Publications

"Variety of Customers Served by Expansion of Water Recycling," Consulting Engineer and Land Surveyor, Volume 8, No. 3, Fall 1995.

"Wastewater Disposal Goes Underground," Water Engineering & Management, Volume 142, No. 2, February 1995.

"Fillmore Goes Underground for Wastewater Disposal," Western City, August 1994.

"Mechanical Surface Aeration for VOC Removal," Civil Engineering, Volume 63, No. 3, March 1993.

"New Process Removes VOCs from Groundwater," Water Environment & Technology, Volume 5, No. 1, January 1993.

Kennedy/Jenks Consultants

Engineers & Scientists

622 Folsom Street
San Francisco, California 94107
415-243-2150
FAX 415-896-0999

2151 Michelson Drive
Suite 100
Irvine, California 92612
949-261-1577
FAX 949-261-2134

840 Grier Drive
Suite 300
Las Vegas, Nevada 89119
702-270-3610
FAX 702-270-3611

1330 Broadway
Suite 700
Oakland, California 94612
510-663-3960
Fax 510-663-6210

16835 West Bernardo Drive
Suite 215
San Diego, California 92127
858-676-3620
Fax 858-676-3625

530 South 336th Street
Federal Way, Washington 98003
253-874-0555
FAX 253-952-3435

2191 East Bayshore Road
Suite 200
Palo Alto, California 94303
650-852-2800
FAX 650-856-8527

200 New Stine Road
Suite 205
Bakersfield, California 93309
661-835-9785
FAX 661-831-5196

2828 S.W. Naito Parkway
Suite 250
Portland, Oregon 97201
503-295-4911
FAX 503-295-4901

3336 Bradshaw Road
Suite 140
Sacramento, California 95827
916-362-3251
FAX 916-362-9915

340 Salem Street
Chico, California 95928
530-891-9293
FAX 530-891-9283

P.O. Box 771
21 First Street N.W., Suite 20
Choteau, Montana 59422
406-466-5930
FAX 406-466-5931

1000 Hill Road
Suite 200
Ventura, California 93003
805-658-0607
FAX 805-650-1522

5190 Neil Road
Suite 210
Reno, Nevada 89502
775-827-7900
FAX 775-827-7925

2929 North Central Avenue
Suite 1500
Phoenix, Arizona 85012
602-266-8668
Fax 602-266-8649

TO: BOARD OF DIRECTORS

FROM: DOUG JONES

DATE: NOVEMBER 15, 2000

AGENDA ITEM E 2
NOV 15 2000

DISTRICT METER FEE

ITEM

Review the effective date of the increased meter fee

BACKGROUND

The District received a letter from John Barlogio, developer of Tract 2219, requesting that the $105.00 meter fee increase be waived for his eight lot subdivision (8 x $105.00 = $840.00).

The increase in meter fees was created to cover the cost of the automatic meter reading devices (to enhance the efficiency of the water system operations). On August 2, 2000, the Board introduced a Resolution adjusting the water meter fee at a public meeting. On August 16, 2000, the District adopted Resolution 00-740, increasing fees $105.00.

> ***A RESOLUTION OF THE BOARD OF DIRECTORS OF THE NIPOMO COMMUNITY SERVICES DISTRICT AMENDING APPENDIX "A" TO CHAPTER 3.04 OF THE NIPOMO COMMUNITY SERVICE DISTRICT CODE TO ESTABLISH NEW METER FEES***

The fee increase became effective 60 days after adoption of the Resolution, which was October 16, 2000.

On September 12, 2000, a letter was written to Valenzuela Engineering outlining the District fees for Tract 2219. At that time, the fees included the front footage fee of $21.00 per foot and the meter fee at $170.00 per lot. Mr. Barlogio requested that the Board reconsider the front footage fee. The Board considered Mr. Barlogio's request and on October 18, 2000 made the finding that the Camino Caballo Water Transmission Line could serve properties on both sides of the line at a future date, dependant on future annexations and/or outside user agreements, therefore, the front footage fee could be cut in half (Resolution 00-743). In response to the Boards findings, a new letter was written addressed to John Barlogio and Brenda Dana dated October 23, 2000 revising the front footage fee to $10.50. The letter also reflected the meter fee increase from $170.00 to $275.00 since the meter fee increase became effective on October 16, 2000.

Mr. Barlogio paid the District fees October 31, 2000, paying the front footage fee at $10.50 and the meter fee at $170.00 per lot instead of $275.00 per lot. At the time, Mr. Barlogio was told he could pay the disputed amount and appeal to the Board of Directors. The additional meter fees have not been paid to date, therfore, the Will Serve Letter has been withheld. Upon resolution of this matter the Will Serve Letter will be released.

RECOMMENDATION

Staff recommends that your honorable Board uphold the fees as stated in the October 23, 2000 letter.

FIRST PICK
P.O. BOX 325
NIPOMO, CA 93444

Nov 2. 2000.

Doug Jones.
General manager.
Nipomo Community Services District,
148 South Wilson Street.
P.O. Box 326.
Nipomo. CA. 93444-0326

Subject: Tract 2219 Construction / NCSD Meter Fees

Dear Mr. Jones and NCSD Board Members.

I'm writing you this letter because on October 28. I paid NCSD $ 40750.50 this being the original amount of the total fees due to NCSD. Upon making payment I was given a receipt but denied a will serve letter do to the meter fees going up from what I was quoted $170.00 to $275.00 a $105.00 increase for a total of $840.00 extra. On October 4. I wanted to pay the fees but was told to wait until October 18. at witch time the district could determine the correct amount due for the front footage fees meanwhile on October 16. unannounced to me your meter fees went up. At no time was I informed that this fee was going up or given the option to pay this before the16 of October. Due to the extenuating circumstances of this particular instance and the unforeseen time frame not to mention lack of communication. I would request that you please accept my payment for total due and issue tract 2219 a will serve letter.

Sincerely.

John Barlogio

NIPOMO COMMUNITY SERVICES DISTRICT

BOARD MEMBERS
ROBERT BLAIR, **PRESIDENT**
AL SIMON, **VICE PRESIDENT**
RICHARD MOBRAATEN, **DIRECTOR**
ALEX MENDOZA, **DIRECTOR**
MICHAEL WINN, **DIRECTOR**

STAFF
DOUGLAS JONES, **GENERAL MANAGER**
JON SEITZ, **GENERAL COUNSEL**
LEE DOUGLAS, **MAINTENANCE SUPERVISOR**

148 SOUTH WILSON STREET POST OFFICE BOX 326 NIPOMO, CA 93444 - 0326
(805) 929-1133 FAX (805) 929-1932 Email address - NCSD@ix.netcom.com

October 23, 2000

John Barlogio
Brenda Dana
P O Box 325
Nipomo, CA 93444

SUBJECT: TRACT 2219
REIMBURSEMENT FOR WATER LINES IN NIPOMO

At the Regular Board Meeting held on October 18, 2000, the Board of Directors of the Nipomo Community Services District reviewed your request for reimbursement costs of District installed water lines. After discussion, the Board made a finding that service could be provided on the other side of the water line where your development is located. One-half of the front footage fee will be charged which would be $10.50 per running foot. The District fees for your project are as follows:

ITEM	NUMBER	COST	TOTAL
Water Capacity Fee 1"	8	$3,180.00	$25,440.00
Meter Fee	8	$275.00	2,200.00
Account Fee	8	10.00	$80.00
NCSD Front Footage Fee	1321 ft.	$10.50 per foot	13,870.50
TOTALS			$41,59050

Once the fees are paid, an Intent-to Serve letter will be issued and may be taken to the County for recording of the project.

The monthly service charge and consumption is billed when a meter is set on a lot.

If you have any further questions please call.

Very truly yours,

NIPOMO COMMUNITY SERVICES DISTRICT

Doug Jones
General Manager

TRACTS/2219/REIMBURSEMENT

NIPOMO COMMUNITY SERVICES DISTRICT

BOARD MEMBERS
ROBERT BLAIR, **PRESIDENT**
AL SIMON, **VICE PRESIDENT**
RICHARD MOBRAATEN, **DIRECTOR**
ALEX MENDOZA, **DIRECTOR**
MICHAEL WINN, **DIRECTOR**

STAFF
DOUGLAS JONES, **GENERAL MANAGER**
JON SEITZ, **GENERAL COUNSEL**
LEE DOUGLAS, **MAINTENANCE SUPERVISOR**

148 SOUTH WILSON STREET POST OFFICE BOX 326 NIPOMO, CA 93444 - 0326
(805) 929-1133 FAX (805) 929-1932 Email address - NCSD@ix.netcom.com

September 12, 2000

Stuart Twells
Valenzuela Engineering Inc.
P O Box 2549
Santa Maria, CA 93457-2549

SUBJECT: TRACT 2219 (8 LOT SUBDIVISION) RANCHO SAN JUAN ESTATES
WATER FEES

This is in response to your September 7, 2000 letter requesting District water fees for Tract 2219.

The District fees are as follows:

ITEM	NUMBER	COST	TOTAL
Water Capacity Fee 1"	8	$3,180.00	$25,440.00
Meter Fee	8	$170.00	1,360.oo
Account Fee	8	10.00	$80.00
NCSD Front Footage Fee	1321 ft.	$21 per foot	~~27,720.00~~
TOTALS			~~$54,600.00~~

@150% 13,870.50
Due $40,750.50

Once the fees are paid, an Intent-to Serve letter will be issued and may be taken to the County for recording of the project.

The monthly service charge and consumption is billed when a meter is set on a lot.

If you have any further questions please call.

Very truly yours,

NIPOMO COMMUNITY SERVICES DISTRICT

Doug Jones
General Manager

Tract/2219 fees

TO: BOARD OF DIRECTORS

FROM: DOUG JONES

DATE: NOVEMBER 15, 2000

AGENDA ITEM E-3
NOV 15 2000

RIVER BLUFFS DEVELOPMENT SERVICES

ITEM

Review proposed homeowners association to operate the water & sewer systems for the development - Tracts 1802, 1808, and 1856.

BACKGROUND

The development of the project called "The Bluffs" includes Tracts 1802, 1808 and 1856, together comprise a 115-lot residential development and is located near the Santa Maria Raceway. Initially, the project was proposed to have a homeowner's association operate the water system and County Service Area #1 would operate the wastewater system. This matter was taken to LAFCO for annexing to CSA-1. LAFCO felt that if annexation were to take place, it should be with NCSD for services to "The Bluffs". The County Planning Department has revised the project where a homeowners association is now to operate the water and wastewater system for the 115 homes.

There is a general tendency that homeowners associations operating a utility system loses efficiency over time. The District has found this to be true about some mutual water company operations. Normally, when a homeowners association or mutual water company system begins to fail, they are usually taken over to be operated by a public entity, i.e. county, special district or city. Normally, when this happens, the public entity must go in and make improvements so the facility can continue operations and at times at considerable cost to the customer. It may be more economical for a public entity to operate a system from the start. Due to the possibility of NCSD having to operate the water and wastewater system for The Bluffs, it would be staff's recommendation that a letter be written to the County and the Regional Water Quality Control Board recommending that a public entity provide service to this development and not a homeowners association.

RECOMMENDATION

Staff recommends that a letter be written opposing the formation of a homeowners association to operate the water and wastewater system for Tract 1802, 1808 and 1856.

RIVER BLUFFS LLC

930 South Broadway, Suite 104
Post Office Box 1454
Santa Maria, CA 93456
805-922-1951 805-922-8013 Fax

October 30, 2000

Doug Jones, General Manager
Nipomo Community Service District
Via Fax 929-1932

Re: *SLO Tract 1808*
Water Distribution System

Dear Mr. Jones:

As you know, we are proceeding with our plans for the development of SLO Tract 1808. We will be developing a well and distribution system for the subdivision. We have two options regarding the design of the system. Our original plan called for a large water storage and pressure system on site. As an alternative to the onsite storage, we could tie into the existing Nipomo Community Service District Water line located near Southland and Orchard with a 4" water line. It is my understanding that the pipeline would run along existing right-of-ways. The onsite water storage would be the less expensive to construct. However, the pipeline alternative may make sense.

Our plans for the project are complete except for the final design of the water system and we request your assistance and advice before the final plans are prepared.

Thank you for your consideration and we look forward to hearing from you as soon as possible.

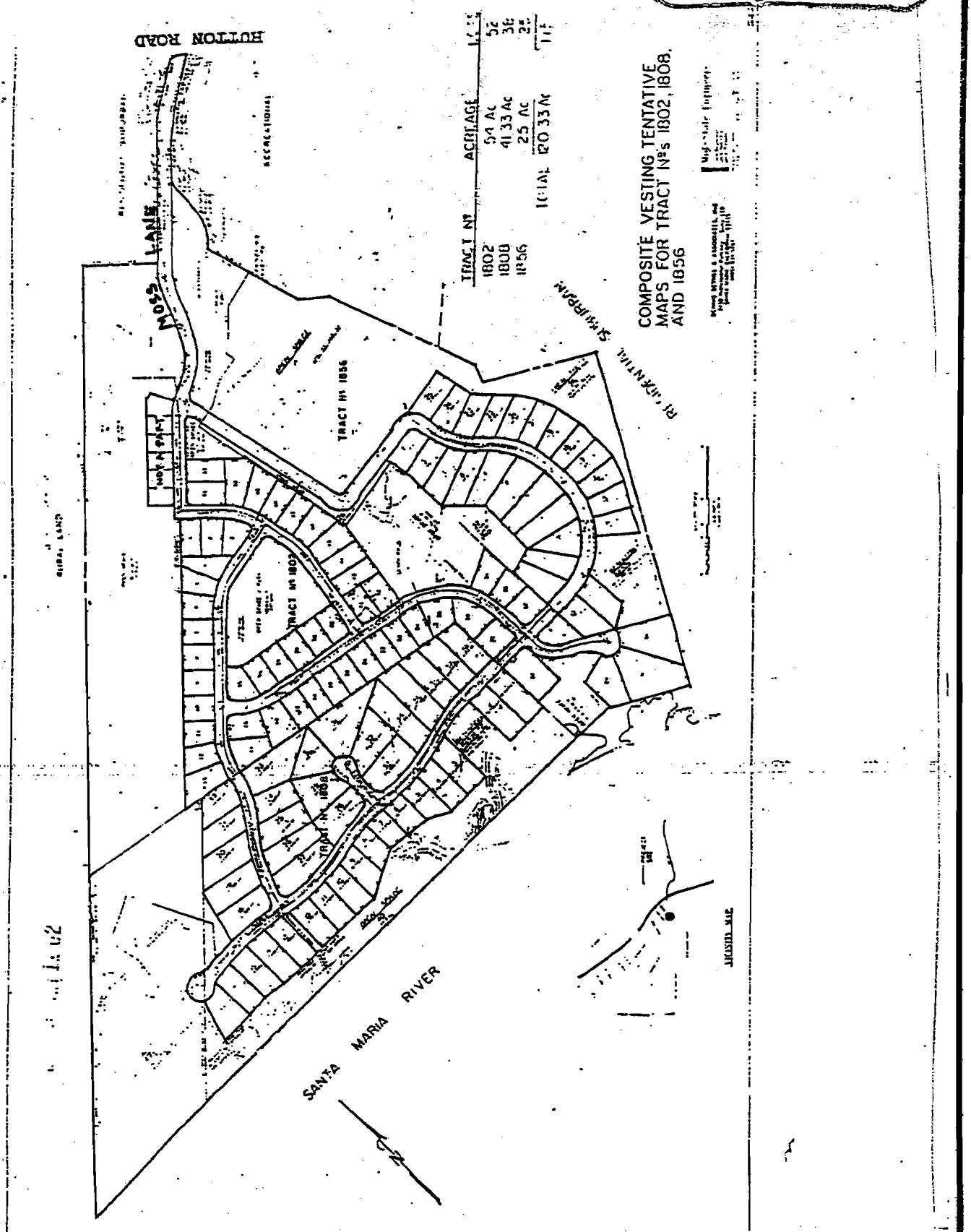
RIVER BLUFFS, LLC

C. KENT STEPHENS
cks:lam

cc: Pacific Engineering & Associates Inc.

SAN LUIS OBISPO COUNTY DEPARTMENT OF PLANNING & BUILDING

EXHIBIT "A"



PROJECT

ANNEXATION NO. 6 TO CSA NO. 1
(TRACTS 1802, 1808 & 1856)

EXHIBIT

LAFCo FILE 4-R-00
COMPOSITE MAP OF TRACTS 1802/1808/1856

AGENDA ITEM F
NOV 15 2000

TO: BOARD OF DIRECTORS

FROM: DOUG JONES

DATE: NOVEMBER 15, 2000

CONSENT AGENDA

The following items are considered routine and non-controversial by staff and may be approved by one motion if no member of the Board wishes an item be removed. If discussion is desired, the item will be removed from the Consent Agenda and will be considered separately. Questions or clarification may be made by the Board members without removal from the Consent Agenda. The recommendations for each item are noted in parenthesis.

F-1) WARRANTS [RECOMMEND APPROVAL]

F-2) BOARD MEETING MINUTES [RECOMMEND APPROVAL]
Approval of Minutes of November 1, 2000 Regular Board meeting

F-3) INVESTMENT POLICY QUARTERLY REPORT ENDING 9/30/00 [RECOMMEND RECEIVE & FILE

C:W:Bd2000\Consent-11.DOC

NIPOMO COMMUNITY SERVICES DISTRICT

MINUTES

NOVEMBER 1, 2000

AGENDA ITEM F 2
NOV 15 2000

REGULAR SESSION 10:30 A.M.
BOARD ROOM 148 S. WILSON STREET NIPOMO, CA

BOARD MEMBERS
ROBERT BLAIR, **PRESIDENT**
AL SIMON, **VICE PRESIDENT**
RICHARD MOBRAATEN, **DIRECTOR**
ALEX MENDOZA, **DIRECTOR**
MICHAEL WINN, **DIRECTOR**

STAFF
DOUGLAS JONES, **GENERAL MANAGER**
DONNA JOHNSON, **SECRETARY TO THE BOARD**
JON SEITZ, **GENERAL COUNSEL**

*NOTE: **All comments concerning any item on the agenda are to be directed to the Board Chairperson.***

A. CALL TO ORDER AND FLAG SALUTE

President Blair called the meeting to order at 10:37 a.m. and led the flag salute.

B. ROLL CALL

At Roll Call, all Board members were present.

C. PUBLIC COMMENTS PERIOD

PUBLIC COMMENTS

Any member of the public may address and ask questions of the Board relating to any matter within the Board's jurisdiction, provided the matter is not on the Board's agenda, or pending before the Board. **Presentations are limited to three (3) minutes or otherwise at the discretion of the Chair.**

President Blair opened the meeting to Public Comments.

The following members of the public spoke:

Jessie Hill, reminded Board of Nipomo Water Planning Forum with Susan Litteral, Monday, November 13, 2000 in the District Board room.

Mike Branigan, 1541 Los Padres informed the Board that Arroyo Grande High School is at Level 3 overcrowding according to the County Resource.

D. ADMINISTRATIVE

D-1) AMENDMENT TO WATER & SEWER SERVICE AGREEMENT BETWEEN NCSD & LUCIA MAR UNIFIED SCHOOL DISTRICT

Review and discussion only

Jon Seitz, District Legal Counsel, reviewed the changes made to the first Amended Agreement for Extraterritorial Water and Sewer Service Between the Nipomo Community Services District and the Lucia Mar Unified School District.

Dean Derleth, Attorney for Lucia Mar Unified School District from Best, Best & Kreiger, 3750 University Ave., Riverside - agreed with Mr. Seitz that there are only minor points that need to be changed. He clarified that before the School District gets service, LMUSD will provide NCSD with a water source. Adequate assurance will be approved by NCSD. The changes are designed to protect the NCSD.

Director Winn asked Mr. Derleth

How does the draft handed to the Board today differ from the one received in the Board packet last week?

Mr. Derleth: thought Mr. Seitz explained the changes well. The water the School District will be receiving will be excess water and not impacting NCSD's water.

Director Winn: asked Mr. Derleth if the LM School District is supportive of the draft received today.

Mr. Derleth says the School District is anxious for the NCSD to approve.

Is it still in the agreement that the Community Services District must have adequate assurances of the sufficiency of this source before we provide service? Mr. Derleth answered Yes. The agreement states that before the School District gets service, we provide you with a water source. That is still a condition precedent. Mr. Winn: When we say adequate assurances, to satisfy whom? Mr. Derleth: NCSD has to approve. The hydrology study will say whether or not the well is good. That hydrology report has to be approved by NCSD. Mr. Winn asked about the hydrology report and the different numbers coming from the test well.

Mike Sears, Interim Deputy Superintendent for business for the School District, read from a pump test report that stated the well had been tested at up to 120 gallons per minute with a maximum pumping level of 343 feet for 48 hours. The well should be equipped to produce no more than 80 gallons per minute. Based on the maximum month demand estimate, the well needs to have a continuos pumping rate of 60 gpm for one or two months duration. The estimated demand would be at the least at the initial start-up of the school since the number of students would not be at the ultimate level planned for by the School District.

Mr. Derleth said this is only a test well and requires us [School District] to study the production capability and a longer period of time. We're hoping that to be several months before the school is in operation and if it doesn't work out then we need to look to other sources to supplement that well.

Director Winn: Section 3.11.5 needs clarification - If the source failed over a period of 18 months to 2 years, and could not be remedied, the NCSD has the option to terminate the school's water service. Would like wording to be reduce or terminate ...
Mr. Derleth agreed to change in wording.

President Blair asked about credits. Mr. Derleth would like to discuss that if the time came that there was a problem, but did not want that issue to prevent approving the agreement.

There was more discussion by the Board. Mr. Seitz and Mr. Derleth agreed that before the School District receives water service, NCSD must be satisfied.

Mr. Derleth explained that the agreement will require the LMUSD to study the production capability for a longer period of time.

The following members of the public spoke in favor of the Board approving the agreement today:

Mike Sears,
Bill Petrelli, County probation officer
Jessie Hill, 1910 Grand Ave., Arroyo Grande
Susie Bickmore, 590 Story St., Nipomo
Abby Lassen, 765 Monarch Way, Nipomo
Evan Evanoff, 490 Brytec, Nipomo
Bill Senna, Oceano
John Barlogio, Nipomo
Jim Dunbar, 740 Black Oak Lane, Nipomo
Lori Kilpelainen, 464 Violet, Nipomo
Georgie O'Conner, 310 W. Cherry Ave.
Bill Deneen, 1040 Cielo Lane, Nipomo
George Lymon
Jacqueline Frederick, 267 W. Tefft St., Nipomo
Donna Mills, 655 Sweet Donna Place, Nipomo

John Snyder, 662 Eucalyptus Rd., Nipomo - handed the Board a letter asking a question concerning water for the new school. District Legal Counsel advised the Board that due to current litigation, no response should be given.

Director Mobraaten made the motion to approve the agreement with the addition of a reduction provision to Section 3.11.5 of the agreement. Director Winn requested that the maker of the motion amend the motion to include the following:
In Sections 3.4.3, 3.6.2, & 3.8 to include closure or cap, to be renegotiated; Sections 3.8 & 3.10 to add expression about pumps as mentioned in the School's EIR; Section 3.11.5 reduce or "terminate..."; and Section 3.12 to incorporate some language to not obligate NCSD to double fees if annexation could not be commenced in 3 years. Mr. Derleth would like 3.8 to not include the cap, but could renegotiate in good faith.
Director Mobraaten agreed to change the motion, as discussed. After more discussion, Director Mendoza seconded the motion as amended. The Board unanimously agreed to the first Amended Agreement for Extraterritorial Water and Sewer Service Between the Nipomo Community Services District and the Lucia Mar Unified School District with the minor changes as amended in the discussion.

D-2) REPLACEMENT OF FIRE HYDRANTS
Award the replacement of fire hydrants to low bidder- Benergy Inc.

Twelve bids to replace approx. 20 fire hydrants in the District were received on October 10, 2000. The low bidder was Benergy, Inc. from Southern California.
Upon motion of Director Mendoza and seconded by Director Simon, the Board unanimously approved Resolution 00-746 awarding the contract to replace fire hydrants to Benergy, Inc.

RESOLUTION NO. 00-746
A RESOLUTION OF THE BOARD OF DIRECTORS OF THE NIPOMO COMMUNITY SERVICES DISTRICT AWARDING THE CONTRACT TO BENERGY, INC FOR THE REPLACEMENT OF FIRE HYDRANTS

D-3) REQUEST FOR SERVICE - CAR WASH @ SHELL STATION
Request for water & sewer service for a proposed car wash at 501 W. Tefft St.

A request was received for water and sewer service for a car wash at the Shell Station at 501 W. Tefft St. in Nipomo. Dennis Telgis from Mark II in Fresno explained that the process recycles water whereby saving water. He said there were no hydro-carbons generated. Upon motion of Director Winn and seconded by Director Mobraaten, the Board unanimously approved an Intent-to-Serve letter with the conditions outlined in the Board letter for a car wash at the Shell Station on W. Tefft Street.

E. OTHER BUSINESS

E-1) SLO COUNTY AD-HOC PLANNING ADVISORY COMMITTEE
Review committee's recommendations on area planning process

Jon Seitz, District Legal Counsel, reported on the SLO County Ad-Hoc Planning Advisory Committee meetings. There were 3 recommendations for consideration.

- Municipal Advisory Councils
- Advisory Groups
- Combination of Approaches

Upon motion of Director Winn and seconded by Director Simon, the Board unanimously agreed to direct staff to write a letter to the County Board of Supervisors announcing the District's support of the concept of Area Ad Hoc Planning Committees, especially the combination approach.

F. CONSENT AGENDA *The following items are considered routine and non-controversial by staff and may be approved by one motion if no member of the Board wishes an item be removed. If discussion is desired, the item will be removed from the Consent Agenda and will be considered separately. Questions or clarification may be made by the Board members without removal from the Consent Agenda. The recommendations for each item are noted in parenthesis.*

F-1) WARRANTS [RECOMMEND APPROVAL]
F-2) BOARD MEETING MINUTES [RECOMMEND APPROVAL]
Approval of Minutes of October 18, 2000 Regular Board meeting

Upon motion of Director Mobraaten and seconded by Director Winn the Board unanimously approved the items on the Consent Agenda.

G. MANAGER'S REPORT

Manager, Doug Jones presented information on the following.

G-1) COUNTY ROAD IMPROVEMENT FEES

Mr. Jones provided copies of a letter from Mrs. Maloney to the Board.

H. DIRECTORS COMMENTS

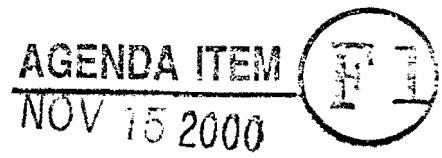
District Legal Counsel, Jon Seitz, announced the need to go into Closed Session concerning the matter below.

CLOSED SESSION

CONFERENCE WITH LEGAL COUNSEL GC§54956.9
d. Anticipated Litigation, one case, GC § 54956l9

The Board came back into Open Session and had no reportable action.
President Blair adjourned the meeting at 1:12 p.m.

ADJOURN



WARRANTS NOVEMBER 15, 2000

HAND WRITTEN CHECKS

18381	11-02-00	POSTMASTER	300.94
18382	11-02-00	PERS RETIREMENT	15.98
18384	11-07-00	POSTMASTER	65.88
18385	11-08-00	M. WINN	50.00
18386	11-08-00	R. MOBRAATEN	50.00
18387	11-15-00	COPY PRINT	354.68

VOID 5258, 18383

COMPUTER GENERATED CHECKS

5290	11/02/00	EMP01	EMPLOYMENT DEVELOP DEPT	391.68
5291	11/02/00	MID01	MID STATE BANK	1689.18 407.98
			Check Total.....:	2097.16
5292	11/02/00	MID02	MIDSTATE BANK - DIRECT DP	12296.88
5293	11/02/00	PER01	PERS RETIREMENT	961.32
5294	11/02/00	SIM01	DEBRA SIMMONS	150.00
5295	11/02/00	STA01	STATE STREET GLOBAL	825.00
5296	11/15/00	ASM01	FRED ASMUSSEN	1000.00
5297	11/15/00	BLA01	ROBERT L BLAIR	100.00
5298	11/15/00	BOY01	BOYLE ENGINEERING CORP	14231.70
5299	11/15/00	CAL02	CALIFORNIA APPLIED TECH	61.00
5300	11/15/00	CHA01	CHAMPION AMERICA INC	124.75
5301	11/15/00	CRE01	CREEK ENVIRONMENTAL LABS	30.00 30.00
			Check Total.....:	60.00
5302	11/15/00	DEP01	DEPARTMENT-HEALTH SERVICE	6283.00
5303	11/15/00	DEW01	J B DEWAR INC	320.56
5304	11/15/00	EAS01	EASTER RENTS	119.69
5305	11/15/00	FGL01	FGL ENVIRONMENTAL	49.60 44.80 186.70
			Check Total.....:	282.40
5306	11/15/00	FIR01	FIRST AMERICAN REAL EST	188.06 80.59
			Check Total.....:	268.65
5307	11/15/00	GIL01	GLM	217.00
5308	11/15/00	GRO01	GROENIGER & CO	80.87 546.22 9369.36
			Check Total.....:	9996.45
5309	11/15/00	HAY01	HAYES & SONS	200.00
5310	11/15/00	IKO01	IKON OFFICE SOLUTIONS	47.20
5311	11/15/00	MAI01	MAINLINE	2000.00
5312	11/15/00	MCK01	MCKESSON WATER PRODUCTS	8.50
5313	11/15/00	MEN01	ALEX MENDOZA	100.00
5314	11/15/00	MIS01	MISSION UNIFORM SERVICE	201.80
5315	11/15/00	MOB01	RICHARD MOBRAATEN	100.00
5316	11/15/00	NIP01	NIPOMO ACE HARDWARE INC	104.99
5317	11/15/00	NIP02	NIPOMO GARBAGE	42.50 14.55
			Check Total.....:	57.05
5318	11/15/00	PGE01	P G & E	87.00
5319	11/15/00	SAN03	SANTA MARIA TOOL	92.12
5320	11/15/00	SAN04	SANTA MARIA TIMES	19.50
5321	11/15/00	SHI01	SHIPSEY & SEITZ, INC	2991.89
5322	11/15/00	SIM02	ALBERT SIMON	100.00
5323	11/15/00	SLO01	SAN LUIS OBISPO COUNTY	247.67 18.00 18.00 18.00 18.00
			Check Total.....:	319.67
5324	11/15/00	STA06	STATE WATER RESOURCES	400.00 400.00 200.00
			Check Total.....:	1000.00
5325	11/15/00	THE01	THE GAS COMPANY	7977.18
5326	11/15/00	USA01	USA BLUEBOOK	83.80
5327	11/15/00	VER01	VERIZON	62.73
5328	11/15/00	WIN01	MICHAEL WINN	100.00

AGENDA ITEM F 3
NOV 15 2000

TO: BOARD OF DIRECTORS

FROM: DOUG JONES

DATE: NOVEMBER 15, 2000

INVESTMENT POLICY - QUARTERLY REPORT

The Board of Directors have adopted an Investment Policy for NCSD which states that the Finance Officer shall file a quarterly report that identifies the District's investments and their compliance with the District's Investment Policy. The quarterly report must be filed with the District's auditor and considered by the Board of Directors.

Below is the September 30, 2000 Quarterly Report for your review. The Finance Officer is pleased to report to the Board of Directors that the District is in compliance with the Investment Policy.

After Board consideration and public comment, it is recommended that your Honorable Board accept the quarterly report by motion and minute order.

NIPOMO COMMUNITY SERVICES DISTRICT
INVESTMENT POLICY - QUARTERLY REPORT 9/30/00

The District's investments are as follows:

TYPE OF INVESTMENT	INSTITUTION	DATE OF MATURITY	AMOUNT OF DEPOSIT 9/30/00	RATE OF INTEREST	ACCRUED 09/30/00	AMOUNT OF DEPOSIT 9/30/99	RATE OF INTEREST	ACCRUED INTEREST 9/30/99
Money Market Checking	Mid-State Bank	n/a	$2,096.82	0.50%	$0.00	$35,632.22	0.50%	$0.00
Savings	Mid-State Bank	n/a	$5,845.55	2.00%	$0.00	$19,663.44	2.00%	$0.00
Pooled Money Investment	Local Agency Investment Fund	n/a	$6,932,347.97	6.47%	$110,922.40	$5,858,254.07	5.21%	$76,341.62

n/a = not applicable

As District Finance Officer and Treasurer, I am pleased to inform the Board of Directors that the District is in compliance with the 2000 Investment Policy and that the objectives of safety, liquidity, and yield have been met. The District has the ability to meet cash flow requirements for the next six months.

Respectfully submitted,

Doug Jones
General Manager and
Finance Officer/Treasurer

AGENDA ITEM G
NOV 15 2000

TO: BOARD OF DIRECTORS

FROM: DOUG JONES

DATE: NOVEMBER 15, 2000

MANAGER'S REPORT

G. MANAGER'S REPORT

G-1) REFUSE COLLECTION

A number of comrnunity services districts are proceeding to handle the refuse collection within their jurisdiction. They tend to be more efficient and beneficial to the local area.

Heritage Ranch and Oceano Community Services are presently operating a refuse collection. Templeton and Los Osos CSD's are proceeding to take over this services from the County.

Staff is seeking direction from your Honorable Board if you wish to proceed in the refuse collecting matter. If so, staff will bring back the appropriate action items for the next Board meeting.

Mgr 111500