NIPOMO COMMUNITY SERVICES DISTRICT

AGENDA

February 16, 2000

Canceled

CLOSED SESSION (CONFERENCE ROOM) 6:00 P.M.

CONFERENCE WITH LEGAL COUNSEL GC§54956.9

a. SMVWCD vs NCSD Case No. CV 770214 and related cases, Case Nos. CV 990266, CV 990391, CV 990392, CV 990556, CV 990558, CV 990738, CV 990739, SM 112867, SM 113421, SM 113422, SM 113424, SM 113425, SM 113788, SM 113789

REGULAR SESSION 7:00 P.M.

BOARD ROOM 148 S. WILSON STREET NIPOMO, CA

BOARD MEMBERS
GENE KAYE, **PRESIDENT**
AL SIMON, **VICE PRESIDENT**
ROBERT BLAIR, **DIRECTOR**
RICHARD MOBRAATEN, **DIRECTOR**
ALEX MENDOZA, **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

B. FLAG SALUTE
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) INCORPORATION OF NIPOMO
Nipomo Chamber of Commerce's investigation of incorporation (cityhood)

D-2) REQUEST FOR SERVICE - PARCEL MAP CO 90-208 (PRUIT PROPERTIES)
Request to renew an Intent-to-Serve Letter for a recreational vehicle & mini-storage area at Camino Caballo & N. Frontage

D-3) REQUEST FOR SERVICE - TRACT 2219 (RANCHO SAN JUAN)
Request for water service for an 8-lot (5-acre parcels) development on Camino Caballo

D-4) REQUEST FOR SERVICE - TRACT 2375 (HERNANDEZ)
Request for water and sewer service for a 28-lot development at Orchard & Grande Ave.

D-5) REQUEST FOR SERVICE - PARCEL MAP CO 99-0115 (SAV-ON DRUGS)
Request for water and sewer service for a commercial development at Mary & Tefft St.

E. 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.*

E-1) WARRANTS (RECOMMEND APPROVAL)

E-2) BOARD MEETING MINUTES (RECOMMEND APPROVAL)
Approval of Minutes of February 2, 2000 Regular Board meeting

F) MANAGER'S REPORT

F-1) California Water Journal articles - weather, toilets

F-2) AWWA Opflow article on hydraulics

F-3) AWWA Annual Conference

F-4) SDRMA Workshop

F-5) Review SDRMA video

G. DIRECTORS COMMENTS

CLOSED SESSION

a. NCSD vs. State Dept of Health Services CV 990706, GC§54956.9

b. Public Employment - Review General Manager contract GC§54957

JOURN

TO: BOARD OF DIRECTORS

FROM: DOUG JONES

DATE: FEBRUARY 16, 2000

AGENDA ITEM D-1
FEB 16 2000

INCORPORATION OF NIPOMO

ITEM

Nipomo Chamber of Commerce correspondence regarding incorporation of Nipomo

BACKGROUND

The District received a letter from the President of the Nipomo Chamber of Commerce, Guy Murry, requesting comments from your Honorable Board of the possibility of incorporation of Nipomo into a city.

Attached for the Board's review is the procedure for incorporation of a city.

C:W:Board 2000\Incorporation.DOC

Nipomo Chamber of Commerce

February 4, 2000

Mr. Douglas Jones
General Manager
Nipomo Community Services District
148 S. Wilson Street
Nipomo, CA., 93444

Dear Doug:

The Nipomo Chamber of Commerce has formed a Fact Finding Committee regarding the Incorporation of Nipomo. Our committee is requesting the opportunity to be on the agenda for your February 16, 2000 Board meeting at 7:00 p.m.

We would like to discuss the possibility of Nipomo's Incorporation. We are eager to hear the Board's Comments; and assess their level of interest and possible participation in this process.

Thank you for your consideration in this matter.

Sincerely,

Guy W. Murray
President, Nipomo Chamber of Commerce
GWM:th

267 West Tefft Street • Post Office Box 386 • Nipomo, California 93444
Office: 805.929.1583 • Fax: 805.929.5835 • E-mail: nipomochamber@yahoo.com • Web: http//members.aol.com/nipomochmb

CITY INCORPORATION

Definition

Incorporation means the formation of a city with corporate powers. Any area proposed for incorporation as a new city shall have at least 500 registered voters residing within the affected area at the time proceedings are initiated with the San Luis Obispo County LAFCO (56043).

Initiation of Proceedings

Incorporation proceedings may be initiated either by a resolution of an affected local agency or by petition. A petition must be signed by not less than 25% of the registered voters residing in the area to be incorporated, or by not less than 25% of the land owners who also own not less than 25% of the assessed value of land within the territory to be incorporated (56750).

Application

1. *An application for incorporation must be accompanied by a feasibility study. This study is to be provided in addition to all other information listed in the general procedures section of this guide. An incorporation feasibility study should include the following information:*

   A. A brief discussion of the relevant history and characteristics of the study area;

   B. A description of the local agencies which presently serve the community, with discussion of the range and level of services currently provided;

   C. A rationale for the boundaries proposed for incorporation, and a description of possible boundary alternatives;

   D. At a minimum, a forecast of revenues including estimate of property tax distribution and expenditures for the new city during the three fiscal years following incorporation;

   E. The effects on the costs and revenues of any affected local agency during the three fiscal years of incorporation;

   F. A discussion of the negative fiscal impacts of the incorporation on affected local agencies and measures proposed to mitigate the negative impacts;

   G. A discussion of the range and level of services potentially available to the community after incorporation; and

H. A discussion of the effects of the incorporation upon adjacent communities, special districts, and the county.

2. *Other elements may be necessary (for example, a discussion of commercial/industrial land use potential), based on the circumstances of the community in question.*

3. *Five copies of the draft version of the feasibility study should be submitted to the LAFCO office as soon as they are available. Upon formal initiation of the proposal, additional copies of the final version of the report will be required.*

4. *More detailed guidelines are available from the San Luis Obispo County LAFCO upon request.*

Review of Comprehensive Fiscal Analysis

When an application has been submitted to the San Luis Obispo County LAFCO, the Executive Officer will review the feasibility study, and determine if it contains all the elements of a comprehensive fiscal analysis as required by Section 56833.1. The Executive Officer may certify the feasibility study as the comprehensive fiscal analysis that is required to be released for public review. During a specified review period, any interested person may request the State Controller's Office to review the comprehensive fiscal analysis prior to issuance of the Executive Officer's report and recommendation (56833.3). The party requesting the review will be responsible for all costs associated with the review.

1. *The Executive Officer will notify all interested parties that the comprehensive fiscal analysis is available for public review by publishing notice in a newspaper of general circulation serving the proposed incorporation area and by mailing notice to all affected agencies, the chief proponents, and all persons who have filed a written request for notification. The notice will specify the locations where the fiscal analysis can be reviewed and the time period in which the Controller's review can be requested. The time period must be at least 30 days, and will begin 15 days after the notice is published.*

2. *A request for Controller's review shall specify in writing the elements of the fiscal analysis which the Controller is requested to review and the reasons the Controller is requested to review them. The request must include the LAFCO processing fee and a deposit of $5,000, which will be credited toward the total cost of the Controller's review.*

3. *After a request for the Controller's review has been submitted to the San Luis Obispo County LAFCO, the Executive Officer will contract the Controller for review of the comprehensive fiscal analysis. The contract will specify the elements to be reviewed and the estimated cost of the review. Prior to executing the contract, the person requesting the review will deposit with the Executive Officer the remainder of the Controller's total estimated cost of conducting the review. If the Executive Officer is notified that the*

6. *Separate revenue neutrality determinations will be made between the proposed city and the county, and between the proposed city and any affected special district(s).*

Commission Proceedings

Upon receiving a complete application, the following actions will be taken:

1. *The San Luis Obispo County LAFCO staff conducts an analysis of the proposal.*

2. *Any interested party may request the State Controller's Office to review LAFCO's fiscal analysis prior to issuance of the Executive Officer's report and recommendation (56833.3). The party requesting the review will be required to pay for all costs associated with the review.*

3. *The Commission conducts a public hearing to review the LAFCO staff analysis and receive oral or written testimony (56840).*

4. *The Commission then adopts a resolution approving, modifying, or disapproving the proposal (56851).*

5. *If the incorporation is approved, the Commission determines the final boundaries, government structure, the base property tax, and the provisional appropriations limit for the proposed city (56842 & 56842.6), and any terms and conditions of approval.*

6. *At the time the San Luis Obispo County LAFCO approves an incorporation, or a reorganization that includes an incorporation, it may also determine the sphere of influence for the proposed new city. The Commission shall, in any event, determine the sphere of influence for any newly incorporated city within one year of the effective date of incorporation (56426.5).*

If the San Luis Obispo County LAFCO wholly disapproves a proposal, no new proposal involving the same or substantially the same territory shall be initiated for one year after the date of the Commission's resolution unless this provision is waived by the Commission (56855).

Conducting Authority Proceedings

The County Board of Supervisors is designated as the conducting authority. After a public hearing and a review of written protests, the Board can take one of two actions:

1. *Terminate the proceedings if more than 50% of the registered voters residing in the territory protest; or*

AGENDA ITEM D-2
FEB 16 2000

TO: BOARD OF DIRECTORS

FROM: DOUG JONES

DATE: FEBRUARY 16, 2000

REQUEST FOR SERVICE
PARCEL MAP CO 90-208 (PRUIT PROPERTIES)

ITEM

Request for water service at Camino Caballo & N. Frontage Rd.

BACKGROUND

Mr. Don Pruit requested a renewal of an Intent-to-Serve Letter for Parcel Map CO 90-208, a recreational vehicle and mini-storage area at Camino Caballo and N. Frontage Rd. An Intent-to-Serve letter was approved February 17, 1999, which had a one-year expiration date. Since this time, the Board has adopted a policy that Intent-to-Serve Letters shall have an expiration of two years from issuance.

An Intent-to-Serve letter may be issued with the following conditions:

1. Enter into a Plan Check and Inspection Agreement and pay the appropriate fees.
2. Dedicate a 20-foot utility easement on the north side of Camino Caballo centerline.
3. Dedicate a 10-foot utility easement to the District on the northerly property line of the project.
4. Grant a 20-foot utility easement in Inga Road from Camino Caballo to Frontage Road.
5. Install an eight inch water line in Camino Caballo and loop it in Inga Raod to Frontage Rd.
6 Water meter size is to be determined by the California Uniform Plumbing Code.
7. Submit improvement plans in accordance with the District Standards and Specifications for review and approval.
8. Pay all appropriate District water and other fees associated with this development.
9. 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 improvement costs
10. This Intent-to-Serve Letter will expire two years from date of issuance.

RECOMMENDATION

It is staff's recommendation that you approve the Intent-to-Serve letter for Parcel Map CO 90-208, with the above conditions.

Pruit Properties
P. O. Box 920
Nipomo, CA 93444
(805) 929-1984

January 28, 2000

Doug Jones, General Manager
Nipomo Community District Services District
148 South Wilson - Box 326
Nipomo, CA 93444-1932

Re: Parcel Map CO-90-208
Intent to Serve Letter

Dear Mr. Jones,

Please be advised that we are in receipt of your letter regarding the above referenced Parcel Map and the Intent to Serve Letter. Thank you for your prompt reply.

As per your instruction, I would like to request a two year extension on the Intent to Serve Letter on Parcel Map CO-90-208. The current "letter" is scheduled to expire on 2/18/00.

I have enclosed check # 7019 for the amount of $50.00 payable to NCSD to cover the fee associated with the extension request.

Please contact me at the above telephone number if you have any questions or require any further information.

Sincerely,

Don Pruit
Pruit Properties

TAX AREA CODE NO 91-327
328

CALIMEX PLANTATION'S TRACT "A"
RANCHO NIPOMO
SAN LUIS OBISPO COUNTY
CALIFORNIA

ASSMENT PURPOSES ONLY

AGENDA ITEM D-3
FEB 16 2000

TO: BOARD OF DIRECTORS

FROM: DOUG JONES

DATE: FEBRUARY 16, 2000

REQUEST FOR SERVICE
TRACT 2219 (RANCHO SAN JUAN ESTATES)

ITEM

Request for water service for an eight lot development off Camino Caballo

BACKGROUND

Mr. John Barlogio, representing the Rancho San Juan Estates, is requesting water service for an eight (8) lot development on 40 acres (5-acre lots) on Camino Caballo near Waypoint Drive. In 1990, the District entered into an agreement with the developers of the present Tract 2219 for easements to drill two water wells. The two wells were drilled but were not completed. The agreement states that upon completing one or both wells, the District would install a water distribution system in the proposed Tract 2219 to serve the 8-lot subdivision. The agreement states if the District did not complete these wells, then it would be the owners responsibility to install the water distribution system proposed for this development at their cost.

The District did not proceed to develop these wells but instead chose to drill a new well with higher production at the location of Sundale and Camino Caballo.

If the developer wishes to proceed at this time, your Honorable 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 showing appropriate looping in accordance with the District Standards and Specifications for review and approval.
3. Pay all appropriate District water 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 improvement costs
5. This Intent-to-Serve Letter will expire two years from date of issuance.

RECOMMENDATION

If the developer wishes to proceed, it is staff's recommendation that you approve the Intent-to-Serve letter for Tract 2219 with the above conditions.

C:W:Board 2000\Intent San Juan.DOC

Johnnie Barlogio

PO Box 325
1045 Camino Caballo
Nipomo, CA 93444

Phone 929-5761
Fax 929-5761
Home Phone 929-1885

January 27, 2000

Nipomo Communities Service District
Attn: Mr. Doug Jones, General Manager
PO Box 326
Nipomo, CA 9344

Re: Tract 2219 Rancho San Juan Estates located off Camino Caballo, Nipomo

Dear Mr. Jones:

We are in the process of filing the above referenced subdivision with the Department of Real Estate. One of the requirements we must satisfy is obtaining a letter from the water supplier stating the following:

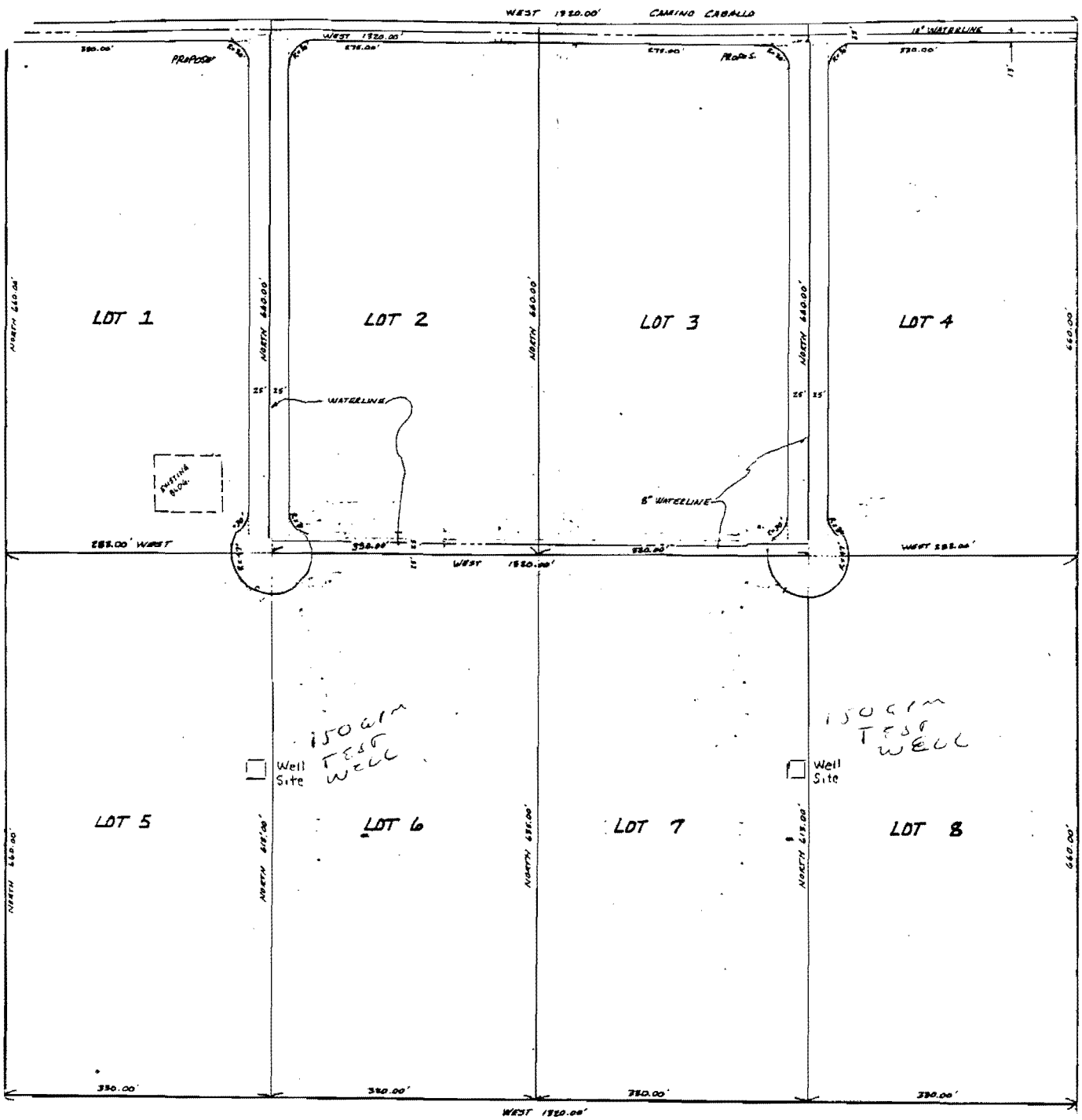
1) That an agreement has been made between the parties.

Sincerely,

John Barlogio

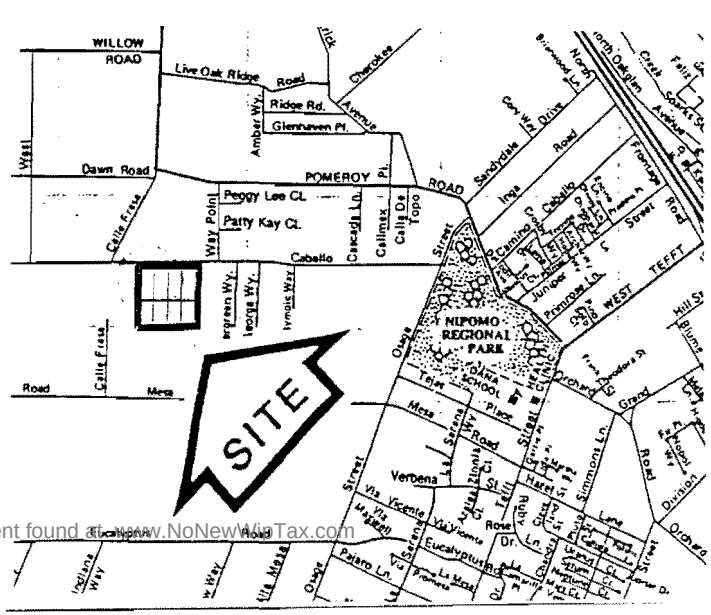
ksb

Enc: 1



TRACT # 2219

VICINITY MAP



AGENDA ITEM D-4
FEB 16 2000

TO: BOARD OF DIRECTORS

FROM: DOUG JONES

DATE: FEBRUARY 16, 2000

REQUEST FOR SERVICE
TRACT 2375 (HERNANDEZ)

ITEM

Request for water and sewer services for a twenty-eight (28) lot development near Orchard and Grande Ave.

BACKGROUND

The District received a request from Pamela Jardini, of Westland Engineering representing the developer of Tract 2375, for a 28-lot subdivision located at Orchard and Grande as shown on the attached map.

Your Honorable 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 showing appropriate looping 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

It is staff's recommendation that you approve the Intent-to-Serve letter for Tract 2375 with the above conditions.

C:W:Board 2000\Intent Hernandez.DOC

WESTLAND
ENGINEERING COMPANY
CONSULTING CIVIL ENGINEERING & SURVEYING

75 ZACA LANE, SUITE 100 • SAN LUIS OBISPO, CA 93401
TELEPHONE: (805) 541-2394 • FAX: (805) 541-2439

January 26, 2000

Doug Jones
c/o Nipomo Community Services District
P.O. Box 326
Nipomo, CA 93444

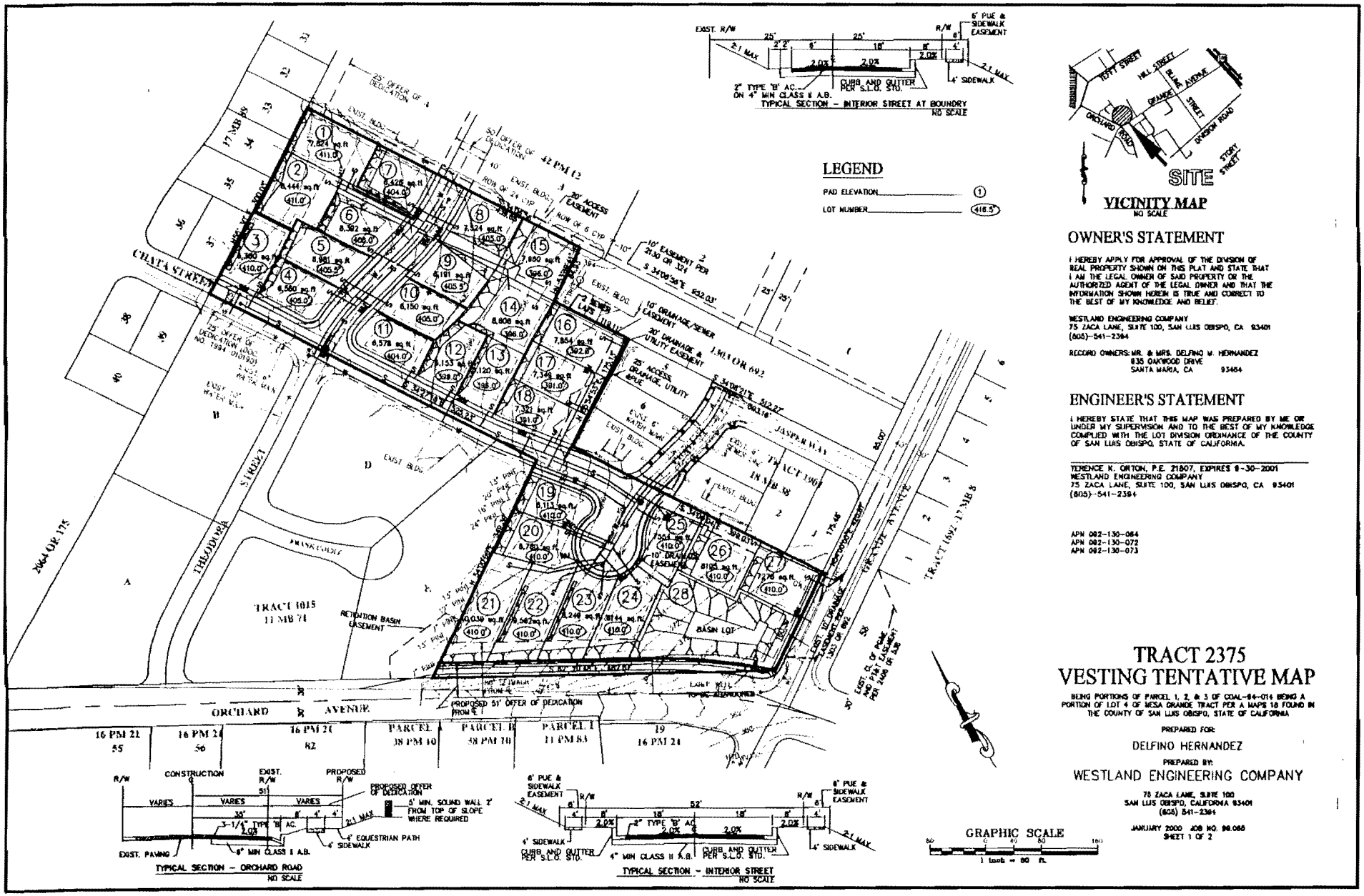
RE: Intent to serve letter for Tract Map #2375

Dear Doug,

We are submitting an application to the County of San Luis Obispo's Planning Department for a development of twenty-eight (28) lots on this property. The County's Planning Department requires an intent to serve letter from NCSD in order to process the tentative Tract Map. The owner of the property is Delfino Hernandez at 880 Grande Street and Chata Street, Nipomo, CA 93444; Assessor's Parcel Number 092-130-064, 072 & 073. Please provide us with an intent to serve letter. A copy of the proposed Tract Map and a reduction is enclosed for your review.

Sincerely,

Pamela Jardini
Westland Engineering



OWNER'S STATEMENT

I HEREBY APPLY FOR APPROVAL OF THE DIVISION OF REAL PROPERTY SHOWN ON THIS PLAT AND STATE THAT I AM THE LEGAL OWNER OF SAID PROPERTY OR THE AUTHORIZED AGENT OF THE LEGAL OWNER AND THAT THE INFORMATION SHOWN HEREIN IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

WESTLAND ENGINEERING COMPANY
75 ZACA LANE, SUITE 100, SAN LUIS OBISPO, CA 93401
(805)-541-2394

RECORD OWNERS: MR. & MRS. DELFINO M. HERNANDEZ
835 OAKWOOD DRIVE
SANTA MARIA, CA 93454

ENGINEER'S STATEMENT

I HEREBY STATE THAT THIS MAP WAS PREPARED BY ME OR UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLIED WITH THE LOT DIVISION ORDINANCE OF THE COUNTY OF SAN LUIS OBISPO, STATE OF CALIFORNIA.

TERENCE K. ORTON, P.E. 21807, EXPIRES 9-30-2001
WESTLAND ENGINEERING COMPANY
75 ZACA LANE, SUITE 100, SAN LUIS OBISPO, CA 93401
(805)-541-2394

APN 092-130-064
APN 092-130-072
APN 092-130-073

TRACT 2375
VESTING TENTATIVE MAP

BEING PORTIONS OF PARCEL 1, 2, & 3 OF COAL-84-016 BEING A PORTION OF LOT 4 OF MESA GRANDE TRACT PER A MAPS 18 FOUND IN THE COUNTY OF SAN LUIS OBISPO, STATE OF CALIFORNIA

PREPARED FOR:
DELFINO HERNANDEZ

PREPARED BY:
WESTLAND ENGINEERING COMPANY

75 ZACA LANE, SUITE 100
SAN LUIS OBISPO, CALIFORNIA 93401
(805) 541-2394

JANUARY 2000 JOB NO. 98.085
SHEET 1 OF 2

AGENDA ITEM D-5
FEB 16 2000

TO: BOARD OF DIRECTORS

FROM: DOUG JONES

DATE: FEBRUARY 16, 2000

REQUEST FOR SERVICE
PARCEL MAP CO 99-0115 (SAV-ON DRUGS)

ITEM

Request for water and sewer service for a commercial development (Sav-On Drugs) at the intersection of Mary and Tefft Street.

BACKGROUND

The District received a request from Karen Massey of EDA representing the developer of Parcel Map CO 99-0115 (Sav-On Drugs) at the intersection of Mary and Tefft St. for water and sewer services.

Your Honorable 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 showing appropriate looping 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

It is staff's recommendation that you approve the Intent-to-Serve letter for Parcel Map CO 99-0115 with the above conditions.

C:W:Board 2000\Intent SavOn Drugs.DOC

EDA
ENGINEERING
DEVELOPMENT
ASSOCIATES

February 1, 2000

Mr. Doug Jones
NCSD
P.O. Box 326
Nipomo, CA 93444-0326

RE: Can & Will Serve Request for PM Co 99-0115 Sav-On Drugs

Dear Doug,

Please consider this a formal request for a "Can and Will Serve" letter for the enclosed PM Co 99-0115 located in the Community of Nipomo. Please review the enclosed map and respond with a service availability letter to EDA, in care of myself.

If you have any questions concerning this project, please contact our office. Thank you for attention in this matter.

Sincerely,

ENGINEERING DEVELOPMENT ASSOCIATES

Karen J. Massey

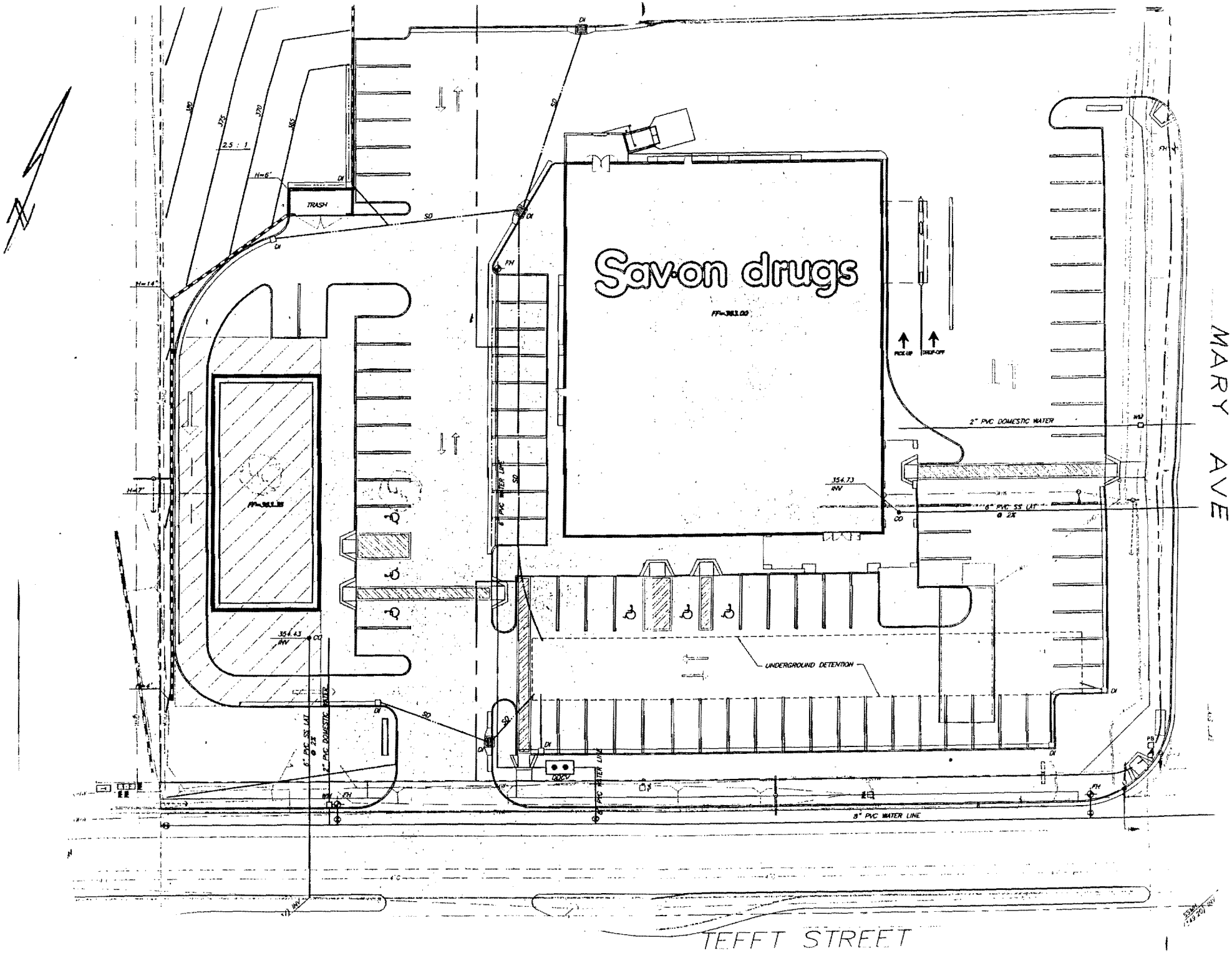
Karen J. Massey
Administrative Coordinator

Enclosure

EDA Job # 2-2307-100

[illegible] 2000

[illegible] SERVICES DISTRICT



AGENDA ITEM E-1
FEB 16 2000

WARRANTS FEBRUARY 16, 2000

HAND WRITTEN CHECKS

18250	JAMS	187.50

COMPUTER GENERATED CHECKS

11462	02/02/00	BOGNUDA, LISA	$37.20
11463	02/02/00	EASTER RENTS	$17.13
11464	02/02/00	GEO SOLUTIONS, INC.	$1,812.75
11465	02/02/00	GLM	$217.00
11466	02/02/00	GTE CALIFORNIA	$26.78
11467	02/02/00	GROENIGER & COMPANY	$786.27
11468	02/02/00	NIPOMO AUTO PARTS	$87.93
11469	02/02/00	NIPOMO REXALL DRUG	$5.36
11470	02/02/00	P G & E	$16,846.76
11471	02/02/00	SAN LUIS OBISPO COUNTY CLERK RECORDE	$14.00
11472	02/02/00	U S POSTAL SERVICE	$727.20
11473	02/02/00	WESTBURNE/AIR COLD INC.	$46.65
11474	02/17/00	AMERICAN WATER WORKS ASSOCIATION	$95.00
11475	02/17/00	ROBERT BLAIR	$100.00
11476	02/17/00	BOYLE ENGINEERING CORPORATION	$3,383.94
11477	02/17/00	CHEVRON	$92.05
11478	02/17/00	FGL ENVIRONMENTAL ANALYTICAL CHEMIST	$255.20
11479	02/17/00	GARING, TAYLOR & ASSOCIATES, INC.	$10,013.52
11480	02/17/00	GTE CALIFORNIA	$26.71
11481	02/17/00	GROENIGER & COMPANY	$444.02
11482	02/17/00	GENE KAYE	$100.00
11483	02/17/00	ALEX MENDOZA	$100.00
11484	02/17/00	MISSION UNIFORM SERVICE	$194.10
11485	02/17/00	MOBRAATEN, RICHARD	$100.00
11486	02/17/00	MORRO GROUP, INC.	$50.40
11487	02/17/00	NIPOMO ACE HARDWARE, INC.	$10.38
11488	02/17/00	NIPOMO GARBAGE COMPANY	$54.75
11489	02/17/00	SAN LUIS OBISPO COUNTY CLERK RECORDE	$14.00
11490	02/17/00	SANSONE, INC.	$247,746.52
11491	02/17/00	SCIENCE APPLICATIONS INTERNATIONAL C	$16,755.75
11492	02/17/00	SHIPSEY & SEITZ, INC.	$1,388.00
11493	02/17/00	ALBERT SIMON	$100.00
11494	02/17/00	STATEWIDE SAFETY & SIGNS, INC.	$202.08
11495	02/17/00	TERMINIX INTERNATIONAL	$42.00
11496	02/17/00	USA BLUE BOOK	$731.37

NIPOMO COMMUNITY SERVICES DISTRICT

MINUTES

February 2, 2000

AGENDA ITEM E-2
FEB 16 2000

CLOSED SESSION (CONFERENCE ROOM) 6:30 P.M.

CONFERENCE WITH LEGAL COUNSEL GC§54956.9
NCSD vs. State Dept of Health Services CV 990706

REGULAR SESSION 7:00 P.M.
BOARD ROOM 148 S. WILSON STREET NIPOMO, CA

BOARD MEMBERS
GENE KAYE, **PRESIDENT**
AL SIMON, **VICE PRESIDENT**
ROBERT BLAIR, **DIRECTOR**
RICHARD MOBRAATEN, **DIRECTOR**
ALEX MENDOZA, **DIRECTOR**

STAFF
DOUGLAS JONES, **GENERAL MANAGER**
DONNA JOHNSON, **SECRETARY TO THE BOARD**
JON AND MIKE SEITZ, **GENERAL COUNSELS**

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

A. CALL TO ORDER

President Kaye called the meting to order at 7:03 p.m.
District Deputy Legal Counsel reported on the 6:30 p.m. Closed Session
The Board authorized the General Manager to sign the agreement. The agreement will be available in the District office by tomorrow. Papers will be obtained from the Attorney General's office with their agreement. Vote 5-0.
The Board approved a proposal from Boyle Engineering to provide two services to the District.

1. To provide a proposal to modify the draft report for the Summit Station area to incorporate the future anticipated Title 22 revisions, i.e. 30 psi at the meter.
2. Review the previously completed Master Plan with a focus on increasing pressure to at least 45 psi or a general range of 40-50 pounds of pressure as a part of that plan. Vote was 4-1 with Director Kaye dissenting.

B. FLAG SALUTE

President Kaye led the flag salute.

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 Kaye opened the meeting to Public Comments
During this agenda item, the following member of the public spoke: John Snyder, 662 Eucalyptus, Nipomo - Informed the Board that the Scalamini Report stated the groundwater basin is not in an overdraft.

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

D-1) WATER AND SEWER REPLACEMENT STUDY

Review and receive final water and sewer replacement study by Boyle Engineering
The services of Boyle Engineering were acquired to prepare a water and sewer replacement study for the Town and the Black Lake Division's water and sewer system.
Bruce Nybo, Boyle Engineering, 973 Higuera St., San Luis Obispo - Reviewed the report with the Board, summarizing the process used.
There were no public comments.
Upon motion of Director Mendoza and seconded by Director Mobraaten, the Board received the Water and Sewer Replacement Study into file. Vote 5-0.

D-2) REQUEST FOR SERVICE - TRACT 1876 (RIEWALD)
Request to renew an Intent-to-Serve letter for a 9-lot development on Colt Lane
Request was received from Coastal Oak Properties to renew an Intent-to-Serve letter for a nine (9) lot development on Colt Lane.
During this agenda item, the following member of the public spoke: Michael Neuhauser 221 Blue Sky Dr., Arroyo Grande - Answered questions from the Board concerning the development.
Upon motion of Director Simon and seconded by Director Blair, the Board approved the request for the Intent-to-Serve letter for Tract 1876 with the conditions listed in the Board letter. Vote 4-1 with President Kaye dissenting.

D-3) REQUEST FOR SERVICE - TRACT 2370 (KRICHEVSKY)
Request for an Intent-to-Serve Letter for a 6-lot development on Evergreen Way
Request was received from Westland Engineering for an Intent-to-Serve letter for a six (6) lot development on Evergreen Way.
During this agenda item, the following member of the public spoke: Thor Krichevsky, 1054 Evergreen, Nipomo - Answered questions from the Board concerning the development.
Upon motion of Director Blair and seconded by Director Simon, the Board approved the request for the Intent-to-Serve letter for Tract 2370 with the conditions listed in the Board letter. Vote 4-1 with President Kaye dissenting.

D-4) BOARD OF DIRECTORS BY-LAWS
Annual Review of the Board By-Laws
District Legal Counsel, Jon Seitz, reviewed the Board of Directors By-Laws There was a modification to Section 5.5. There were no public comments. Upon motion of Director Simon and seconded by Director Mobraaten, the Board unanimously approved Resolution 00-723. Vote 5-0.

RESOLUTION NO. 00-723
A RESOLUTION OF THE BOARD OF DIRECTORS OF THE
NIPOMO COMMUNITY SERVICES DISTRICT REVISING BOARD BYLAWS

E. OTHER BUSINESS (The following may be discussed and action may be taken by the Board.)

E-1) STATE WATER SALE
Review SLO Co. Water Conservation Dist. Proposal for temporary sale of State Water Contract
Board directed staff to get information about the proposal for the temporary sale of the SLO County Flood Control and Water Conservation District's State Water allocation.
During this agenda item, the following member of the public spoke: John Snyder, 662 Eucalyptus, Nipomo - Commented about 2,182 ac. ft. pipe capacity in Santa Barbara County.
Director Blair explained that there were 20,000 ac. ft. available and would like a letter sent to the County. This was an information item. No action was taken.

E-2) WATER LINE ACROSS NIPOMO PARK
Review location and estimated costs
It is proposed that a water line be extended across the southerly end of the Nipomo Regional Park connecting Osage Rd. to Tefft St. to enhance the circulation of water from the west side to the east side. The Board asked Bruce Nybo of Boyle Engineering some questions about the project. Mr. Nybo answered. The Board suggested the Distrcit go out for RFP's in the future. Upon motion of Director Mendoza and seconded by Director Simon, the Board authorized staff to acquire the engineering services from Garing, Taylor and Associates to design the water system and bring back the design concepts to the Board for approval to go to bid. Vote 5-0 with Director Blair abstaining.

E-3) MONTECITO VERDE II SEWER SYSTEM
Review RWQCB correspondence and schedule to connect sewers to District system
The District received a letter from the Regional Water Quality Control Board encouraging the District to connect the on-site sewage disposal system at Montecito Verde II to the District's area-wide system. An application has been submitted for a Community Development Block Grant from the County. If the Board of Supervisors decide in March to award grant funds to the project, the funds can be used for the construction of the on and off site improvements and not capacity fees or right-of ways.
Upon motion of Director Mobraaten and seconded by Director Simon, the Board unanimously directed staff to submit a tentative schedule to the RWQCB. There were no public comments. Vote 5-0.

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 January 19, 2000 Regular Board meeting

Director Blair had a question about the Minutes which was clarified.
Upon rnotion of Director Mobraaten and seconded by Director Kaye, the Board unanimously approved the items on the Consent Agenda.
There were no public comments. Vote 5-0

G) MANAGER'S REPORT
General Manager, Doug Jones, presented information on the following items.
G-1) Cal. Co. article on water issues
G-2) Global Warming article
G-3) Information on low flush toilets
G-4) Incident Report
There were no public comments.

H. DIRECTORS COMMENTS
Director Blair reported on the WRAC meeting today (Katcho requested that Nipomo area be included in future discussions) and the Feb. 2, 2000 SLO COG meeting.
Director Mobraaten asked about the video mentioned several meetings back.
He also reported on the Port San Luis Harbor meeting, the Chamber of Commerce meeting (about Olde Towne Nipomo, Nipomo growth, etc.) and the SLO seminar Jan 21.
President Kaye reported on the Nipomo Advisory Counsel meeting about incorporating Nipomo, Laetitia Winery, King Ventures.
Legal Counsel Jon Seitz commented on the CSDA ad hoc committee for local planning.

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

CLOSED SESSION
CONFERENCE WITH LEGAL COUNSEL GC§54956.9 (a) & (b)
a. SMVWCD vs NCSD Case No. CV 770214 and related cases, Case Nos. CV 990266, CV 990391, CV 990392, CV 990556, CV 990558, CV 990738, CV 990739, SM 112867, SM 113421, SM 113422, SM 113424, SM 113425, SM 113788, SM 113789
b. NCSD vs. Shell Oil, et. al. Case No. CV 077387

The Board came back into Open Session and reported that the Shell Oil matter has been settled and a check - $145,000 has been received and deposited.

ADJOURN

President Kaye adjourned the meeting at 8:50 p.m.

MINUTES SUBJECT TO BOARD APPROVAL

AGENDA ITEM F
FEB 16 2000

TO: BOARD OF DIRECTORS

FROM: DOUG JONES

DATE: FEBRUARY 16, 2000

MANAGER'S REPORT

F-1) California Water Journal articles
Attached articles:
a. 100 years of California weather
b. Solid Gold Throne

F-2) AWWA Opflow article on hydraulics
This article explains hydraulics associated with water system operations.

F-3) AWWA Annual Conference
Attached is information on the AWWA Annual Conference June 11-15

F-4) SDRMA Workshop
Enclosed is information on SDRMA Education Day Workshop. Staff will make arrangements, if any Board member wishes to attend.

F-5) Review SDRMA video
The video is about 26 minutes. The District will receive a 1% credit on its insurance premium after the Board views this video.

C:W:Board 2000\mgr 021600.DOC

California WATER JOURNAL

JANUARY 2000 Vol. 0 No. 1 THE NEWS of CALIFORNIA WATER

STATE WATER ISSUE

100 Years of California Weather

Over the past century, Mother Nature has thrown the book at the Golden State.

California is known throughout the world for its beautiful weather. However, over the past century the state has suffered a wide assortment of dirty tricks from Mother Nature. In the last 100 years, California's normally moderate weather has been puncuated by world-class floods, droughts, blizzards, winds, and temperatures near the extremes found anywhere on earth.

"As we approach a new century, it seems appropriate to take a look at some of the important and unusual climatological events of this century, expecially those that were record breakers," said Maurice Roos, Chief Hydrologist at the California Department of Water Resources Division of Flood Management. Roos, DWR's Bill Mork, and retired state climatologist Jim Goodridge have compiled and published a list of California's extraordinary weather events during the last 100 years.

Most interesting is that the state holds the U.S. record in several categories of weather anomalies. For example, the highest temperature ever recorded in California, the United States, and North America was 134 degrees fahrenheit at Greenland Ranch in Death Valley on July 10, 1913. There were six consecutive days in July with temperatures of 123 degrees or higher. The peak of 134 was within 2 degrees of the world record of 136 degrees set at Azizia, Libya (Sahara Desert) on September 1922.

The all-time high temperature in the Sacramento record books was 114 degrees on July 17, 1925. The Los Angeles record high temperature this century was 112 degrees on June 26, 1930. The peak temperature of record in the Los Angeles Basin was 116 degrees at Canoga Park in the San Fernando Valley on August 24, 1985.

The coldest recorded temperature in the State this century was 45 degrees below zero at Boca (Nevada County, elevation 5532 Feet) on January 20, 1937. The coldest temperature ever recorded in downtown Sacramento was 17 degrees on December 11, 1932, during a historic Central Valley freeze. Temperatures remained in the teens to low 20s for seven days — from Dec. 9 through Dec. 15. Agricultural damage, especially to citrus, was extensive throughout the valley. Other freezes of note in the Central Valley were in December 1972, February 1989, and December 1990. On December 14, 1972, the high

see **History** *page 7*

ıry *from page 1*

.nperature in downtown Sacramento reached 32 degrees, the only day this century when Sacramento temperatures did not get above freezing. Chico dropped to .0 degrees on December 22, 1990, eclipsing the record low of 11 degrees set in December 1932. The coldest: temperature this century in the Los Angeles Basin was 18 degrees at Canoga Park on February 6, 1983.

California Sets U.S. Records For Snow

You'd expect that Fargo, North Dakota; Duluth, Wisconsin; or even Chicago would be likely places for the worst snow storms in the U.S. this century. Not so. The greatest snowfall in one calendar month for California, the United States, and North America was 390 inches in January 1911 at Tamarack in Alpine County at an elevation of 8,000 feet. The storms set another record. The greatest snow depth this century for California, the United States, and North America was 451 inches — 37.5 feet deep — at Tamarack on March 11, 1911.

The greatest snowfall for one season in California this century was 554 inches at Tamarack in 1906-07. Greatest snowfall in 24 hours in California this century was 67 inches at Echo Summit, elevation 7350 eet, on January 5, 1982.

Heaviest snowfall in Sacramento was 2 inches on March 14, 1942 and on February 5, 1376 (a drought year). Historic snowfalls in the Southland include 2 inches at Los Angeles on January 15, 1932 and 0.3 inches January 3, 1949. In the 1949 storm, 3-inch snowfall depths were common at higher elevations of Los Angeles County.

In a January 1952 Sierra snowstorm, the Southern Pacific Railroad streamliner — City of San Francisco — was stranded for six days near Donner Summit.

Winds and Dust Storms

The highest winds ever recorded in California were it Wheeler Ridge, south of Bakersfield, on December 20, 1977 when downslope winds from the southeast reached 110 rnph (6-minute steady wind) with 2-second gusts to 150 mph. There were 5 large electric tower failures reported by Southern California Edison in a 5-hour period. Extensive damage was ·ported in Bakersfield, Edison, Arvin, .nd Lamont.

Large volumes of dust were carried by upper level southerly winds as far north as the Oregon-California border. Rainfall in the Central Valley on December 21 was the dirtiest in memory. A month later, snow surveyors on Mt. Shasta reported finding a layer of dust embedded in the snowpack that had been deposited by the December 20 storm.

Floods and Droughts This Century

The wettest and driest water years of the 20th century were fairly close in time. The driest, 1977 was followed only six years later by the wettest, 1983. Estimated statewide runoff in 1977 was about 15 million acre feet, around 20 percent of average, while runoff in 1983 was estimated to be 135 MAF, around 190 percent of average.

Water years 1976 and 1977 were the driest two-year period of the century. Of more concern for water planning were the two 6-year droughts this century. The first was years 1929 through 1934. In one sense this drought began with below normal snowmelt in the spring of 1928, giving rise to its description as a 7-year drought.

The second 6-year drought was the more recent 1987 through 1992 event which, although just slightly less severe in the Sacramento River region, was drier statewide and was especially dry in Central California.

As the century closed, another record was set — the longest run of consecutive wet: years, as measured by runoff, in the Sacramento River region. Water year 1999 was the fifth consecutive wet year, something which had not been observed previously this century and, based on some early rainfall records, the longest such string since before 1850.

California has had its share of notable floods and interesting wet events in this century. For example, one of San Diego County's biggest storms of the century was apparently created by Charles Malory Hatfield, a rainmaker.

Hatfield met with the San Diego City Council in December 1915 and agreed to fill Morena Reservoir within one year for $10,000. By January 19, 1916, Morena Reservoir was full and rainmaking operations ceased, but the rain did not. Two dams were destroyed and 22 lives were lost, mostly downstream from Lower Otay Dam, which was completely washed away. The City Council denied payment, reportedly saying Mr. Hatfield would have to accept responsibility for $4.5 million in damage if he received payment.

Rainfall Records In California

The storm of March 2, 1938 produced some of the largest streamflows ever recorded in Southern California, mainly in Los Angeles and San Bernardino counties. There were 32 stations with the largest ever rainfall in one day, with as much as 17.61 inches recorded at Lake Arrowhead. Flooding cost 87 lives and $78 million in property damage.

The greatest 24-hour rainfall on record in California was 21.12 inches at Hoegee's Camp (elevation 2.750 feet) in Los Angeles County below Mt. Wilson on January 22-23, 1943. Highest ever rainfalls were reported From 125 stations. Some 15 stations had two-day totals of more than 20 inches.

In Northern and Central California, significant storms/floods occurred in November 1950, December 1955, and December 1964, all associated with La Nina or cold episode years. The storms of November 1950 produced the Last flooding in Sacramento prior to the completion of Folsom Dam in 1953.

Greatest one-day rainfall was 13.16 inches at Giant Forest in Tulare County (elevation 6,412 feet) on November 18. 1950. At 30 stations there were greatest-ever daily rainfall events, mostly in the mountains of the Central Coast and in the Sierra.

A series of storms in the Coastal Mountains and Sierra Nevada on December 19-27, 1955 triggered major flooding from the Feather River south through the Calaveras River, in the Russian and Napa Rivers, and in Bay Area streams.

Greatest 8-day totals included 49.20 inches at Honeydew (Mattole River), 42.27 inches at Lake McKenzie (southwest of San Jose), and 36.57 inches at Strawberry Valley (Yuba River). There were at least 40 deaths when a Feather River levee broke at Yuba City.

The Columbus Day Storm of October 11-13, 1962 was remembered for high winds, and record-breaking rainfall. Millions of trees were blown down in coastal forests from Washington south through Central California during storms fed by energy and moisture from a dissipated Pacific typhoon. Record 3-day rainfalls included 9.26 inches at Marysviile, 23.05 inches at Lake Spaulding (Yuba River) and 31.71 inches at Branscomb (Eel

er). Thirty-five stations reported daily rainfalls 10 inches or more on December 22, 1964.

Winter storms of 1969 produced some of the most severe flooding since 1938 in Southern California and in the southern Sierra. Disaster tallies included 47 dead and $300 million in damage. Over 200 stations in the Southland reported the greatest recorded 60-day rainfalls.

In 1969, Mt. Baldy Notch (San Gabriel Mountains, elevation 7,735 feet) reported 88.50 inches of rainfall from January 13 to March 13. Lytle Creek Power House (San Gabriel Mountains, elevation 2,224 feet) recorded 24.92 inches in 24 hours on January 23-24 — the second largest 24-hour rainfall on record in California. It also brought the greatest seasonal snowpack on record to the southern Sierra producing record runoff in the spring, leaving 53,000 acres of cropland under water in the Tulare Lake Basin.

Sun Always Shines On The Rose Parade

A remarkable annual event has been the good weather that normally occurs each January 1 in Pasadena. The annual Tournament of Roses Parade, first staged on January 1, 1890, has never been canceled because of bad weather. The only significant rain at Pasadena on New Year's Day in this century was on December 31, 1933 and January 1, 1934 with 6.21 inches on December 31 and 6.17 inches on January 1. However, most of the rain on New Year's Day was early in the day and the Rose Parade went on as scheduled.

In all, during the parade's 110-year history, it has rained only nine times on January 1 in Pasadena. Only twice has the parade been delayed due to bad weather — both times heavy rain made it difficult for the floats, made entirely of flowers and plants, to navigate Pasadena streets.

Record wet water years of 1982 and 1983 plus storms/floods of water years 1986, 1995, and 1997 were exceptional, well-documented events that served to round out an amazing century in the Golden State. What do we have to face in the new century? An experienced climatologist said about storms in California: "The big one is yet to come."

California Water Year Classification

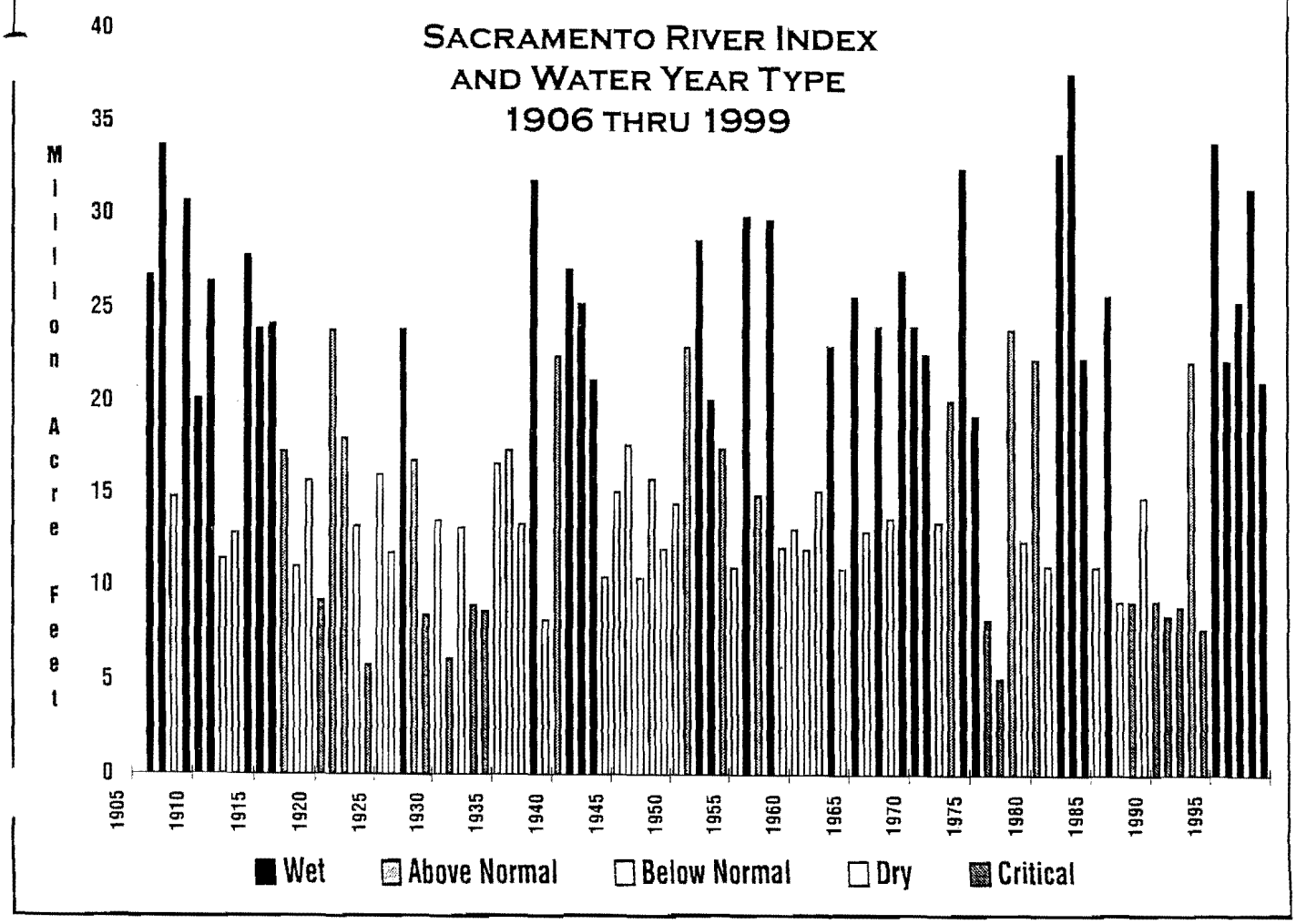
California's *Water Year* begins October 1 and ends September 30, and is classified as Wet, Above Normal, Below Normal, Dry, or Critical by the state Department of Water Resources. Prior to 1995, DWR used the Sacramento River Index to determine the state's Water Year type.

The index is the sum of unimpaired flow in million acre-feet at:

Sacramento River at Bend Bridge
Feather River inflow to Lake Oroville
Yuba River at Smartville
American River inflow to Folsom Lake

Beginning in 1995, DWR added the San Joaquin River Index and now classifies the two river systems independently. The classifications are used by the State Water Resources Control Board to implement fish and wildlife regulations on the two rivers.

Shown below is the Sacramento River Index and the Water Year classifications since 1906, when record-keeping began, through 1999.



Potpourri

The $535,000 Solid Gold Throne

It's got wings, it's sensitive, it's smart. It cares, it knows when you're around, it bleats when you arrive. Ignore it and you could be sorry. Treat it well and it will comfort you in your old age.

A new kind of house pet?

No, it's the Japanese toilet in all its glory. And if you believe its makers, it's only getting better.

Japan has an enduring fascination with the toilet, replete with cutting-edge intelligent-toilet research, toilet. Web sites. symposiums, antique toilet museums, solid 24-karat-gold johns and official Toilet Days. Nowhere else on Earth do so many people spend so much money on such expensive thrones.

And Japan's enthusiasm is largely lost on foreigners. In sharp contrast to people's receptiveness to Japanese cameras, autos and Walkmans that have taken the world by storm, few Americans or Europeans seem to covet Japan's super bowls — some of which can cost $4,000.

Now major Japanese manufacturers hope to change that by creating something with universal appeal. Their latest project: a toilet that doubles as a doctor's office.

At Matsushita's research center in Tokyo, scientists explain how they are working on embedding technology in the porcelain that will catch a urine sample, shoot it full of lasers and in short order test it for glucose, kidney disease and eventually even cancer.

One of the researchers, Tatsuro Kawamura, says future smart toilets will compile and compare medical results day by day, allowing doctors to spot important changes.

Japan's undisputed king of toilets is Tote Ltd., which has noticed the enormous profits ahead in serving Japan's rapidly aging population, although it's moving slower on the medical front.

Tote set the industry standard-in the 1980s with its high-tech Washlet, which got worldwide publicity at the time, With the slogan "Even your bottom wants to stay clean," it built mass appeal in Japan for the $1,000 toilets previously confined to sanitariums and hospitals. Nearly 20 years later, these once-luxury items can be found in about 30% of Japanese homes. The fully configured Washlet, the Lexus of toiletry, has enough lights, hoses, buttons, remote controls and temperature and water-pressure adjustments to bowl over even the most avid gadget freak.

Master the Washlet's controls — most foreigners don't and emerge soaking wet and embarrassed — and the bum will be warmed even as your undercarriage is sprayed clean with warm water and then blow-dried.

"Once you use it, you wonder how you could ever do without it," Mariko Fujiwara, a researcher for the Hakuhodo Institute of Life and Living.

What's behind Japan's keen interest in toiletry? Some cite the Shinto religion's traditional emphasis on physical and spiritual cleanliness. Others note that the toilet may be one of the few places people in crowded Japan can go for a few minutes of quiet — akin to the automobile for some Americans.

Whatever the reason, it all spells big bucks. Tote's most complicated model for the elderly includes armrests and something resembling an ejection seat for people unable to stand without help. A quick glance at its most elaborate configuration leaves the impression there's a small aircraft in your-bathroom.

Japan's toilet culture isn't limited to the plumbing, however. One of several Japanese toilet Web sites asks volunteers to visit and rate Tokyo's public restrooms. and invites photos of the most disgusting cases and posts them in the "Harsh Site of the Day" section. Another site, called Toilet Television, offers global comparisons and a daily quiz on toiletry.

For those in search of more theory, the southern island of Kyushu hosted in mid-November the 5th Japanese National Toilet Symposium, where 500 toilet experts from 15 countries and global groups schmoozed, feasted and voted for their 10 favorite toilets. In past years, the group has also celebrated the toilet's importance with an official day devoted to it.

Japan has several toilet museums, one with over 500 toilets with models dating back 150 years. But a must see for visitors to Japan is the World Toilet Exhibit in Nakatodo-gun, Shikoku. Unicharm, a sanitary napkin company, spent $535,000 in 1994 to craft a solid gold toilet and gold bathroom slippers (the Japanese wear different footwear for the john) that has wowed the crowds from the start.

Understanding Distribution System Hydraulics

Editor's Note: The following is an abridged version of Chapter 2 of the new edition of Water Distribution Operator Training Handbook, *edited by Harry Von Huben. The long-awaited revision, which covers every aspect of a distribution operator's job, is now available through the AWWA Bookstore. Call (800) 926-7337 or e-mail custsvc@awwa.org.*

An understanding of hydraulics is necessary for the proper operation of a water distribution system. Some of the basic concepts used in the operation of water distribution systems are covered [below]. Hydraulics is the study of fluids in motion or under pressure. [Here], the subject will be confined to the behavior of water in water distribution systems.

Static Pressure

Water flows in a water system when it is under a force that makes it move. The force on a unit area of water is termed pressure. The pressure in a water system is a measure of the height to which water theoretically will rise in an imaginary standpipe open to atmospheric pressure. The pressure can be static; i.e., it exists although the water does not flow. Pressure can also be dynamic, existing as "moving energy."

All objects have weight because they are acted on by gravity. When a 1-lb brick is placed on a table with an area of 1 square inch (1 in.^{2}), it exerts a force of 1 pound per square inch (psi) on the table. Two stacked bricks on the 1-in.^{2} table would exert a force of 2 psi. But if the size of the table is doubled, the pressure is halved. And if the table size is tripled, the pressure in psi is reduced by one third.

Likewise, a column of water 10 ft high exerts a total force of 4.33 psi. If you connect a pressure gauge at the bottom of a water tube with 10 ft of water in it, this is what it will read. If you also connect the gauge to the bottom of a larger-diameter column with 10 ft of water, the pressure at the bottom will still read the same (Figure 2-1). Water pressure is dependent only on the height of the column. On the other hand, the total weight exerted on the floor by the water in the large column will obviously be much more.

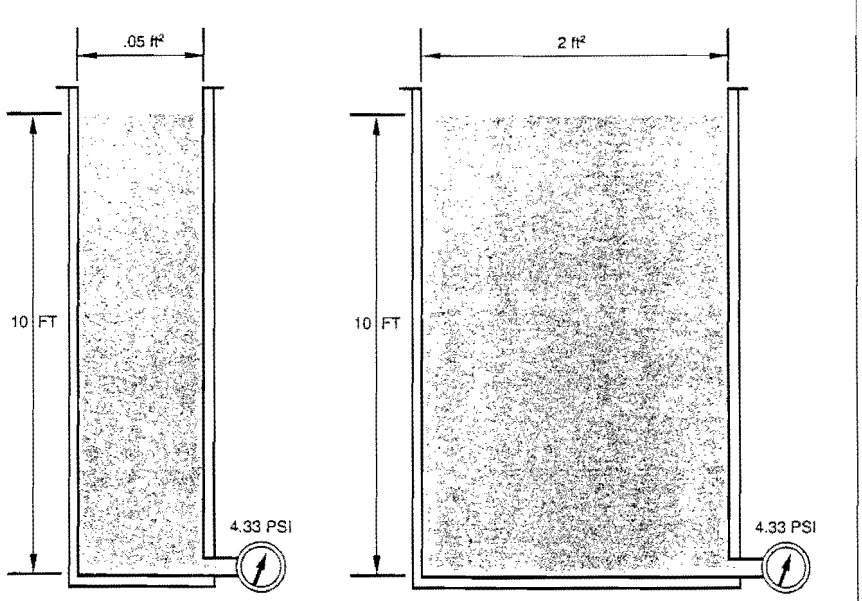


Figure 2-1. Hydraulic head depends only on column height

Dynamic Pressure

If the water in the column is permitted to empty horizontally from the bottom of the column, the water will begin to flow under the hydrostatic pressure applied by the height of the column. The flowing water will have little hydrostatic pressure, but will have gained moving, dynamic pressure, or kinetic energy. The hydrostatic pressure is static potential energy converted into moving energy.

One can add energy to a water system and thereby increase hydrostatic and dynamic pressure. A pump does this when it pumps water into elevated storage. The hydrostatic pressure (height) to which the water can be pumped is equivalent to pressure (less losses) at the pump discharge.

Pressure is usually measured in either psi or feet of head in US units, or as kilopascals (kPa) pressure or metres (m) head in metric units. A pressure of 1 lb/in.^{2} is equal to approximately 6.895 kPa.

Velocity

The speed at which water moves is called velocity, usually abbreviated V. The velocity of water is usually measured in feet per second (ft/s) in US units and metres per second (m/s) in metric terms. For comparison, a rapidly moving river might move at about 7 ft/s (2.13 m/s).

The quantity of water (Q) that flows through a pipe depends on the velocity (V) and the cross-sectional area (A) of the pipe. This is stated mathematically as the formula $Q = A \times V$. Or, in terms of velocity,

$$V = \frac{Q}{A}$$

For example, a flume is 2-ft wide and 2-ft deep, so the cross-sectional area of the flume is 4 ft^2. The flume is flowing full of water and the quantity is measured at 12 ft^3 in 1 second (12 ft^3/s). The velocity of the water would therefore be

$$V = \frac{Q}{A}$$

$$= \frac{12 ft^3/s}{4 ft^2} = 3 ft/s$$

Friction Loss

As water flows through a pipeline, there is friction between the water and the walls of the pipe. The friction loss causes a loss of head (pressure) as the water flows through the pipe. The amount of friction depends partly on the smoothness of the pipe walls. All new pipe is quite smooth, whereas old, badly corroded cast-iron pipe will have a very high friction factor. The degree of pipe roughness is commonly denoted by a *C* factor, which is a coefficient in the Hazen–Williams formula that has long been used for determining flow in pipe. High *C* values imply less friction.

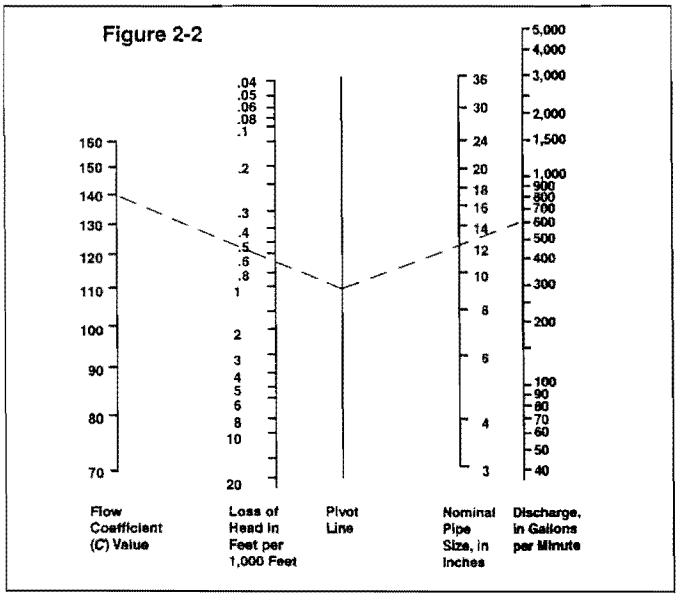
The head loss due to friction also depends on the velocity of the water flowing through the pipe, the diameter of the pipe, and the distance the water travels through the pipe.

Figure 2-2 is a commonly used nomograph for approximating the flow in ductile-iron pipe. In the example shown by a dashed line, a 12-in. pipe is flowing at approximately 600 gpm and the pipe has a *C* factor of 140. A line is drawn from the 600-gpm point on the discharge line, through the point for 12-in. pipe, and to the pivot line. A line is then drawn from that point to 140 on the flow coefficient line. This line crosses the loss of head line at about 0.7, indicating this is the head loss per 1,000 ft of pipeline. If, for example, you are determining the loss of head in a pipeline 3,000 ft long with no valves or bends, the theoretical loss of head would be three times the indicated value (3 × 0.7 = 2.1 ft of head).

Flow of Water in Ductile-Iron Pipe

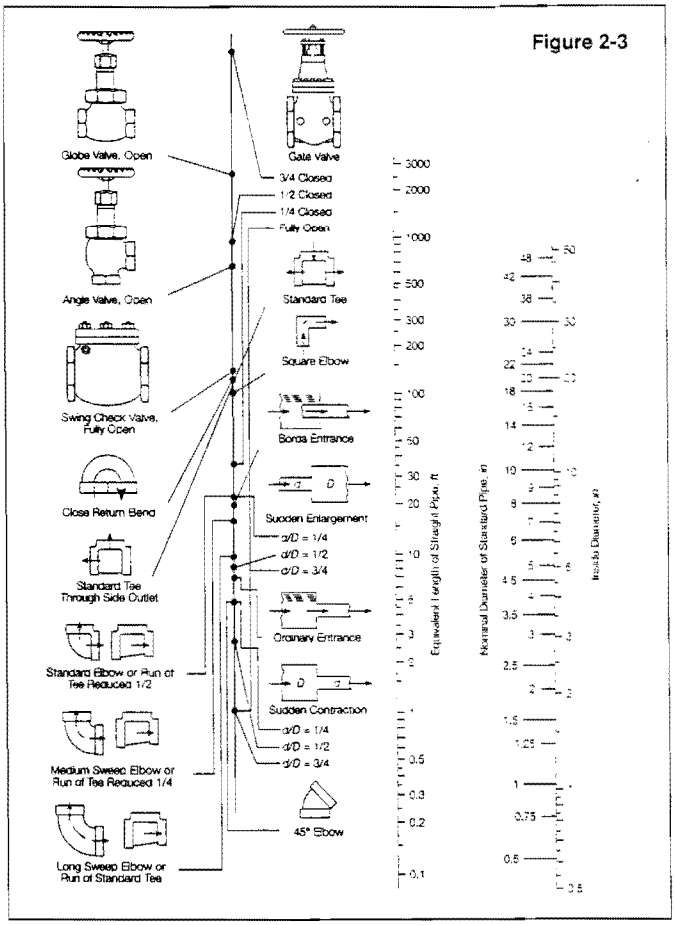
Pipe fittings also add a significant pressure loss in flow, and this is usually expressed as the equivalent length of straight pipe. To use the nomograph in Figure 2-3, a line is drawn from the pipe size to the point for each type of fitting, and the equivalent pipe length is read from the center scale. The total of all readings is then added to the actual length of the pipeline in determining the expected loss of head.

Figure 2-2



Draw a line between two known values and extend it so that it touches the pivot line. Draw a line between that point on the pivot line and the other known value. Read the unknown value where the second line intersects the graph.

Figure 2-3



Referring to the dashed line in the figure, each medium sweep elbow in the 12-in. pipeline example above would add friction loss equal to about 26 ft of pipe. So if the example pipeline has 20 elbows along the 3,000-ft length, it would add friction loss equal to an additional 20 × 26 = 520 ft of pipe. This would cause additional loss of head as follows:

$$\text{loss of head per 1,000 ft} = 0.7 \text{ ft}$$

$$\text{loss of head for 520 ft} = \frac{520}{1{,}000} \times 0.7 = 0.36 \text{ ft loss of head due to elbows}$$

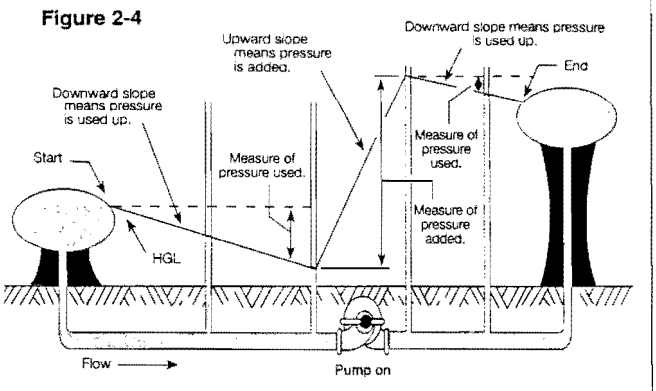
This would be added to the loss of head determined for 3,000 ft of pipe, so the total loss would be 2.1 + 0.36 = 2.46 ft of head. If there are also tees, valves, and other fittings in the pipeline, the head loss that they cause can be computed and added to the total.

This example also illustrates that the loss in head can become quite significant over a long pipeline. If, for example, after adding up the losses caused by all the other fittings, the total loss of head in the pipeline is 5 ft, this loss in terms of pressure would be 5 ft × 4.33 lb/in.^{2}/ft = 21.65 psi. In other words, if the pressure entering the pipe is 50 psi, the theoretical pressure at the far end would be reduced to 50 – 21.65 = 28.35 psi.

continued on page 14

Distribution System Hydraulics *continued from page 11*

Figure 2-4



Hydraulic Gradient

The head of water at any point in a water system refers to the height to which water would rise in a freely vented standpipe. The head at each point would be the height of the water column. The imaginary line joining the elevations of these heads is called the hydraulic grade line. The slope or steepness of this line is called the hydraulic gradient.

Assuming there is equal flow in all sections of the line, a simple hydraulic gradient becomes steeper as the pipe becomes smaller because of the friction head loss. If there were no flow in the line, the water head at the end of the line would be at the same level as the water in the reservoir.

In the example in Figure 2-4, water flows from a reservoir toward a booster pump. The pump adds pressure and causes an upward slope of the hydraulic grade line, then the head falls as the water travels to the end of the system.

For More Information

Basic Science Concepts and Applications. 1996. AWWA.

Practical Hydraulics Handbook. Hauser, B.A. 1991. CRC/Lewis Publishers.

American Water Works Association
Dedicated to Safe Drinking Water

Dear Drinking Water Colleague,

2000 is an exciting year for the drinking water industry. It's a time to look ahead at what the future will bring. And that's just what's planned for the AWWA Annual Conference and Exposition, June 11–15, 2000, in Denver, Colorado.

I want to encourage you and others in your organization to participate in the biggest and most comprehensive drinking water event in the world. With its theme *Step Up to the Future: Innovation for the New Millennium*, the AWWA Annual Conference will focus on innovative new technologies, solutions to current and future challenges, and the tools we all need to succeed.

If it has to do with drinking water, it will be addressed at this conference. There's something for everyone—from operators to water quality laboratory personnel to information technology professionals to government agency regulators to utility executives. Review compliance strategies for new drinking water regulations. Learn how you can meet consumer expectations and enhance customer service. Get guidance on how you can tackle major infrastructure repair and replacement issues. Review the latest technologies for ensuring safe drinking water all the way to the tap.

We're offering the largest technical program in the history of the association. Choose from more than 100 technical sessions, eight in-depth workshops, two special general sessions, and more—all focused on the hottest issues facing the industry. I'm confident you'll find some excellent training and educational opportunities for yourself and those with whom you work. The exposition, with more than 500 exhibiting companies, presents one of the most valuable learning experiences available. Plus, there are countless opportunities for networking with your peers from around the world who share your day-to-day challenges. It all adds up to an experience you simply can't afford to miss.

If you have questions or need additional information about any aspect of the conference, don't hesitate to contact AWWA staff, who will see that your needs are met. I look forward to seeing you in Denver, the Mile-High City!

Sincerely yours,

Stephen F. Gorden

Stephen F. Gorden
Director, Detroit Water and Sewerage Department
President, AWWA

P.S. Please review the enclosed program and share it with others who might benefit from attending. This conference will be exciting!

6666 West Quincy Avenue • Denver, Colorado 80235
Phone: 800-926-7337 • 303-794-7711 • Fax: 303-794-3951 • Web: www.awwa.org/ace2000

MINARY TECHNICAL PROGRAM

ote: This is a preliminary program and is subject to change. The final program ll be available at the conference. For the most current complete information available, visit our web site at <www.awwa.org/ace2000>.

SATURDAY, JUNE 10

Workshop SAT1
International Distribution Research Symposium
9:00 a.m.–5:30 p.m.

SUNDAY, JUNE 11

Workshop SAT1 Day 2
International Distribution Research Symposium
9:00 a.m.–5:30 p.m.

Jrkshop SUN1
Water Distribution Model Calibration: The Key to Good Decision Making
Engineering and Construction Division
Moderator: Susan P. Ancel
8:00 a.m.–4:00 p.m.

Workshop SUN2
Customer Satisfaction: Best Practices for a Continually Improving Customer-Responsive Organization
Management Division
Moderator: Myron Olstein
8:00 a.m.–12 noon

Workshop SUN3
Asking the Hard Questions: Does Your Utility Deserve to Survive?
nagement Division
Moderator: Edward Tenny
8:00 a.m–4:00 p.m.

Workshop SUN4
New AWWA Rate Manual: A Guide to the New Super Manual on Rates and Charges
Management Division
Moderator: Christopher P.N. Woodcock
8:00 a.m–4:00 p.m.

Workshop SUN5
Strategies for Addressing Conflict With the Public
Moderator: Michael J. McGuire
8:00 a.m.–4:00 p.m.

Workshop SUN6
Endocrine Disruptors in Drinking Water: Occurrence, Significance, and Current Understanding
Research Division
Moderator: Issam Najm
8:00 a.m.–4:00 p.m.

Workshop SUN7
Spent Filter Backwash Water Recycle: A Regulatory and Applications Workshop and Facility Tour
Water Quality Division
Moderators: Michael J. Barnes, Matthew B. Alvarez
8:00–6:30 p.m.

MONDAY, JUNE 12

Session MON1
AEESP—Association of Environmental Engineering & Science Professors and Black & Veatch
1:00–2:00 p.m.

Research Division Poster Session
Research Division
Posters will be on display Monday, June 12, from 2:00 p.m. to 5:00 p.m., and on Tuesday, June 13, from 8:00 a.m. to 5:00 p.m. Authors of the poster presentations will be available for questions on Tuesday, June 13, from 12 noon to 2:00 p.m.

Session MON2
Quality Management in Plant Construction
Engineering and Construction Division
2:00–5:00 p.m.

Session MON3
Contaminant-by-Contaminant Regulations
Regulatory Agencies Division
2:00–5:00 p.m.

Session MON4
Planning and Information Technology Strategies
Management Division
2:00–5:00 p.m.

Session MON5
Competition in the New Millennium
Management Division
2:00–5:00 p.m.

Session MON6
Reinventing Water Utilities for Customer Service
Management Division
2:00–5:00 p.m.

Session MON7
Next Generation of Regulatory Approaches
Public Advisory Forum
2:00–5:00 p.m.

Session MON8
Research Issues/ Findings/Needs
Research Division
2:00–5:00 p.m.

Session MON9
Water Quality Dynamics in Distribution Systems
Research Division
2:00–5:00 p.m.

Session MON10
Disinfection Using Membranes
Research Division
2:00–5:00 p.m.

Session MON11A
The Lowdown on Submetering: Technology, Guidelines, and Policy
Water Conservation Division
2:00–3:30 p.m.

Session MON11B
Open Mike: Shots on Conservation Programs and Issues of the Year 2000
Water Conservation Division
3:30–5:00 p.m.

Session MON12
Inorganic Contaminants in Drinking Water
Water Quality Division
2:00–5:00 p.m.

Session MON13
Water Reclamation: A Balancing Act
Water Resources Division/ Water Reuse Committee
2:00–5:00 p.m.

Session MON14
Tapping Seawater and Highly Mineralized Sources
Water Resources Division/ Desalting Committee
2:00–5:00 p.m.

ion TUE22
Controlling Arsenic Health Risks in Drinking Water: : Proposed Arsenic Rule II
Research Division and Regulatory Agencies Division
2:00–5:00 p.m.

Session TUE23
Universities Forum II
Universities Student Activities Subcommittee
2:00–5:00 p.m.

Session TUE24
What Boards, Councils, and Managers Need to Know About Capacity Development
Guidance Committee to Small Water Systems
2:00–5:00 p.m.

Session TUE25
Operation and Maintenance of Small Utility Distribution stems: How To Do It and When
Guidance Committee to Small Water Systems
2:00–5:00 p.m.

Session TUE26A
Irrigation Strategies
Water Conservation Division
2:00–3:30 p.m.

Session TUE26B
Do You Know Where Your Customers Are?
Water Conservation Division
3:30–5:00 p.m.

Session TUE27
Monitoring/Occurrence/ Detection Topics
Water Quality Division
2:00–5:00 p.m.

Session TUE28
Management of Spent Filter Wash Water and Other Waste Streams
Water Quality Division
2:00–5:00 p.m.

Session TUE29
The Endangered Species Act and Municipal Water Supplies: How to Meet the Needs of Both
Water Resources Division
2:00–5:00 p.m.

Session TUE30
Rocky Mountain Regional Issues II: From the Source to the Tap and Back
Technical and Educational Council
2:00–5:00 p.m.

Professional Development PD2
When Values Collide: Reality in the Workplace
2:00–5:00 p.m.

WEDNESDAY, JUNE 14

Plenary Session WED1
H_2Open Forum: Is the Future of Water in a Bottle?
Public Affairs Council/ Technical and Educational Council
8:00–9:30 a.m.

Session WED2
Distribution and Plant Operations Division II
Distribution and Plant Operations Division
9:45 a.m.–12:15 p.m.

Session WED3
Control Systems 2000
Engineering and Construction Division
9:45 a.m.–12:15 p.m.

Session WED4
International Affairs I
International Affairs Committee
9:45 a.m.–12:15 p.m.

Session WED5
International Approaches to Safe Water Regulation, Accreditation, and Self Regulation
Regulatory Agencies Division
9:45 a.m.–12:15 p.m.

Session WED6
Tools for Effective Utility Management
Management Division
9:45 a.m.–12:15 p.m.

Session WED7
Changing Utility Business Practices: Leveraging Information Technology
Management Division
9:45 a.m.–12:15 p.m.

Session WED8
Deregulation Impacts and Opportunities
Management Division
9:45 a.m.–12:15 p.m.

Session WED9
Truthful Talk on Tough Topics
9:45 a.m.–12:15 p.m.

Session WED10
Meet the Press: Make the Media Work for You
Public Affairs Council
9:45 a.m.–12:15 p.m.

Session WED11
Distribution System M/DBP Health Risks: Do We Have a Problem Here?
Research Division/Water Quality Division
9:45 a.m.–12:15 p.m.

Session WED12
Membrane Research: Feed to Distribution
Research Division
9:45 a.m.–12:15 p.m.

Session WED13
SDWA Implementation: The Rules
Guidance Committee to Small Water Systems
9:45 a.m.–12:15 p.m.

Session WED14A
Get Ready to Tumble: What's New with Efficient Clothes Washers
Water Conservation Division
9:45–10:45 a.m.

Session WED14B
Conservation Models 1a: An Overview of Concepts, Methods, Applications, and Limitations
Water Conservation Division
10:45 a.m.–12:15 p.m.

Session WED15
Source Waters and Treatment
Water Quality Division
9:45 a.m.–12:15 p.m.

Session WED16
Disinfection Practices
Water Quality Division
9:45 a.m.–12:15 p.m.

Session WED17
Groundwater Issues
Water Resources Division
9:45 a.m.–12:15 p.m.

Professional Development PD3
When Values Collide: Reality in the Workplace
9:45 a.m.–12:15 p.m.

SPECIAL DISTRICT RISK MANAGEMENT AUTHORITY

SDRMA

1481 River Park Drive, Suite 110
Sacramento, CA 95815-4501

February 4, 2000

Re: SDRMA EDUCATION DAY - WORKSHOP

Dear SDRMA Member:

The Board is pleased to announce the Spring Education Day - Workshop will be held on Wednesday, March 1, 2000 at the Bakersfield Doubletree Hotel.

At this event SDRMA Coverage Counsel Ruby David of the McCormick, Barstow law firm will conduct a presentation on the Memorandum of Coverage and how the document was developed for the benefit of the Member. A representative of the Fresno CAL-OSHA Consultation Services will discuss the services available from the Consultation Office for public agencies and the changes in CAL-OSHA regulations.

In the afternoon, attorney Jeff Thompson of Walsh and Declues will conduct a session discussing the recent court decisions that effect public entities in the areas of employment, internet access and e-mail privacy. Dennis Timoney will lead a discussion on the claim process and Members' involvement.

Attendance at this workshop will be credited towards the Members' CIP credit for the 2000-2001 Program. This workshop is recommended for board members, managers, and designated safety personnel. If you have any question regarding the workshop, please call Dennis Timoney at 800-537-7790.

We look forward to meeting with you in Bakersfield.

SDRMA Claims / Loss Prevention Department

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