

CHINO BASIN WATERMASTER



NOTICE OF MEETINGS

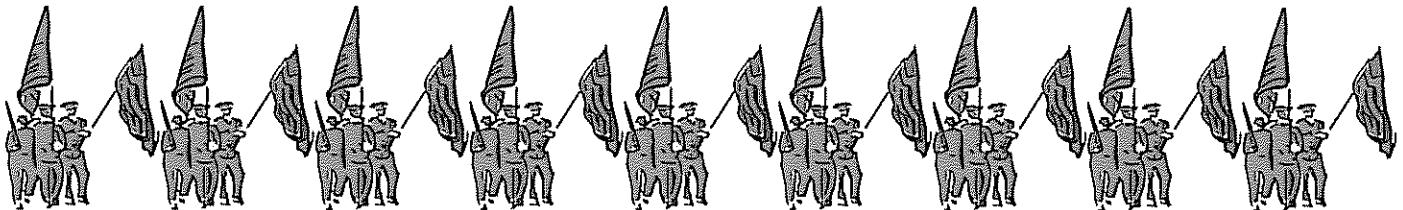
Thursday, May 25, 2006

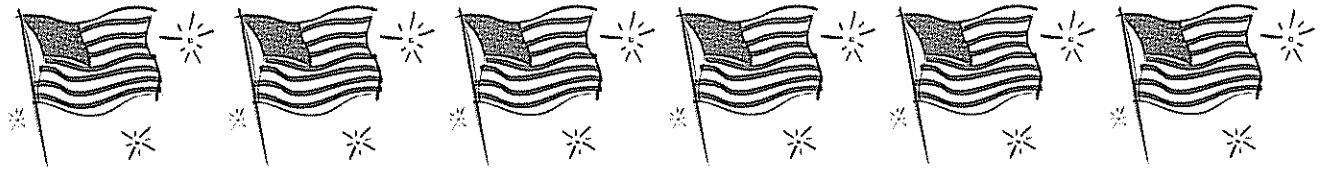
9:00 a.m. – Advisory Committee Meeting
11:00 a.m. – Watermaster Board Meeting

(Lunch will be served)

AT THE CHINO BASIN WATERMASTER OFFICES

9641 San Bernardino Road
Rancho Cucamonga, CA 91730
(909) 484-3888





CHINO BASIN WATERMASTER

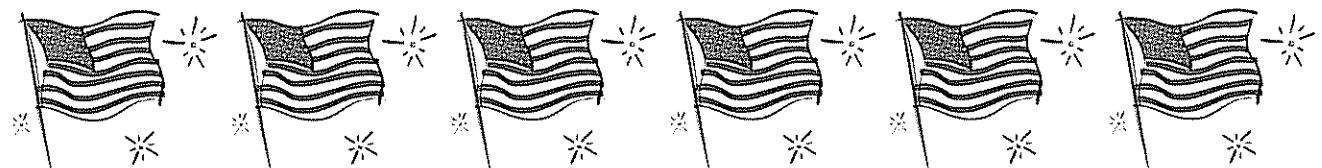
May 25, 2006

9:00 a.m. - Advisory Committee Meeting

11:00 a.m. - Watermaster Board Meeting

(Lunch will be served)

AGENDA PACKAGE



**CHINO BASIN WATERMASTER
ADVISORY COMMITTEE MEETING**

9:00 a.m. – May 25, 2006
At The Offices Of
Chino Basin Watermaster
9641 San Bernardino Road
Rancho Cucamonga, CA 91730

AGENDA

CALL TO ORDER

AGENDA - ADDITIONS/REORDER

I. CONSENT CALENDAR

Note: All matters listed under the Consent Calendar are considered to be routine and non-controversial and will be acted upon by one motion in the form listed below. There will be no separate discussion on these items prior to voting unless any members, staff, or the public requests specific items be discussed and/or removed from the Consent Calendar for separate action.

A. MINUTES

1. Minutes of the Advisory Committee Meeting held April 27, 2006 *(Page 1)*

B. FINANCIAL REPORTS

1. Cash Disbursements for the month of April 2006 *(Page 15)*
2. Combining Schedule of Revenue, Expenses and Changes in Working Capital for the Period July 1, 2005 through March 31, 2006 *(Page 19)*
3. Treasurer's Report of Financial Affairs for the Period March 1, 2006 through March 31, 2006 *(Page 21)*
4. Profit & Loss Budget vs. Actual July through March 2006 *(Page 23)*

II. BUSINESS ITEMS

A. WATERMASTER BUDGET FOR FISCAL YEAR 2006/2007

Consider Approval of the Watermaster Budget for Fiscal Year 2006/2007 *(Page 25)*

III. REPORTS/UPDATES

A. WATERMASTER GENERAL LEGAL COUNSEL REPORT

1. Santa Ana River Application
2. Boardsmanship Workshop Update
3. Peace II Update

B. WATERMASTER ENGINEERING CONSULTANT REPORT

1. Summary of WEI April 2006 Report Regarding Hydraulic Control, Desalters and New Yield
2. Proposed Waste Discharge Requirements (WDR) for Recharge of Imported Water *(Page*

C. CEO/STAFF REPORT

1. Water Quality Update
2. Strategic Planning Committee Update
3. Personnel Committee Update
4. GAMA Presentation by Robert Kent, California Water Science Center

- 5. Storm Water/Recharge Update
- 6. Inland Empire Public Affairs Network (IEPAN) Update *(Page 137)*
- 7. Legislative/Bond Update

D. INLAND EMPIRE UTILITIES AGENCY

- 1. Monthly Water Conservation Programs Report *(Page 143)*
- 2. Groundwater Operations Recharge Summary *(Page 149)*
- 3. Monthly Imported Water Deliveries Report *(Page 151)*
- 4. State/Federal Legislation Reports *(Page 157)*
- 5. Public Relations Report *(Page 185)*

E. OTHER METROPOLITAN MEMBER AGENCY REPORTS

IV. INFORMATION

- 1. Newspaper Articles *(Page 187)*

V. COMMITTEE MEMBER COMMENTS

VI. OTHER BUSINESS

VII. FUTURE MEETINGS

May 23, 2006	9:00 a.m.	GRCC Committee Meeting
May 25, 2006	9:00 a.m.	Advisory Committee Meeting
May 25, 2006	11:00 a.m.	Watermaster Board Meeting
June 8, 2006	10:00 a.m.	Appropriative & Non-Agricultural Pool Meeting
June 20, 2006	9:00 a.m.	Agricultural Pool Meeting @ IEUA
June 22, 2006	9:00 a.m.	Advisory Committee Meeting
June 22, 2006	11:00 a.m.	Watermaster Board Meeting

Meeting Adjourn

**CHINO BASIN WATERMASTER
WATERMASTER BOARD MEETING**

11:00 a.m. – May 25, 2006
At The Offices Of
Chino Basin Watermaster
9641 San Bernardino Road
Rancho Cucamonga, CA 91730

AGENDA

CALL TO ORDER

PLEDGE OF ALLEGIANCE

AGENDA - ADDITIONS/REORDER

I. CONSENT CALENDAR

Note: All matters listed under the Consent Calendar are considered to be routine and non-controversial and will be acted upon by one motion in the form listed below. There will be no separate discussion on these items prior to voting unless any members, staff, or the public requests specific items be discussed and/or removed from the Consent Calendar for separate action.

A. MINUTES

1. Minutes of the Annual Watermaster Board Meeting held April 27, 2006 *(Page 7)*

B. FINANCIAL REPORTS

1. Cash Disbursements for the month of April 2006 *(Page 15)*
2. Combining Schedule of Revenue, Expenses and Changes in Working Capital for the Period July 1, 2005 through March 31, 2006 *(Page 19)*
3. Treasurer's Report of Financial Affairs for the Period March 1, 2006 through March 31, 2006 *(Page 21)*
4. Profit & Loss Budget vs. Actual July through March 2006 *(Page 23)*

II. BUSINESS ITEMS

A. WATERMASTER BUDGET FOR FISCAL YEAR 2006/2007

Consider Approval of the Watermaster Budget for Fiscal Year 2006/2007 *(Page 25)*

B. PEACE II TERM SHEET

Consider Recommendation to Forward Through the Watermaster Process *(Page 35)*

C. MZ1 SUMMARY REPORT

Consider Approval of the February 2006 MZ-1 Summary Report *(Page 37)*

III. REPORTS/UPDATES

A. WATERMASTER GENERAL LEGAL COUNSEL REPORT

1. Santa Ana River Application
2. Boardsmanship Workshop Update

B. WATERMASTER ENGINEERING CONSULTANT REPORT

1. Summary of WEI April 2006 Report Regarding Hydraulic Control, Desalters and New Yield

- 2. Proposed Waste Discharge Requirements (WDR) for Recharge of Imported Water
(Page 107)

C. CEO/STAFF REPORT

- 1. Water Quality Update
- 2. Strategic Planning Committee Update
- 3. Personnel Committee Update
- 4. GAMA Presentation by Robert Kent, California Water Science Center
- 5. Storm Water/Recharge Update
- 6. Inland Empire Public Affairs Network (IEPAN) Update (Page 137)
- 7. Legislative/Bond Update

IV. INFORMATION

- 1. Newspaper Articles (Page 187)

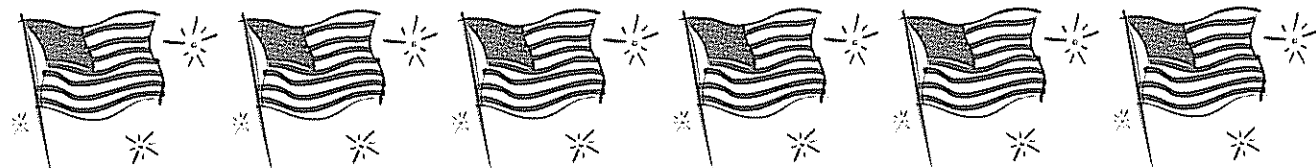
V. BOARD MEMBER COMMENTS

VI. OTHER BUSINESS

VII. FUTURE MEETINGS

May 23, 2006	9:00 a.m.	GRCC Committee Meeting
May 25, 2006	9:00 a.m.	Advisory Committee Meeting
May 25, 2006	11:00 a.m.	Watermaster Board Meeting
June 8, 2006	10:00 a.m.	Appropriative & Non-Agricultural Pool Meeting
June 20, 2006	9:00 a.m.	Agricultural Pool Meeting @ IEUA
June 22, 2006	9:00 a.m.	Advisory Committee Meeting
June 22, 2006	11:00 a.m.	Watermaster Board Meeting

Meeting Adjourn

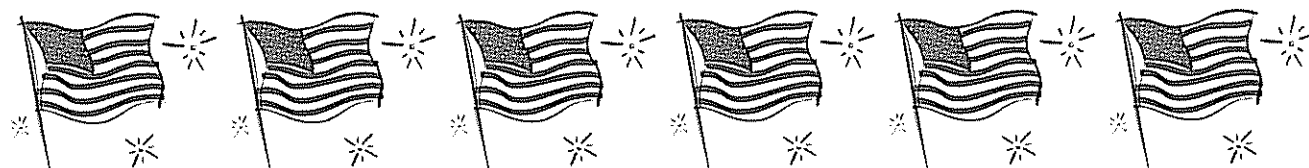


CHINO BASIN WATERMASTER

I. CONSENT CALENDAR

A. MINUTES

1. Advisory Committee Meeting – April 27, 2006



Draft Minutes
CHINO BASIN WATERMASTER
ADVISORY COMMITTEE MEETING

April 27, 2006

The Advisory Committee meeting was held at the offices of the Chino Basin Watermaster, 9641 San Bernardino Road, Rancho Cucamonga, California, on April 27, 2006 at 9:00 a.m.

ADVISORY COMMITTEE MEMBERS PRESENT

Agricultural Pool

Nathan deBoom, Chair	Ag Pool/Dairy
Bob Feenstra	Ag Pool/Dairy

Appropriative Pool

Ken Jeske	City of Ontario
Mike McGraw	Fontana Water Company
Frank LoGuidice	Fontana Union Water Company
Rosemary Hoerning	City of Upland
Dave Crosley	City of Chino
Ashok K. Dhingra	City of Pomona
Charles Moorrees	San Antonio Water Company
Mark Kinsey	Monte Vista Water District
J. Arnold Rodriguez	Santa Ana River Water Company
Justin Brokaw	Marygold Mutual Water Company

Non-Agricultural Pool

Bob Bowcock	Vulcan Materials Company (Calmat Division)
-------------	--

Watermaster Staff Present

Kenneth R. Manning	Chief Executive Officer
Sheri Rojo	CFO/Asst. General Manager
Gordon Treweek	Project Engineer
Danielle Maurizio	Senior Engineer
Sherri Lynne Molino	Recording Secretary

Watermaster Consultants Present

Michael Fife	Hatch & Parent
Mark Wildermuth	Wildermuth Environmental Inc.
Dave Argo	Black & Veatch

Others Present

Chris Diggs	Fontana Water Company
Bill Kruger	City of Chino Hills
Steven G. Lee	Ag Pool Legal Counsel
Rick Hansen	Three Valleys Municipal Water District
Martha Davis	Inland Empire Utilities Agency

The Advisory Committee meeting was called to order by Chair deBoom at 9:10 a.m.

AGENDA - ADDITIONS/REORDER

No comment was made regarding this item.

I. CONSENT CALENDAR

A. MINUTES

1. Minutes of the Advisory Committee Meeting held March 23, 2006

B. FINANCIAL REPORTS

5. Cash Disbursements for the month of March 2006
6. Combining Schedule of Revenue, Expenses and Changes in Working Capital for the Period July 1, 2005 through February 28, 2006
7. Treasurer's Report of Financial Affairs for the Period February 1, 2006 through February 28, 2006
8. Profit & Loss Budget vs. Actual July through February 2006

C. WATER TRANSACTION

Consider Approval for Transaction of Notice of Sale or Transfer – Cucamonga Valley Water District has agreed to purchase from West Valley Water District water in storage in the amount of 500 acre-feet. Date of application: January 10, 2006

Motion by Jeske, second by McGraw, and by unanimous vote

Moved to approve Consent Calendar Items A through C, as presented

II. BUSINESS ITEMS**A. MZ1 SUMMARY REPORT**

Mr. Manning stated this item was presented to the pools and had unanimous votes in favor of this item except for a one negative vote by the City of Chino Hills. Staff, counsel, and technical consultants are recommending the approval of the presented MZ1 Summary Report. This summary report was designed out of the MZ1 workshop in May of 2005 where the Special Referee made recommendations, this being one of those, and to be in compliance with the court, staff is asking that this report be approved and forwarded to the Watermaster Board for their approval. This report also includes the guidance criteria of the MZ1 management and meets the needs for this agency and for the court.

Motion by Kinsey, second by Rodriguez, and by unanimous vote

Motion approve the February 2006 MZ1 Summary Report, as presented

III. REPORTS/UPDATES**A. WATERMASTER GENERAL LEGAL COUNSEL REPORT****1. Peace II Process**

Counsel Fife stated there was a meeting held the week before last on the Peace II process and staff and counsel are currently taking comments on the proposal that was released prior to that meeting. Staff is anticipating scheduling follow up meetings shortly. Staff and counsel are optimistic to be able to bring something to the Watermaster Board members in May for their approval to place the approved term sheet through the Watermaster process in June in preparation of the court mandated workshop in July.

2. Santa Ana River Water Rights Application

Counsel Fife stated this item has been a long on-again/off-again process and presently it is on the forefront again. Counsel Fife stated in May of 2005, the other parties that are involved in this process (including Orange County Water District (OCWD), Western Municipal Water District (WMWD), San Bernardino Municipal Water District, and the City of Riverside) decided they were ready to move forward on their applications and bring their applications to hearing by the beginning of 2006. Counsel Fife stated it has been made known to the parties involved that Watermaster is confident in our projects, positive in our validity of our application, and if they are ready to go to the State Board to get confirmation of their rights, we will follow suit. The last time this item was in motion, counsel and staff met with the State Board's staff to discuss the details of our application along with trips made to Sacramento and after that attempt the issue faded away and has been silent ever since. Counsel Fife stated OCWD has now reissued a programmatic environmental impact report for their water rights application. The notice of availability is on the back table for review. With this news, counsel is anticipating WMWD to follow suit and if this does happen counsel, in concert with WMWD, will approach the State Board. Counsel Fife

stated it is Watermaster's position that we have all the rights to all the surface water that passes through the Chino Basin and staff has expressed to the State Board that we do not need to do any further CEQA work and believe Watermaster is solid on our part of our application.

Counsel Fife stated there is an interesting development in legislation regarding Senate Bill 1795 which is being sponsored by the Stockton East Water District. The purpose of the legislation is to amend the water code, to say that any water rights application that is for the diversion of surface flows to use as groundwater recharge will not need an underground storage supplement. This is a part of the application that is very onerous and requires a lot of reporting. The State Board in recent years has stated they will regard a diversion for the purpose of recharge as that ultimate pumping is the actual diversion and everything prior to that just a pipe basically and what the State Board is going to regulate is the ultimate pumping. This SB1795 would rectify this situation and make our application much easier. To date there is no opposition to this bill and staff and counsel are hopeful this bill will get passed. A brief discussion ensued with regard to water plans.

B. WATERMASTER ENGINEERING CONSULTANT REPORT

1. Update on Report on Balance of Recharge and Discharge

Mr. Wildermuth stated as reported at the pool meetings, the Balance of Recharge and Discharge/Hydraulic Control Modeling Report is out as a draft report. Mr. Wildermuth stated that opposed to all the numbers the engineers have been working over the past twelve months, the numbers are slightly different; however, the final answer comes out the same. Mr. Wildermuth noted one item that is different; and this has been collaborated by all the new monitoring data that has come out of the Hydraulic Control mentoring program, which is we do not have hydraulic control on the far west side of the basin. This area would be in the vicinity of Desalter I, wells one through four which are deep wells, and then just west of those wells. There is an opportunity that we can obtain hydraulic control by installing more desalter wells in that location; we can't control that area by re-operation. This report will be finalized at some point in time or will be accepted as a draft report as final.

Added Comment:

Mr. Wildermuth stated recently the Regional Board was anticipating coming up with waste discharge requirements for the recharge of imported water. The Regional Board has now put out that tentative order for review which contains objectives that must be met in order to recharge water. The order has faults and will need to be looked at carefully and the Regional Board is asking for comments by May 1, 2006 which has caused uproar by agencies wanting this deadline pushed back for sixty days for proper review. Mr. Manning commented this is an item Watermaster will want to review and phone calls on this issue have been received. Mr. Manning suggested to the parties who phoned him would be to have the agencies get together and put together a "united" set of recommendations. Ms. Davis added comment regarding sending out a united message for the delay on this issue.

C. CEO/STAFF REPORT

1. Consequences of Non-Implementation of Peace II

Mr. Manning stated following discussions with the special referee, it was suggested a brief summary be put together and presented to the parties on this subject matter. Hatch & Parent was tasked to go through all the consequences and provide a memo to be presented at the meetings to bring the parties up to speed on the consequences. Counsel Fife stated this memo is a brief overview of some of the consequences if Peace II is not completed. Counsel Fife noted that other than water quality, all the rest of the items are tied to specific deadlines, all of which will kick in whether we do Peace II or not. The ultimate conclusion of the memo is the choice in dealing with these issues as a unit and in

a coordinated way or dealing with them on an individual basis. It was noted that "no action" really constitutes "action" because something will happen eventually if one chooses to do nothing – there will be a consequence.

2. DataX Presentation

The Advisory Committee members declined on seeing the DataX Presentation at this meeting. It was noted the presentation was given at each of the pool meetings and will be given at the Watermaster Board meeting today. Mr. Manning gave a brief overview of the DataX program and noted Watermaster staff is currently using the system and is very pleased with it.

3. Legislative Update

Mr. Manning stated he believes SB 1795 bill will be amended shortly and will assist our efforts in the Chino Basin to declare the water as beneficial use. Mr. Manning stated there is a new bill presented by Senator Simitian SB 1612 which has been pulled by the senator because it was not going to get a hearing. This is a \$3 billion dollar general obligation bond and noted even if the bill was passed it would still have to go through the voters. Mr. Manning noted the portion of the bill that was of interest to us is for the first time since 1982 it had discussion about a bypass facility around the Delta as the basis for the bill. It was noted this bill will be introduced at a later date.

4. MWD Groundwater Study

Mr. Manning stated in September of 2005, Metropolitan Water District (MWD) asked groundwater managers in the MWD service area to meet at their office to discuss putting together a very cursory look at groundwater basins in Southern California within and in some cases outside the service area. The purpose would be to answer questions from their board relative to, "Is there any potential for groundwater storage as opposed to surface storage?" MWD staff is collecting data for this report. Recently Ms. Grebbien, Mr. Rossi and Mr. Manning met with MWD staff to talk about what MWD is exactly looking for due to the vagueness of their request for data. Mr. Manning stated he expressed a concern to MWD staff that if they were going to be gathering groundwater data that they needed to have a groundwater savvy person on staff or in a consultant capacity that can deal with the data. MWD noted they were going to be addressing that concern. Mr. Manning noted several other basins opted to fill out the questionnaire that was sent by MWD; however, Chino Basin Watermaster opted to send them our State of the Basin Report and some of our underlying governance documents and then schedule meeting directly with them to discuss their need to fill in the gaps.

5. Workshops Update

Mr. Manning stated there is a Boardsmanship workshop scheduled for board members and any other party who wishes to attend today after the Board meeting. This meeting has been scheduled by a request from board member Sandra Rose who wanted a better understanding of her role as a board member for the Chino Basin Watermaster. Hatch & Parent will be conducting this workshop.

A budget workshop has been scheduled for Ms. Rojo to present the proposed 2006/2007 budget on Tuesday, May 2, 2006 starting at 9:00 a.m.

6. Storm Water/Recharge Update

Mr. Treweek stated there is an updated Storm Water/Recharge Update available on the back table. It was noted 34,000 acre-feet of water has been recharged after nine months, there are four more months left in the storm season and we have been receiving above 5,000 acre-feet per month of recharge. This should bring us up to the 50,000 acre-foot goal for this year. February and March have had very good results of recharge due to recent storms. Mr. Treweek reviewed the handout in detail.

7. Draft Desalter III Alternative Study Update

Mr. Manning stated that as part of the Peace II process, staff has been discussing a relationship with Western Municipal Water District (WMWD) for the construction of a desalter program. There have been several questions regarding what the new desalter program might possibly look like. Mr. Dave Argo from Black & Veatch has been tasked by WMWD to look at some desalter alternatives and Mr. Argo is here to present five draft concept ideas. Mr. Argo presented the "Chino Basin Optimum Basin Management Program – Potential Deliveries of 10,000 AFY to WMWD / Development of New Chino III Desalter) presentation. The presentation was developed by Black & Veatch, in association with RBF Consulting and Wildermuth Environmental, Inc. It was noted Watermaster is exploring options for a third Chino desalter and a plan is needed to fulfill the objectives of the originally proposed Chino III Desalter which will maintain hydraulic control, meet Peace II objectives, and meet the goals of the Optimum Basin Management Program (OBMP). Mr. Argo stated a plan is needed to maintain hydraulic control in the basin and reviewed the goal to maintain historic agricultural pumping in the south basin to achieve required production of 40,000 afy. Mr. Argo stated five concepts were developed to meet these objectives of Chino III Desalter and reviewed in detail each of the possible concepts Mr. Argo stated all concepts assume use of the existing Arlington Desalter pipeline for deliveries to Western. Facility and cost assumptions were based on existing Chino Desalter Authority facilities and construction costs. A facility model was developed to estimate the costs for each of the concepts presented. Mr. Argo reviewed several maps of wells in correlation to the five concepts in detail and discussed the next steps that will be taken with Watermaster and stakeholder approval. The hydraulic control summary chart was examined and discussed and Mr. Argo solicited questions and comments from committee members. A question regarding the numbers presented on the concepts which lead to a discussion. Mr. Argo stated the five concepts which were presented will most likely not be one of the options to choose from later on once more work has been done and recommendations received to make changes. Mr. Jeske made reference to the report on hydraulic control which was received last month on what we may need to do in certain issues. That report and findings may or may not tie into what Black & Veatch is trying to do. Mr. Jeske noted that in a meeting with the CDA the group was looking at five specific low cost alternatives to achieve both goals in hydraulic control and providing reliability to the agencies. There may be some work involved to merge what WMWD and the CDA are doing financially. Mr. Manning stated the extension of the work which was originally discussed was authorized and budgeted for in the Watermaster budget and is still within the original authorization. Discussions will still take place with WMWD on cost sharing ideas. A discussion ensued with regard to cost sharing and the Tier II rate.

D. INLAND EMPIRE UTILITIES AGENCY

1. Monthly Water Conservation Programs Report
No comment was made regarding this item.
2. Groundwater Operations Recharge Summary – handout
No comment was made regarding this item.
3. Monthly Imported Water Deliveries Report
No comment was made regarding this item.
4. State/Federal Legislation Reports
No comment was made regarding this item.
5. Public Relations Report
No comment was made regarding this item.

E. OTHER METROPOLITAN MEMBER AGENCY REPORTS

Mr. Hansen commented on the feedback received regarding waste discharge requirements for the recharge of imported water by the Regional Board. Mr. Hansen stated it is not just the Chino Basin area that would be affected, there would be a terrible president for all of Southern California. Mr. Hansen stated yesterday communications already began with Metropolitan Water District that they want MWD member agencies to all get involved in this process.

IV. INFORMATION

1. Newspaper Articles

No comment was made regarding this item.

V. COMMITTEE MEMBER COMMENTS

No comment was made regarding this item.

VI. OTHER BUSINESS

No comment was made regarding this item.

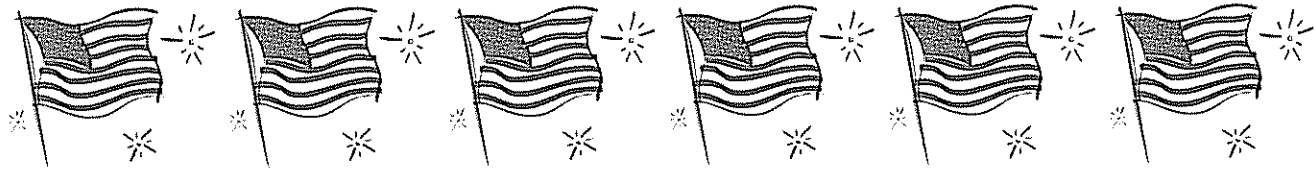
VII. FUTURE MEETINGS

April 25, 2006	9:00 a.m.	GRCC Committee Meeting
April 27, 2006	9:00 a.m.	Advisory Committee Meeting
April 27, 2006	11:00 a.m.	Watermaster Board Meeting
April 27, 2006	1:00 p.m.	Boardsmanship Workshop
May 2, 2006	9:00 a.m.	Budget Workshop
May 11, 2006	9:00 a.m.	Appropriative & Non-Agricultural Pool Meeting
May 16, 2006	9:00 a.m.	Agricultural Pool Meeting @ IEUA
May 25, 2006	9:00 a.m.	Advisory Committee Meeting
May 25, 2006	11:00 a.m.	Watermaster Board Meeting

The Advisory Committee Meeting Adjourned at 9:45 a.m.

Secretary: _____

Minutes Approved: _____

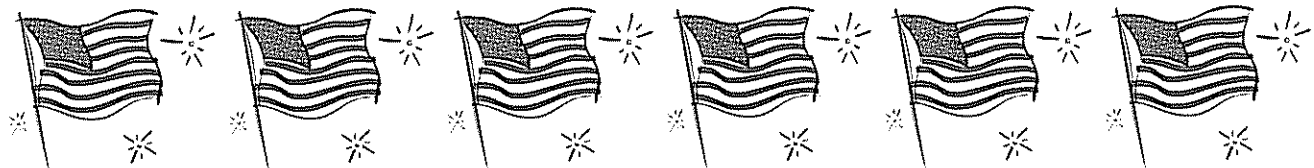


CHINO BASIN WATERMASTER

I. CONSENT CALENDAR

A. MINUTES

1. Watermaster Board Meeting – April 27, 2006



Draft Minutes
CHINO BASIN WATERMASTER
WATERMASTER BOARD MEETING
April 27, 2006

The Watermaster Board Meeting was held at the offices of the Chino Basin Watermaster, 9641 San Bernardino Road, Rancho Cucamonga, California, on April 27, 2006 at 11:00 a.m.

WATERMASTER BOARD MEMBERS PRESENT

Ken Willis, Chair	West End Consolidated Water Company
Sandra Rose	Monte Vista Water District
Terry Catlin	Inland Empire Utilities Agency
Al Lopez	Western Municipal Water District
Bob Kuhn	Three Valleys Municipal Water District
Bob Bowcock	Vulcan Materials Company
Paul Hofer	Agricultural Pool, Crops
Paul Hamrick	Jurupa Community Services District
Geoffrey Vanden Heuvel	Agricultural Pool, Dairy

Watermaster Staff Present

Kenneth R. Manning	Chief Executive Officer
Sheri Rojo	CFO/Asst. General Manager
Gordon Treweek	Project Engineer
Danielle Maurizio	Senior Engineer
Sherri Lynne Molino	Recording Secretary

Watermaster Consultants Present

Scott Slater	Hatch & Parent
Michael Fife	Hatch & Parent
Mark Wildermuth	Wildermuth Environmental Inc.
Dave Argo	Black & Veatch

Others Present

Rosemary Hoerning	City of Upland
Ken Jeske	City of Ontario
Marty Zvirbulis	Cucamonga Valley Water District
Mark Kinsey	Monte Vista Water District
Carole McGreevy	Jurupa Community Services District
Ashok K. Dhingra	City of Pomona
Charles Moorrees	San Antonio Water Company
Dave Crosley	City of Chino
David DeJesus	Three Valleys Municipal Water District

The Watermaster Board Meeting was called to order by Mr. Willis at 11:00 a.m.

PLEDGE OF ALLEGIANCE

AGENDA - ADDITIONS/REORDER

Mr. Manning noted that while reviewing the March 23, 2006 minutes counsel decided to make a slight change to the language written on the discussion regarding confidentiality. Counsel Slater noted the revised minutes are provided in your meeting folder and on the back table. A brief discussion ensued with regard to what was changed and why the change was necessary. The revised minutes were presented into the Consent Calendar for approval.

I. CONSENT CALENDAR

A. MINUTES

- 1. Revised Minutes of the Annual Watermaster Board Meeting held March 23, 2006

B. FINANCIAL REPORTS

- 5. Cash Disbursements for the month of March 2006
- 6. Combining Schedule of Revenue, Expenses and Changes in Working Capital for the Period July 1, 2005 through February 28, 2006
- 7. Treasurer's Report of Financial Affairs for the Period February 1, 2006 through February 28, 2006
- 8. Profit & Loss Budget vs. Actual July through February 2006

C. WATER TRANSACTION

Consider Approval for Transaction of Notice of Sale or Transfer – Cucamonga Valley Water District has agreed to purchase from West Valley Water District water in storage in the amount of 500 acre-feet. Date of application: January 10, 2006

Motion by Kuhn, second by Hamrick, and by unanimous vote

Moved to approve Consent Calendar Items A (as revised) through C, as presented

II. BUSINESS ITEMS

A. MZ1 SUMMARY REPORT

Mr. Manning stated this item was presented to the Pools and Advisory Committee and had unanimous votes in favor of this item except for a one negative vote by the City of Chino Hills. Staff, counsel, and technical consultants are recommending the approval of the presented MZ1 Summary Report. This summary report was designed as a result of the MZ1 workshop held in May of 2005 where the Special Referee made recommendations, this being one of those recommendations. To be in compliance with the court, staff is asking that this report be approved. This report also includes the guidance criteria of the MZ1 management and meets the needs for this agency and for the court. Mr. Vanden Heuvel inquired if the city of Chino Hills has expressed an opinion on this report. Mr. Manning noted the city of Chino Hills at this point in time is not in concurrence with the MZ1 Technical Committee or other parties who are in favor of this report. The city of Chino Hills has not provided any comment on this report in the last sixty days and they have been absent from the MZ1 meetings. Mr. Vanden Heuvel asked if a representative had been in attendance at any meeting where this report was presented for approval. Mr. Manning stated a representative was present at the April 13, 2006, Appropriative & Non-Agricultural pool meeting and that representative was the only "no" vote at any meeting where this was presented for approval. Mr. Vanden Heuvel offered comment on the history of this issue. It was noted a representative from the Watermaster Board should meet personally with the city of Chino Hills to understand what their concerns are and that Chair Willis should be that representative. An extended discussion ensued with regard to the Summary Report and the Long-Term Report with regard to the city of Chino Hills concerns. Counsel Slater stated Chino Hills concerns do not necessarily relate to the report itself or to the guidance criteria, which are not mandates, they are recommendations on operation. Comments were received by each member and Chair Willis called for a vote to table the motion for 30 days, while further attempts are made to engage Chino Hills into dialogue regarding their concerns.

Motion by Vanden Heuvel, second by Rose, and by majority vote

Motion to table this item for 30 days in order for Chair Willis to meet with the city of Chino Hills for resolution of their issues on the MZ1 Summary Report

III. REPORTS/UPDATES**A. WATERMASTER GENERAL LEGAL COUNSEL REPORT****1. Peace II Process**

Counsel Slater noted the legal section will be divided between himself who will be presenting the Peace II Process update and Counsel Fife who will be presenting the Santa Ana update. Counsel Slater stated as we reported at the last Board meeting the Wildermuth Environmental technical report would be out for review, a Strawman Proposal would be distributed, and a confidential meeting with attorneys, managers, principals, board members, and stakeholders who were willing to abide by the rules of evidentiary confidentiality was held on April 18, 2006. At that meeting the Strawman Proposal was explained and it was noted that this was not a proposal of the Watermaster Board or Board Member; it was solely an effort on the part of staff to facilitate an agreement among the parties. The document was presented, questions were asked and answered and the question was put to the group whether the proposal was worth further discussion, and the strong consensus in favor to continue the discussions of the document. The discussion of process occurred by either two ways, through the open Watermaster process or should the dialog continue in a confidential environment. The consensus was, for the time being, that conversations should be continued in confidence. Based upon that decision, a preliminary "hold a date" notice has been sent out for two dates May 4, 2006 and May 15, 2006. Mr. Kuhn inquired if input from board members will be needed at the next Attorney-Manager meeting? Counsel Slater stated the board members input is welcome. Mr. Vanden Heuvel offered comment on seeking board comments at those meetings. A discussion ensued with regard to the differences in the meetings. Counsel Slater stated initially the Attorney-Manager meetings was limited to the parties to have in attendance, a lawyer and a principal which was perceived as being exclusive as opposed to inclusive. Our understanding by the direction we received was to not limit it to allow board members to attend but to allow any representative of the stakeholders to attend so long as each attendee were willing to abide by the evidentiary confidentiality associated with the discussions. Ultimately that process would yield a product which would be brought forward through the Pools, Advisory Committee, and be subject to open comments by the Board members; the question is to give that process more time or the confidential sessions more time prior to the introduction to the Watermaster process. Ms. Rose confirmed the meetings that might be held on the 4th and the 15th are the confidential sessions and Counsel Slater concurred. Chair Willis acknowledged the board members want to continue to be invited to the confidential meetings and will adhere to the evidentiary confidentiality agreement.

2. Santa Ana River Water Rights Application

Counsel Fife stated this item has been a long on-again/off-again process and presently it is on the forefront again. Counsel Fife stated in May of 2005, the other parties that are involved in this process (including Orange County Water District (OCWD), Western Municipal Water District (WMWD), San Bernardino Municipal Water District, and the City of Riverside) decided they were ready to move forward on their applications and bring their applications to hearing by the beginning of 2006. Counsel Fife stated it has been made known to the parties involved that Watermaster is confident in our projects, positive in our validity of our application, and if they are ready to go to the State Board to get confirmation of their rights, we will follow suit. The last time this item was in motion, counsel and staff met with the State Board's staff to discuss the details of our application along with trips made to Sacramento and after that attempt the issue faded away and has been silent ever since. Counsel Fife stated OCWD has now reissued a programmatic environmental impact report for their water rights application. The notice of availability is on the back table for review. With this news, counsel is anticipating WMWD to follow suit and if this does happen counsel, in concert with WMWD, will approach the State Board. Counsel Fife stated it is Watermaster's position that we have all the rights to all the surface water that passes through the Chino Basin and staff has expressed to the State Board that we do not

need to do any further CEQA work and believe Watermaster is solid on our part of our application.

Counsel Fife stated there is an interesting development in legislation regarding Senate Bill 1795 which is being sponsored by the Stockton East Water District. The purpose of the legislation is to amend the water code, to say that any water rights application that is for the diversion of surface flows to use as groundwater recharge will not need an underground storage supplement. This is a part of the application that is very onerous and requires a lot of reporting. The State Board in recent years has stated they will regard a diversion for the purpose of recharge as that ultimate pumping is the actual diversion and everything prior to that just a pipe basically and what the State Board is going to regulate is the ultimate pumping. This SB1795 would rectify this situation and make our application much easier. To date there is no opposition to this bill and staff and counsel are hopeful this bill will get passed. A brief discussion ensued with regard to water plans.

B. WATERMASTER ENGINEERING CONSULTANT REPORT

1. Update on Report on Balance of Recharge and Discharge

Mr. Wildermuth stated as reported at the Pool and the Advisory Committee, the Balance of Recharge and Discharge/Hydraulic Control Modeling Report is out as a draft report. Mr. Wildermuth stated that opposed to all the numbers the engineers have been working with over the past twelve months, the numbers are slightly different; however, the final answer comes out the same. Mr. Wildermuth noted one item is different, and this has been collaborated by all the new monitoring data that has come out of the Hydraulic Control monitoring program, is that we do not have hydraulic control on the far west side of the basin. This area would be in the vicinity of Desalter I, wells one through four which are deep wells, and then just west of those wells. There is an opportunity there that we can obtain hydraulic control by installing more desalter wells in that location. This report will be finalized at some point in time or will be accepted as a draft report as final. Mr. Vanden Heuvel commented on the new information which was just released regarding our monitoring showing there is leakage from the Chino Basin and the Regional Board is aware of this issue and expecting something to be done about it.

C. CEO/STAFF REPORT

1. Consequences of Non-Implementation of Peace II

Mr. Manning stated following discussions with the special referee, it was suggested a brief summary be put together and presented to the parties on this subject matter. Hatch & Parent was tasked to go through all the consequences and provide a memo to be presented at the meetings to bring the parties up to speed on the consequences. Counsel Fife stated this memo is a brief overview of some of the consequences if Peace II is not completed. Counsel Fife noted that other than water quality, all the rest of the items are tied to specific deadlines, all of which will kick in whether we implement Peace II or not. The ultimate conclusion of the memo is the choice in dealing with these issues together and in a coordinated way or dealing with them on an individual basis. Mr. Vanden Heuvel stated, in his opinion, the presented document does not spell out the magnitude of the consequences and noted there are huge price tags associated with the failure to deal with storage. Mr. Vanden Heuvel stated an estimated range of potential cost should be given to the parties for the record regarding storage. A lengthy discussion ensued with regard to liability and financial obligations. Counsel Fife stated to put together a more comprehensive analysis including all aspects of financial obligations and numbers on storage would take longer to produce than time we have left for the conclusion of the Peace II process. A discussion ensued on the cost of estimation of replenishing the existing desalters. Comments were received by Mr. Vanden Heuvel regarding the discussions on this issue. Mr. Manning noted it would be extremely expensive and involved to proceed with giving a more detailed description of consequences.

2. DataX Presentation

Mr. Manning stated this presentation will be given at the Watermaster Board meeting and that the Inland Empire Utilities Agency (IEUA) will also be presenting it at their board meeting; this is a joint project with IEUA. Ms. Maurizio noted an update was last given on this project in March 2005 and reviewed the background on this project and acknowledged that this effort started in October 2003. The purpose of the project is to facilitate the collection, management and sharing of water resources data. What DataX can be used for was reviewed in detail. The phased implementation was presented including Phase I - fiscal year 2004/05 and Phase II - fiscal year 2005/06. The DataX inter-agency web-based data-entry portal will be a centralized location for CBWM and IEUA to receive and store data that is being collected and submitted by other parties. The objectives and benefits to participating agency/cities were discussed. An inter-agency data entry portal pilot test will take place with the City of Chino and Cucamonga Valley Water District as participants. Future work for Phase III - fiscal year 2006/07 will include implementing direct data input by all Appropriative pool data generators, display recharge basin calculated results from the SCADA data, and interface imported and recycled water system with the IEUA billing system. Chino Basin Watermaster is currently using DataX and is very pleased with it. Mr. Manning noted this system should provide a lot of streamlining for agencies for data requests and processing.

3. Legislative Update

Mr. Manning stated he believes SB 1795 bill will be amended shortly and will assist our efforts in the Chino Basin to declare the water as beneficial use. Mr. Manning stated there is a new bill presented by Senator Simitian SB 1612 which has been pulled by the senator because it was not going to get a hearing. This is a \$3 billion dollar general obligation bond and noted even if the bill was passed it would still have to go through the voters. Mr. Manning noted the portion of the bill that was of interest to us is for the first time since 1982 it had discussion about a bypass facility around the Delta as the basis for the bill. It was noted this bill will be introduced at a later date.

4. MWD Groundwater Study

Mr. Manning stated in September of 2005 Metropolitan Water District (MWD) asked groundwater managers in the MWD service area to meet at their office to discuss putting together a very cursory look at groundwater basins in Southern California within and in some cases outside the service area. The purpose would be to answer questions from their board relative to, "Is there any potential for groundwater storage as opposed to surface storage?" MWD staff is collecting data for this report. Recently Ms. Grebbien, Mr. Rossi and Mr. Manning met with MWD staff to talk about what MWD is exactly looking for due to the vagueness of their request for data. Mr. Manning stated he expressed a concern to MWD staff that if they were going to be gathering groundwater data that they needed to have a groundwater savvy person on staff or in a consultant capacity that can deal with the data. MWD noted they were going to be addressing that concern. Mr. Manning noted several other basins opted to fill out the questionnaire that was sent by MWD; however, Chino Basin Watermaster opted to send them our State of the Basin Report and some of our underlying governance documents and then schedule meeting directly with them to discuss their need to fill in the gaps.

5. Workshops Update

Mr. Manning stated there is a Boardmanship workshop scheduled for board members and any other party who wishes to attend today after the Board meeting. This meeting has been scheduled by a request from board member Sandra Rose who wanted a better understand her role as a board member for the Chino Basin Watermaster. Hatch & Parent will be conducting this workshop.

A budget workshop has been scheduled for Ms. Rojo to present the proposed 2006/2007 budget on Tuesday, May 2, 2006 starting at 9:00 a.m.

6. Storm Water/Recharge Update

Mr. Treweek stated there is an updated Storm Water/Recharge Update available on the back table. It was noted 34,000 acre-feet of water has been recharged after nine months, there are four more months left in the storm season and we have been receiving above 5,000 acre-feet per month of recharge. This should bring us up to the 50,000 acre-foot goal for this year. February and March have had very good results of recharge due to recent storms. Mr. Treweek reviewed the handout in detail.

7. Draft Desalter III Alternative Study Update

Mr. Manning stated that as part of the Peace II process, staff has been discussing a relationship with Western Municipal Water District (WMWD) for the construction of a desalter program. There have been several questions regarding what the new desalter program might possibly look like. Mr. Dave Argo from Black & Veatch, has been tasked by WMWD to look at some desalter alternatives and Mr. Argo is here to present five draft concept ideas. Mr. Argo presented the "Chino Basin Optimum Basin Management Program – Potential Deliveries of 10,000 AFY to WMWD / Development of New Chino III Desalter) presentation. The presentation was developed by Black & Veatch in association with RBF Consulting and Wildermuth Environmental, Inc. It was noted Watermaster is exploring options for a third Chino desalter and a plan is needed to fulfill the objectives of the originally proposed Chino III Desalter which will maintain hydraulic control, meet Peace II objectives, and meet the goals of the Optimum Basin Management Program (OBMP). Mr. Argo stated a plan is needed to maintain hydraulic control in the basin and reviewed the goal to maintain historic agricultural pumping in the south basin to achieve required production of 40,000 afy. Mr. Argo stated five concepts were developed to meet these objectives of Chino III Desalter and reviewed in detail each of the possible concepts. Mr. Argo stated all concepts assume use of the existing Arlington Desalter pipeline for deliveries to Western. Facility and cost assumptions were based on existing Chino Desalter Authority facilities and construction costs. A facility model was developed to estimate the costs for each of the concepts presented. Mr. Argo reviewed several maps of wells in correlation to the five concepts in detail and discussed the next steps that will be taken with Watermaster and stakeholder approval. The hydraulic control summary chart was examined and discussed and Mr. Argo solicited questions and comments from committee members. A question regarding the numbers presented on the concepts which lead to a discussion. Mr. Argo stated the five concepts which were presented will most likely not be one of the options to choose from later on once more work has been done and recommendations received to make changes.

IV. INFORMATION

1. Newspaper Articles

No comment was made regarding this item.

V. BOARD MEMBER COMMENTS

No comment was made regarding this item.

VI. OTHER BUSINESS

No comment was made regarding this item.

VII. FUTURE MEETINGS

April 25, 2006	9:00 a.m.	GRCC Committee Meeting
April 27, 2006	9:00 a.m.	Advisory Committee Meeting
April 27, 2006	11:00 a.m.	Watermaster Board Meeting
April 27, 2006	1:00 p.m.	Boardsmanship Workshop
May 2, 2006	9:00 a.m.	Budget Workshop
May 11, 2006	9:00 a.m.	Appropriative & Non-Agricultural Pool Meeting
May 16, 2006	9:00 a.m.	Agricultural Pool Meeting @ IEUA

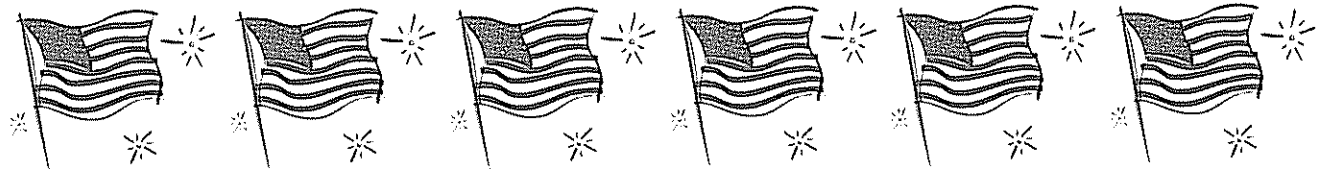
May 25, 2006	9:00 a.m.	Advisory Committee Meeting
May 25, 2006	11:00 a.m.	Watermaster Board Meeting

The Watermaster Board Meeting Adjourned at 1:00 p.m.

Secretary: _____

Minutes Approved: _____

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION

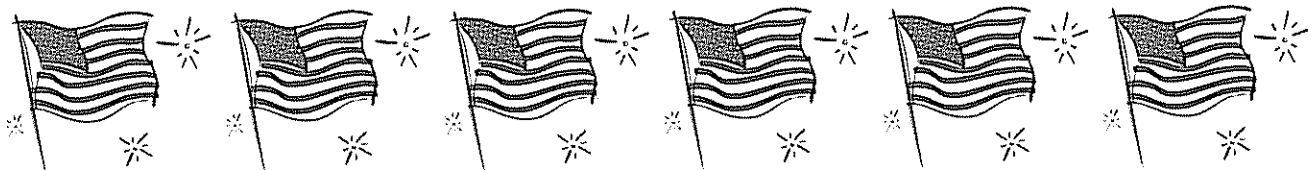


CHINO BASIN WATERMASTER

I. CONSENT CALENDAR

B. FINANCIAL REPORTS

1. Cash Disbursements for the month of April 2006
2. Combining Schedule of Revenue, Expenses and Changes in Working Capital for the Period July 1, 2005 through Marcy 31 2006
3. Treasurer's Report of Financial Affairs for the Period March 1, 2006 through March 31, 2006
4. Profit & Loss Budget vs. Actual July through March 2006





CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, Ca 91730
Tel: 909.484.3888 Fax: 909.484.3890 www.cbwm.org

KENNETH R. MANNING
Chief Executive Officer

STAFF REPORT

DATE: May 16, 2006
May 18, 2006
May 25, 2006

TO: Committee Members
Watermaster Board Members

SUBJECT: Cash Disbursement Report – April 2006

SUMMARY

Issue – Record of cash disbursements for the month of April 2006.

Recommendation – Staff recommends the Cash Disbursements for April 2006 be received and filed as presented.

Fiscal Impact – All funds disbursed were included in the FY 2005-06 Watermaster Budget.

BACKGROUND

A monthly cash disbursement report is provided to keep all members apprised of Watermaster expenditures.

DISCUSSION

Total cash disbursements during the month of April 2006 were \$464,435.23. The most significant expenditures during the month were Wildermuth Environmental Inc. in the amount of \$239,025.93 and Hatch and Parent in the amount of \$42,808.86.

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION

CHINO BASIN WATERMASTER
Cash Disbursement Detail Report
April 2006

Type	Date	Num	Name	Amount
Apr 06				
Bill Pmt -Check	4/5/2006	10368	ANDERSON, JOHN	-125.00
Bill Pmt -Check	4/5/2006	10369	ARROWHEAD MOUNTAIN SPRING WATER	-48.61
Bill Pmt -Check	4/5/2006	10370	BOWCOCK, ROBERT	-250.00
Bill Pmt -Check	4/5/2006	10371	CHAMPION NEWSPAPERS	-35.00
Bill Pmt -Check	4/5/2006	10372	DE BOOM, NATHAN	-625.00
Bill Pmt -Check	4/5/2006	10373	DIRECTV	-74.98
Bill Pmt -Check	4/5/2006	10374	DURRINGTON, GLEN	-500.00
Bill Pmt -Check	4/5/2006	10375	FEENSTRA, BOB	-375.00
Bill Pmt -Check	4/5/2006	10376	GEOTECHNICAL SERVICES	-7,964.56
Bill Pmt -Check	4/5/2006	10381	GROOMAN'S PUMP & WELL DRILLING, INC.	-85.00
Bill Pmt -Check	4/5/2006	10382	HAMRICK, PAUL	-125.00
Bill Pmt -Check	4/5/2006	10383	Hettinga, Peter	-375.00
Bill Pmt -Check	4/5/2006	10384	HOSTETLER, DAN	-125.00
Bill Pmt -Check	4/5/2006	10385	HSBC BUSINESS SOLUTIONS	-945.83
Bill Pmt -Check	4/5/2006	10386	HUITSING, JOHN	-375.00
Bill Pmt -Check	4/5/2006	10387	JAMES JOHNSTON	-1,110.00
Bill Pmt -Check	4/5/2006	10388	KOOPMAN, GENE	-375.00
Bill Pmt -Check	4/5/2006	10389	KUHN, BOB	-250.00
Bill Pmt -Check	4/5/2006	10390	MONTE VISTA WATER DIST	-250.00
Bill Pmt -Check	4/5/2006	10377	MWH LABORATORIES	-200.00
Bill Pmt -Check	4/5/2006	10378	PAYCHEX	-226.95
Bill Pmt -Check	4/5/2006	10379	PETTY CASH	-646.94
Bill Pmt -Check	4/5/2006	10380	PIERSON, JEFFREY	-375.00
Bill Pmt -Check	4/5/2006	10391	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	-6,727.21
Bill Pmt -Check	4/5/2006	10392	PUMP CHECK	-9,169.98
Bill Pmt -Check	4/5/2006	10393	PURCHASE POWER	-11.00
Bill Pmt -Check	4/5/2006	10394	QUILL	-465.95
Bill Pmt -Check	4/5/2006	10395	R&D PEST SERVICES	-85.00
Bill Pmt -Check	4/5/2006	10396	SPRINT	-599.28
Bill Pmt -Check	4/5/2006	10397	STATE COMPENSATION INSURANCE FUND	-1,686.89
Bill Pmt -Check	4/5/2006	10398	THEIRL, JIM	-400.00
Bill Pmt -Check	4/5/2006	10399	UNION 76	-166.46
Bill Pmt -Check	4/5/2006	10400	VANDEN HEUVEL, GEOFFREY	-375.00
Bill Pmt -Check	4/5/2006	10401	VELASQUEZ JANITORIAL	-1,200.00
Bill Pmt -Check	4/5/2006	10402	VERIZON	-41.44
Bill Pmt -Check	4/5/2006	10403	WHEELER METER MAINTENANCE	-2,100.00
Bill Pmt -Check	4/5/2006	10404	WILLIS, KENNETH	-250.00
Bill Pmt -Check	4/5/2006	10405	YUKON DISPOSAL SERVICE	-134.72
Bill Pmt -Check	4/5/2006	10406	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	-6,727.81
Bill Pmt -Check	4/5/2006	10407	CITISTREET	-8,850.00
Bill Pmt -Check	4/5/2006	10408	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	-6,727.80
Bill Pmt -Check	4/13/2006	10409	AWWA	-8,795.00
Bill Pmt -Check	4/13/2006	10410	ACWA SERVICES CORPORATION	-234.16
Bill Pmt -Check	4/13/2006	10411	AWWA	-1,230.00
Bill Pmt -Check	4/13/2006	10412	BANK OF AMERICA	-2,919.97
Bill Pmt -Check	4/13/2006	10413	DAILY BULLETIN	-184.80
Bill Pmt -Check	4/13/2006	10414	HATCH AND PARENT	-42,808.86
Bill Pmt -Check	4/13/2006	10415	INLAND COUNTIES INSURANCE SERVICES, INC.	-238.57
Bill Pmt -Check	4/13/2006	10416	MATHIS & ASSOCIATES	-2,300.00
Bill Pmt -Check	4/13/2006	10417	MAYER HOFFMAN MC CANN P.C.	-1,731.00
Bill Pmt -Check	4/13/2006	10418	PARK PLACE COMPUTER SOLUTIONS, INC.	-2,035.00
Bill Pmt -Check	4/13/2006	10419	PREMIERE GLOBAL SERVICES	-40.17
Bill Pmt -Check	4/13/2006	10420	REID & HELLYER	-4,661.90
Bill Pmt -Check	4/13/2006	10421	RICOH BUSINESS SYSTEMS-Maintenance	-1,011.46
Bill Pmt -Check	4/13/2006	10422	STANTEC CONSULTING, INC.	-206.25
Bill Pmt -Check	4/13/2006	10423	THE FURMAN GROUP, INC.	-3,050.00
Bill Pmt -Check	4/13/2006	10424	UNITED PARCEL SERVICE	-201.68
Bill Pmt -Check	4/13/2006	10425	VERIZON	-375.67
Bill Pmt -Check	4/13/2006	10426	VIP AUTO DETAILING	-399.45
General Journal	4/15/2006	06/04/4	PAYROLL	-5,432.15
General Journal	4/15/2006	06/04/4	PAYROLL	-20,139.37
Bill Pmt -Check	4/20/2006	10427	APPLIED COMPUTER TECHNOLOGIES	-1,635.70
Bill Pmt -Check	4/20/2006	10428	BLACK & VEATCH CORPORATION	-5,122.50
Bill Pmt -Check	4/20/2006	10429	CALPERS	-2,650.83
Bill Pmt -Check	4/20/2006	10430	COMPUSA, INC.	-161.61
Bill Pmt -Check	4/20/2006	10431	CUCAMONGA VALLEY WATER DISTRICT	-5,076.00
Bill Pmt -Check	4/20/2006	10432	ELLISON, SCHNEIDER & HARRIS, LLP	-7,313.47
Bill Pmt -Check	4/20/2006	10433	FIRST AMERICAN REAL ESTATE SOLUTIONS	-125.00

CHINO BASIN WATERMASTER
Cash Disbursement Detail Report
April 2006

Type	Date	Num	Name	Amount
Bill Pmt -Check	4/20/2006	10434	MCI	-908.17
Bill Pmt -Check	4/20/2006	10435	PITNEY BOWES CREDIT CORPORATION	-468.72
Bill Pmt -Check	4/20/2006	10436	PRE-PAID LEGAL SERVICES, INC.	-103.60
Bill Pmt -Check	4/20/2006	10437	PRINTING RESOURCES	-597.14
Bill Pmt -Check	4/20/2006	10438	PUMP CHECK	-1,350.00
Bill Pmt -Check	4/20/2006	10439	RICOH BUSINESS SYSTEMS-Lease	-4,480.25
Bill Pmt -Check	4/20/2006	10440	STAULA, MARY L	-136.61
Bill Pmt -Check	4/20/2006	10441	UNITEK TECHNOLOGY INC.	-4,130.21
Bill Pmt -Check	4/20/2006	10442	WHEELER METER MAINTENANCE	-750.00
Bill Pmt -Check	4/24/2006	10443	ROUTE 66 SUBS	-129.55
Bill Pmt -Check	4/26/2006	10444	ARROWHEAD MOUNTAIN SPRING WATER	-17.23
Bill Pmt -Check	4/26/2006	10445	EL TORITO	-191.65
Bill Pmt -Check	4/26/2006	10446	JOBS AVAILABLE INC	-29.95
Bill Pmt -Check	4/26/2006	10447	PETTY CASH	-415.59
Bill Pmt -Check	4/26/2006	10448	POWERS ELECTRIC PRODUCTS CO.	-195.73
Bill Pmt -Check	4/26/2006	10449	RICOH BUSINESS SYSTEMS-Maintenance	-1,000.00
Bill Pmt -Check	4/26/2006	10450	SPRINT	-594.15
Bill Pmt -Check	4/26/2006	10451	STANDARD INSURANCE CO.	-581.22
Bill Pmt -Check	4/26/2006	10452	THREE VALLEYS MUNICIPAL WATER DIST	-15.00
Bill Pmt -Check	4/26/2006	10453	TREWEEK, GORDON	-282.53
Bill Pmt -Check	4/26/2006	10454	WATER EDUCATION FOUNDATION	-45.00
Bill Pmt -Check	4/27/2006	10455	P.C. CLUB	-1,066.71
Bill Pmt -Check	4/27/2006	10456	WILDERMUTH ENVIRONMENTAL INC	-239,025.93
Bill Pmt -Check	4/27/2006	10457	ROUTE 66 SUBS	-157.39
General Journal	4/30/2006	06/04/6	PAYROLL	-5,717.38
General Journal	4/30/2006	06/04/6	PAYROLL	-20,783.54
				-464,435.23

Apr 06

CHINO BASIN WATERMASTER
 COMBINING SCHEDULE OF REVENUE, EXPENSES AND CHANGES IN WORKING CAPITAL
 FOR THE
 PERIOD JULY 1, 2005 THROUGH MARCH 31, 2006

	WATERMASTER ADMINISTRATION	OPTIMUM BASIN MANAGEMENT	POOL ADMINISTRATION AND SPECIAL PROJECTS APPROPRIATIVE POOL	AGRICULTURAL POOL	NON-AGRIC. POOL	GROUNDWATER OPERATIONS GROUNDWATER REPLENISHMENT	SB222 FUNDS	EDUCATION FUNDS	GRAND TOTALS	BUDGET 2004-05
Administrative Revenues										
Administrative Assessments			4,781,347		66,160				4,847,507	\$3,984,888
Interest Revenue			207,296	12,391	6,304			57	226,048	78,330
Mutual Agency Project Revenue		29,763							29,763	0
Grant Income									-	0
Miscellaneous Income									-	0
Total Revenues	-	29,763	4,988,643	12,391	72,464	-	-	57	5,103,318	4,063,218
Administrative & Project Expenditures										
Watermaster Administration	397,745								397,745	621,784
Watermaster Board-Advisory Committee	41,692								41,692	37,018
Pool Administration			14,987	94,642	3,416				113,045	91,153
Optimum Basin Mgmt Administration		1,044,682							1,044,682	1,019,183
OBMP Project Costs		1,464,954							1,464,954	3,733,694
Education Funds Use								375	375	375
Mutual Agency Project Costs	24,125								24,125	80,004
Total Administrative/OBMP Expenses	463,562	2,509,636	14,987	94,642	3,416			375	3,086,618	5,583,211
Net Administrative/OBMP Income	(463,562)	(2,479,873)								
Allocate Net Admin Income To Pools	463,562		359,979	97,030	6,554				-	0
Allocate Net OBMP Income To Pools		2,479,873	1,925,745	519,069	35,059				-	0
Agricultural Expense Transfer			704,591	(704,591)					-	0
Total Expenses			3,005,302	6,150	45,028	-	-	375	3,086,618	5,583,211
Net Administrative Income			1,983,341	6,241	27,436			(318)	2,016,700	(1,519,993)
Other Income/(Expense)										
Replenishment Water Purchases						6,635,065			6,635,065	0
MZ1 Supplemental Water Assessments									-	2,179,500
Water Purchases									-	0
MZ1 Imported Water Purchase									-	(2,278,500)
Groundwater Replenishment						(6,255,290)			(6,255,290)	0
Net Other Income						379,775			379,775	(99,000)
Net Transfers To/(From) Reserves			1,983,341	6,241	27,436	379,775		(318)	2,396,475	(1,618,993)
Working Capital, July 1, 2005			4,450,869	464,653	187,298	3,580,499	158,251	2,238	8,843,808	
Working Capital, End Of Period			6,434,210	470,894	214,734	3,960,274	158,251	1,920	11,240,283	
04/05 Production			127,810,967	34,450,449	2,326,836				164,588,252	
04/05 Production Percentages			77.655%	20.931%	1.414%				100.000%	

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION

**CHINO BASIN WATERMASTER
TREASURER'S REPORT OF FINANCIAL AFFAIRS FOR THE PERIOD
MARCH 1 THROUGH MARCH 31, 2006**

DEPOSITORIES:

Cash on Hand - Petty Cash		\$ 500
Bank of America		
Governmental Checking-Demand Deposits	\$ 117,151	
Savings Deposits	9,697	
Zero Balance Account - Payroll	-	126,848
Vineyard Bank CD - Agricultural Pool		417,810
Local Agency Investment Fund - Sacramento		10,945,566
TOTAL CASH IN BANKS AND ON HAND	3/31/2006	\$ 11,490,724
TOTAL CASH IN BANKS AND ON HAND	2/28/2006	13,602,603
PERIOD INCREASE (DECREASE)		\$ (2,111,879)

CHANGE IN CASH POSITION DUE TO:

Decrease/(Increase) in Assets: Accounts Receivable		\$ (110,417)
Assessments Receivable		-
Prepaid Expenses, Deposits & Other Current Assets		2,174
(Decrease)/Increase in Liabilities: Accounts Payable		(1,148,956)
Accrued Payroll, Payroll Taxes & Other Current Liabilities		(37,577)
Transfer to/(from) Reserves		(817,103)
PERIOD INCREASE (DECREASE)		\$ (2,111,879)

SUMMARY OF FINANCIAL TRANSACTIONS:

	Petty Cash	Govt'l Demand	Zero Balance Account Payroll	Savings	Vineyard Bank	Local Agency Investment Funds	Totals
Balances as of 2/28/2006	\$ 500	\$ 204,976	\$ 25,423	\$ 9,685	\$ 416,453	\$ 12,945,566	\$ 13,602,603
Deposits	-	18		12	1,357	-	1,387
Transfers	-	1,949,896	50,104	-	-	(2,000,000)	-
Withdrawals/Checks	-	(2,037,739)	(75,527)	-	-	-	(2,113,266)
Balances as of 3/31/2006	\$ 500	\$ 117,151	\$ -	\$ 9,697	\$ 417,810	\$ 10,945,566	\$ 11,490,724
PERIOD INCREASE OR (DECREASE)	\$ -	\$ (87,825)	\$ (25,423)	\$ 12	\$ 1,357	\$ (2,000,000)	\$ (2,111,879)

**CHINO BASIN WATERMASTER
TREASURER'S REPORT OF FINANCIAL AFFAIRS FOR THE PERIOD
MARCH 1 THROUGH MARCH 31, 2006**

INVESTMENT TRANSACTIONS

Effective Date	Transaction	Depository	Activity	Redeemed	Days to Maturity	Interest Rate(*)	Maturity Yield
3/10/2006	Withdrawal		\$ 500,000				
3/12/2006	Withdrawal		\$ 600,000				
3/24/2006	Withdrawal		\$ 900,000				
TOTAL INVESTMENT TRANSACTIONS			\$ 2,000,000	-			

* The earnings rate for L.A.I.F. is a daily variable rate; 4.03% was the effective yield rate at the Quarter ended March 31, 2006

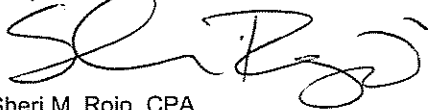
**INVESTMENT STATUS
March 31, 2006**

<u>Financial Institution</u>	<u>Principal Amount</u>	<u>Number of Days</u>	<u>Interest Rate</u>	<u>Maturity Date</u>
Local Agency Investment Fund	\$ 10,945,566			
TOTAL INVESTMENTS	\$ 10,945,566			

Funds on hand are sufficient to meet all foreseen and planned Administrative and project expenditures during the next six months.

All investment transactions have been executed in accordance with the criteria stated in Chino Basin Watermaster's Investment Policy.

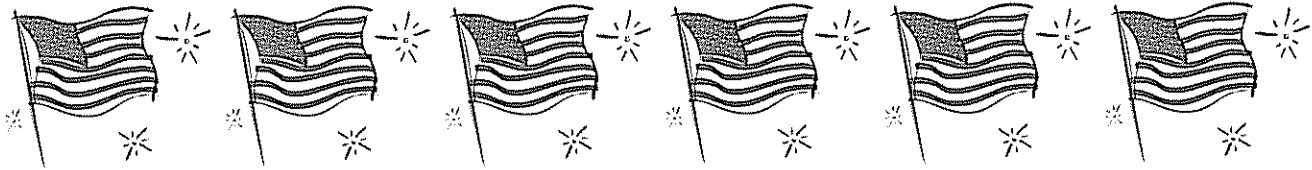
Respectfully submitted,



Sheri M. Rojo, CPA
Chief Financial Officer & Assistant General Manager
Chino Basin Watermaster

	<u>Jul '05 - Mar 06</u>	<u>Budget</u>	<u>\$ Over Budget</u>	<u>% of Budget</u>
Ordinary Income/Expense				
Income				
4010 · Local Agency Subsidies	29,763	132,000	-102,238	22.55%
4110 · Admin Asmnts-Approp Pool	4,781,347	4,804,121	-22,774	99.53%
4120 · Admin Asmnts-Non-Agri Pool	66,160	73,425	-7,265	90.11%
4700 · Non Operating Revenues	226,048	78,330	147,718	288.58%
Total Income	5,103,317	5,087,876	15,441	100.3%
Gross Profit	5,103,317	5,087,876	15,441	100.3%
Expense				
6010 · Salary Costs	350,172	404,153	-53,981	86.64%
6020 · Office Building Expense	65,099	97,850	-32,751	66.53%
6030 · Office Supplies & Equip.	16,786	47,500	-30,714	35.34%
6040 · Postage & Printing Costs	56,826	75,700	-18,874	75.07%
6050 · Information Services	85,723	103,500	-17,777	82.82%
6060 · Contract Services	19,619	130,500	-110,881	15.03%
6080 · Insurance	18,677	24,210	-5,533	77.15%
6110 · Dues and Subscriptions	3,605	14,000	-10,395	25.75%
6140 · WM Admin Expenses	1,566	6,500	-4,934	24.09%
6150 · Field Supplies	-1,752	4,050	-5,802	-43.26%
6170 · Travel & Transportation	49,172	45,200	3,972	108.79%
6190 · Conferences & Seminars	14,842	17,500	-2,658	84.81%
6200 · Advisory Comm - WM Board	10,654	14,082	-3,428	75.66%
6300 · Watermaster Board Expenses	31,037	29,782	1,255	104.22%
8300 · Appr PI-WM & Pool Admin	14,987	15,347	-360	97.65%
8400 · Agri Pool-WM & Pool Admin	14,848	18,756	-3,908	79.16%
8467 · Agri-Pool Legal Services	71,145	45,000	26,145	158.1%
8470 · Ag Meeting Attend -Special	8,650	10,000	-1,350	86.5%
8500 · Non-Ag PI-WM & Pool Admin	3,416	7,423	-4,007	46.02%
6500 · Education Funds Use Expens	375	375	0	100.0%
9500 · Allocated G&A Expenditures	-282,589	-378,284	95,695	74.7%
Subtotal G&A Expenditures	552,857	733,144	-180,287	75.41%
6900 · Optimum Basin Mgmt Plan	950,770	996,767	-45,997	95.39%
6950 · Mutual Agency Projects	24,125	75,000	-50,875	32.17%
9501 · G&A Expenses Allocated-OBMP	93,912	109,541	-15,629	85.73%
Subtotal OBMP Expenditures	1,068,807	1,181,308	-112,501	90.48%
7101 · Production Monitoring	59,184	68,755	-9,571	86.08%
7102 · In-line Meter Installation	54,757	97,954	-43,197	55.9%
7103 · Grdwtr Quality Monitoring	53,116	66,503	-13,387	79.87%
7104 · Gdwtr Level Monitoring	95,719	184,812	-89,093	51.79%
7105 · Sur Wtr Qual Monitoring	12,552	90,223	-77,671	13.91%
7106 · Wtr Level Sensors Install	0	5,734	-5,734	0.0%
7107 · Ground Level Monitoring	93,959	554,825	-460,866	16.94%
7108 · Hydraulic Control Monitoring	222,462	495,368	-272,906	44.91%
7109 · Recharge & Well Monitoring Prog	204,008	133,061	70,947	153.32%
7200 · PE2- Comp Recharge Pgm	262,619	759,105	-496,486	34.6%
7300 · PE3&5-Water Supply/Desalte	339	12,548	-12,209	2.7%
7400 · PE4- Mgmt Plan	160,921	1,081,014	-920,093	14.89%

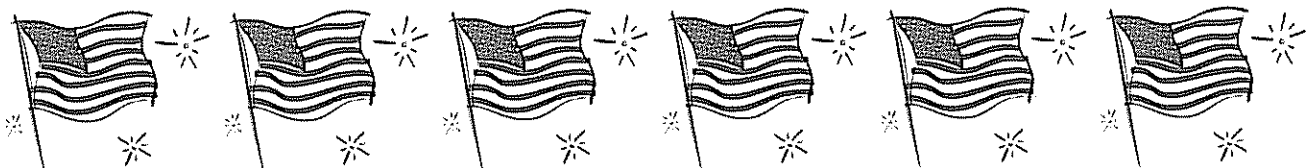
	<u>Jul '05 - Mar 06</u>	<u>Budget</u>	<u>\$ Over Budget</u>	<u>% of Budget</u>
7500 · PE6&7-CoopEfforts/SaltMgmt	49,792	255,769	-205,977	19.47%
7600 · PE8&9-StorageMgmt/Conj Use	6,849	77,268	-70,419	8.86%
7690 · Recharge Improvement Debt Pymt	0	300,000	-300,000	0.0%
7700 · Inactive Well Protection Prgm	0	12,128	-12,128	0.0%
9502 · G&A Expenses Allocated-Projects	188,677	268,742	-80,065	70.21%
	<u>1,464,954</u>	<u>4,463,809</u>	<u>-2,998,855</u>	<u>32.82%</u>
Total Expense	<u>3,086,618</u>	<u>6,378,261</u>	<u>-3,291,643</u>	<u>48.39%</u>
Net Ordinary Income	<u>2,016,700</u>	<u>-1,290,385</u>	<u>3,307,085</u>	<u>-156.29%</u>
Other Income/Expense				
Other Income				
4231 · MZ1 Assigned Water Sales	0	600,000	-600,000	0.0%
4210 · Approp Pool-Replenishment	6,635,065			
Total Other Income	<u>6,635,065</u>	<u>600,000</u>	<u>6,035,065</u>	<u>1,105.84%</u>
Other Expense				
5010 · Groundwater Replenishment	6,255,290	699,000	5,556,290	894.89%
9999 · To/(From) Reserves	2,396,475	-1,389,385	3,785,860	-172.49%
Total Other Expense	<u>8,651,765</u>	<u>-690,385</u>	<u>9,342,150</u>	<u>-1,253.18%</u>
Net Other Income	<u>-2,016,700</u>	<u>1,290,385</u>	<u>-3,307,085</u>	<u>-156.29%</u>
Net Income	<u>0</u>	<u>0</u>	<u>0</u>	<u>0.0%</u>



CHINO BASIN WATERMASTER

II. BUSINESS ITEM

- A. 2006/2007 BUDGET**
Consider Approval of the
Watermaster Budget for FY
2006/2007





CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, Ca 91730
Tel: 909.484.3888 Fax: 909.484.3890 www.cbwm.org

KENNETH R. MANNING
Chief Executive Officer

STAFF REPORT

DATE: May 16, 2006
May 18, 2006
May 25, 2006

TO: Committee Members
Watermaster Board Members

SUBJECT: Proposed Fiscal Year 2006/2007 Budget

SUMMARY

Issue – Annual Budget for Watermaster Administration and OBMP tasks during FY 2006/07.

Recommendations – Staff recommends the Committees and the Board take action to approve/adopt the Proposed FY 2006/07 Budget.

Fiscal Impact – The FY 2006/07 Proposed Budget expenses are \$8,537,405. The FY 2006/07 Budget, as proposed, anticipates a slight increase in Administrative costs, an increase in OBMP general costs, and an increase in OBMP project costs.

DISCUSSION

Staff has compiled a draft budget for the Administrative costs:

- The draft budget includes anticipated increases in legal expenses paid on behalf of the Agricultural Pool as a result of the continued Peace II negotiations.
- Based on a market survey, the personnel committee is bringing forward a recommendation to increase the medical benefits paid per employee per month. The current plan allows for a cafeteria type of option where employees receive benefits up to \$600 per month and are allowed to receive excess cash up to \$525 per month should they elect not to take Watermaster health benefits. The proposal from the personnel committee allows for a two year increase with the first year benefit increasing from \$600 to \$862 with the allowable cash back to employees from \$525 to deferred compensation plan contribution of \$690. The second year allows for the increase in benefits to \$1,150 and deferred compensation of up to \$920 respectively.
- The proposed COLA this year is 4.7%.

Staff has compiled a draft budget for OBMP General costs:

- Attorney-General Manager's meetings, Pool meetings, Advisory Committee and Board meetings.
- Miscellaneous data requests from Appropriators.
- Continued implementation of DataX.
- The Court requires an update of the State of the Basin Report every two years. This report was last updated for the year 2004 – completed in FY 2004/05.
- The California Environmental Quality Act (CEQA) work required out of the Peace II process, which includes a recalibration of the groundwater flow model and the simulation of subsidence in the western portion of Chino Basin.

Staff has compiled a draft budget for OBMP Project costs:

- Monitoring activities – Groundwater production, groundwater level and quality, surface water discharge and quality, and ground level.
- Continued implementation of the recharge improvement project including recharge and well monitoring program
- Support of the Water Quality Committee, including engineering support for mitigation of volatile organic chemicals (VOC) plumes associated with the Ontario International Airport and the Chino Airport. Watermaster is also performing a comprehensive groundwater monitoring program in MZ-3.
- Development of a recharge master plan
- Management of subsidence and related monitoring and analysis
- Continued implementation of the Hydraulic Control Monitoring Program

In summary, the FY 2006/07 Budget, as proposed, anticipates a slight increase in Administrative costs, an increase in OBMP general and project costs. Final assessments will be refined when the assessment package is prepared this fall; assessments are dependent on prior year pumping and actual available cash on hand.

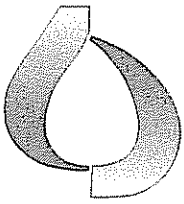


**CHINO BASIN WATERMASTER
FY 2006/2007
SUMMARY BUDGET**

	FY 04-05 June Actual	FY 05-06 December Actual	FY 05-06 Current Budget	FY 06-07 Proposed Budget	Current vs. Proposed
Ordinary Income					
4000 Mutual Agency Revenue	\$895,733	\$19,879	\$132,000	\$138,000	\$6,000
4110 Appropriative Pool Assessments	4,807,004	4,781,347	4,834,117	7,227,619	2,393,502
4120 Non-Agricultural Pool Assessments	74,241	66,160	65,020	80,586	15,566
4730 Prorated Interest Income	211,607	111,779	78,330	136,500	58,170
4900 Miscellaneous Income	3,865	0	0	0	0
Total Income	5,992,451	4,979,166	5,109,467	7,582,705	2,473,238
Administrative Expenses					
6010 Salary Costs	427,958	225,436	404,153	447,037	42,884
6020 Office Building Expense	108,636	42,696	97,850	102,000	4,150
6030 Office Supplies & Equip.	66,089	12,978	54,000	51,500	-2,500
6040 Postage & Printing Costs	83,058	37,933	75,700	78,500	2,800
6050 Information Services	108,857	65,930	103,500	112,500	9,000
6060 WM Special Contract Services	168,168	1,939	130,500	131,000	500
6080 Insurance Expense	25,875	-691	24,210	25,210	1,000
6110 Dues and Subscriptions	19,073	2,502	14,000	16,750	2,750
6150 Field Supplies & Equipment	2,831	-1,832	4,050	4,000	-50
6170 Vehicle Maintenance Costs	20,291	44,240	45,200	19,350	-25,850
6190 Conferences & Seminars	16,022	5,632	17,500	22,500	5,000
6200 Advisory Committee Expenses	12,215	7,153	14,082	15,168	1,086
6300 Watermaster Board Expenses	34,943	19,032	29,782	36,955	7,173
6500 Education Fund Expenditures	0	375	375	375	0
8300 Appropriative Pool Administration	13,459	9,777	15,347	15,918	571
8400 Agricultural Pool Administration	87,794	69,642	73,756	95,633	21,877
8500 Non-Agricultural Pool Administration	3,065	2,174	7,423	6,694	-729
9500 Allocated G&A Expenditures	-307,227	-186,018	-378,284	-408,749	-30,465
Total Administrative Expenses	891,107	358,900	733,144	772,341	39,197
General OBMP Expenditures					
6900 Optimum Basin Mgmt Program	1,150,441	585,756	996,767	1,713,780	717,013
6950 Cooperative Efforts	57,631	15,755	75,000	5,000	-70,000
9501 Allocated G&A Expenditures	102,863	64,502	109,541	142,015	32,474
Total General OBMP Expenditures	1,310,935	666,013	1,181,308	1,860,795	679,487

**CHINO BASIN WATERMASTER
FY 2006/2007
SUMMARY BUDGET**

	FY 04-05 June Actual	FY 05-06 December Actual	FY 05-06 Current Budget	FY 06-07 Proposed Budget	Current vs. Proposed
7000 OBMP Implementation Projects					
7101 Production Monitoring	38,998	28,178	68,755	61,565	-7,190
7102 In-Line Meter Installation/Maintenance	26,093	16,575	97,954	64,904	-33,050
7103 Groundwater Quality Monitoring	126,327	35,098	66,503	149,713	83,210
7104 Groundwater Level Monitoring	93,148	51,866	184,812	191,953	7,141
7105 Basin Water Quality Monitoring	399,130	6,449	90,223	32,247	-57,976
7106 Water Level Sensors Install	0	0	5,734	0	-5,734
7107 Ground Level Monitoring	342,946	75,679	554,825	160,984	-393,841
7108 Hydraulic Control Monitoring Program	531,404	132,589	495,368	483,258	-12,110
7109 Recharge & Well Monitoring Program	0	81,442	133,061	146,350	13,289
7200 OBMP Pgm Element 2 - Comp Recharge Program	474,966	146,305	759,105	1,822,997	1,063,892
7300 OBMP Pgm Element 3 & 5 - Water Supply Plan - Desalter	1,418	339	12,548	4,676	-7,872
7400 OBMP Pgm Element 4 - Mgmt Zone Strategies	229,155	81,207	1,081,014	578,762	-502,252
7500 OBMP Pgm Element 6 & 7 - Coop Efforts/Salt Mgmt	49,744	46,274	255,769	310,507	54,738
7600 OBMP Pgm Element 8 & 9 Storage Mgmt/Conj Use	93,662	5,933	77,268	6,698	-70,570
7700 Inactive Well Protection Program	5,380	0	12,128	14,921	2,793
7690 Recharge Improvement Debt Payment	274,169	0	300,000	1,608,000	1,308,000
9502 Allocated G&A Expenditures	204,364	121,515	268,742	266,734	-2,008
Total OBMP Implementation Projects	2,890,904	829,449	4,463,809	5,904,269	1,440,460
Total Expenses	5,092,946	1,854,363	6,378,261	8,537,405	2,159,144
Net Ordinary Income	899,505	3,124,803	-1,268,794	-954,700	314,094
Other Income					
4210 Approp Pool-Replenishment	8,094,622	6,635,065	0	0	0
4220 Non-Ag Pool-Replenishment	2,485	0	0	0	0
4230 Groundwater Recharge Activity	1,625,000	0	600,000	0	-600,000
Total Other Income	9,722,107	6,635,065	600,000	0	-600,000
Other Expense					
5010 Groundwater Recharge	10,274,665	4,007,547	699,000	0	-699,000
Total Other Expense	10,274,665	4,007,547	699,000	0	-699,000
Net Other Income	-552,558	2,627,519	-99,000	0	99,000
9800 From / (To) Reserves	-346,947	-5,752,322	1,367,794	954,700	-413,094
Net Income	\$0	\$0	\$0	\$0	\$0



Inland Empire
UTILITIES AGENCY *
 * A Municipal Water District

6075 Kimball Avenue • Chino, CA 91710
 P.O. Box 9020 • Chino Hills, CA 91709
 TEL (909) 993-1600 • FAX (909) 993-1983
 www.ieua.org

RECEIVED

APR 21 2006

CHINO BASIN WATERMASTER

April 19, 2006

Chino Basin Watermaster
 Attention of Ken Manning
 9641 San Bernardino Road
 Rancho Cucamonga, CA 91730

Proposed 2006-07 Recharge Operations and Maintenance Budget

Dear Mr. Manning:

IEUA has assembled the attached Recharge Operations and Maintenance (O&M) budget for the 2006-07 fiscal year for review and approval by CBWM. This budget includes all proposed budgeted costs as provided by CBWCD, SBCFCD and IEUA. The proposed budget is based on our understanding of the status of the recharge basins and the upcoming opportunities for additional recharge of imported and recycled water. By the end of the 2005-06 fiscal year, it is projected that approximately 43,000 acre-feet will be recharged within the 2005-06 O&M budget period at an O&M cost of \$727,582. For the 2006-07 fiscal year, it is anticipated that through additional water supplies and basin enhancements, total recharge will exceed 54,000 acre-feet. The proposed budget includes an increase based on the unit cost of recharging the additional water.

The proposed budget also includes required costs that in the previous year were supplemented by either project capitalization or FEMA funding. Approximately \$160,000 in utilities and environmental support were capitalized and approximately \$520,600 in basin cleaning was funded by FEMA during the current fiscal year. Thus, the true cost of 2005-06 O&M was approximately \$1,408,182 (a unit cost of \$32.75 per acre-foot).

The proposed operating budget for 2006-07 is \$1,143,010 (which does not include a single year \$90,000 contingency allotment) and reflects an increase in total O&M cost at a decreased unit cost of recharge (\$1,143,010/54,000 AF per year = \$21.20 per acre-foot). For comparison, the unit cost per acre-foot is slightly higher than that of Orange County Water District, which has a much larger and well established O&M program. OCWD O&M costs are approximately \$15.70 per acre-foot based on a budget of \$3.5 million and a 15-year average recharge of 222,370 acre-feet. The IEUA unit cost is well below historical CBWCD O&M costs for the Montclair, Turner, and Ely basins (\$47 per acre-foot).

In addition to the detailed 2006-07 fiscal year O&M budget, I have also attached a variety of text and summary tables that show a GWR Fund overview, explanations for budget line items, justification for significant budget changes, anticipated recharge estimates and anticipated unit production cost tables. Please give me a call if you have any questions or comments.

Sincerely,
 INLAND EMPIRE UTILITIES AGENCY

Richard W. Atwater
 Chief Executive Officer
 General Manager

Enc.

Printed on Recycled Paper

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION

Programmatic Overview

The FY 2006-07 budget for groundwater recharge operations of the basins and pertinent facilities is based on the costs to operate and maintain eighteen recharge sites in the Chino Basin. The anticipated volume of water recharge in FY 2006-07 is approximately 54,000 acre-feet (AF). This will be approximately 11,000 AF more than in the previous year due to anticipated improvements including:

- IEUA and SBCFCD completing an inlet to Jurupa Basin, enabling the delivery of storm water, imported water, and recycled water to RP3 and Declez Basins.
- The extension of IEUA's recycled water distribution system to Eighth Street and Brooks Basins, enabling recharge of recycled water at those sites.
- Expansion of MWD turnouts at CB13 and CB14, plus construction of a new turnout feeding Eighth Street and Ely Basins, enabling a consistence supply to these basins typically used only to recharge storm water.

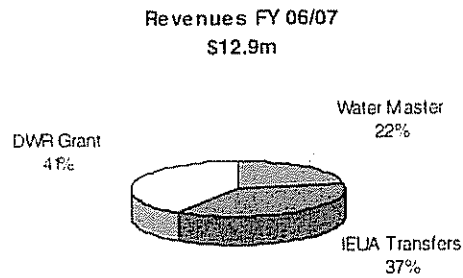
Fund Description

The Recharge Water (RW) Program accounts for the revenues and expenses associated with the groundwater recharge capital expansion, operations and maintenance (O&M). The O&M component of the fund primarily include salaries, equipment, compliance reporting, environmental documentation, utilities and contracted services. Contracted services include cleaning basins of clogging layers of silt/clay, pest control, and weeding. Basin cleaning is planned for the following basins: Montclair, Turner, and San Sevaine 2. Large equipment to be purchased includes turbidity sensors, pumps, and a generator to better facilitate reduced basin cleaning costs and minimize basin downtime.

Capital projects to be facilitated by this fund include matching funds for the utilization of DWR grant funding for MWD turnout improvements, basin berm improvements, SCADA system improvements, and monitoring well installations. Addition fund expenditures include groundwater monitoring activities and compliance reporting.

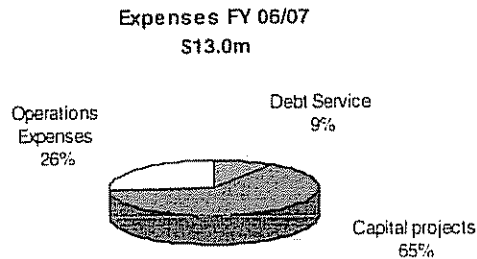
Revenues and Other Funding Sources

Total budgeted revenues for FY 2006/07 are \$12.9 million, including \$2.8 million of reimbursements for debt service and facilities operation and maintenance from Chino Basin Watermaster (CBWM), and fund transfers from Wastewater program at \$4.8 million, for IEUA's share of debt service, operations, and capital support. In addition, DWR grant provides \$5.3 million for Basin improvement projects.



Expenses and Other Uses of Funds

Total budgeted expenses amount to \$13.0 million. Capital projects for Basin Improvements and Groundwater Monitoring Wells account for 65%, or \$8.4 million. Operation expenses, reimbursable and non reimbursable, equal 26%, or \$3.4 million. Debt service represents 9% of total expenses, or \$1.2 million.



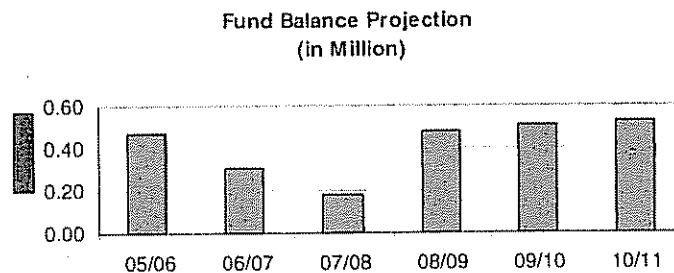
Capital expenses of \$8.4 million include \$7 million for Basin improvements, \$1.4 million for Groundwater Hydraulic Monitoring Wells, and expansion of the Recharge System.

Operations expenses of \$3.4 million include \$1.2 million of Watermaster reimbursable expenses for basin operations and administration, as well as equipment acquisition, and \$2.2 million of non reimbursable expenses, that consists of laboratory services of \$.7 million, other contract services of \$.7 million, and labor and other expenses for \$.8 million.

Debt service expenses of \$1.2 million consist of the Recharge Water fund portion of 2002 variable rate bonds debt payment, \$800,000 for interest and financial expenses and \$400,000 for principal payment.

Fund Balance

The ending Balance for FY 2006/07 is projected to be \$300,000, a 34% decrease from prior year. In FY 2007/08 Fund balance will decrease to \$180,000, due to further Basin improvement capital expenses. Fund balances in future years are projected to maintain at approximately \$500,000.



FY 2006/07 Highlights

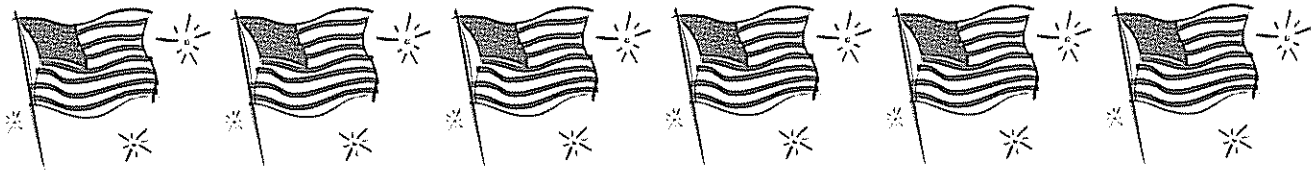
Completed and fully developed groundwater recharge sites will allow for a projected total annual recharge capacity of 170,000 acre feet (AF). Total recharge capacity will be comprised of up to 25,000 AF of storm water, 120,000 AF of imported water and 25,000 AF of recycled water.

Implementation of this program will allow for increased water supplies during dry years, reduced imported water supplies and overall improved water quality.

FY 2008/11 Forecast

Basin Improvement Program will continue in FY 2007/08 with \$4.1 million additional capital projects, leaving reserves at about \$200,000. For future years, operation and maintenance expenses are projected to maintain at approximately \$3 million and debt related expenses will maintain at a \$1.1 million to \$1.4 million range, depending on interest rate fluctuations.

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION

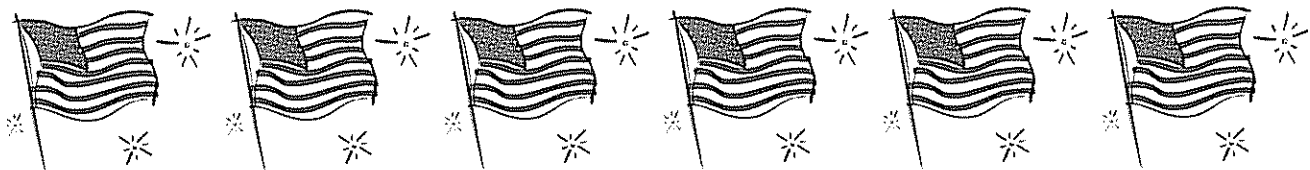


CHINO BASIN WATERMASTER

II. BUSINESS ITEM

B. PEACE II TERM SHEET

Consider Recommendation to
Forward Through the Watermaster
Process





CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, Ca 91730
Tel: 909.484.3888 Fax: 909.484.3890 www.cbwm.org

KENNETH R. MANNING
Chief Executive Officer

STAFF REPORT

DATE: May 25, 2006
TO: Watermaster Board Members
SUBJECT: Stakeholder Proposal

SUMMARY

Recommendation – Staff and General Counsel recommend that the Board accept the enclosed Stakeholder proposal and refer it to the Pools for review and comment and to the Advisory Committee for appropriate action.

BACKGROUND

The Judgment requires Watermaster to prepare an Optimum Basin Management Plan ("OBMP"). Under Court Supervision, the Peace Agreement and the OBMP Implementation Plan was approved by this Board in June of 2000. Court approval of the Peace Agreement and the OBMP Implementation Plan followed in September of 2000.

Within the Peace Agreement there are specific items that require Watermaster to consider and exercise its discretion in the 2005/2006 time frame. Other sections of the Peace Agreement authorize Watermaster to take certain action that may have significant financial and water supply consequences on the members of the Judgment.

In its effort to further refine the OBMP Implementation Plan, Watermaster Staff and stakeholders have become aware of the significance of implementing a new groundwater management goal, commonly referred to as "Hydraulic Control". Properly implemented, achievement of this goal will allow Watermaster to enjoy beneficial coverage under the Regional Board Basin Management Plan and will further created long-term reliable yield improvements for the benefits of the parties.

Potential conflict among stakeholders regarding the application of Form 7 Credits and "Salt Credits" surfaced in the fall of 2003. These matters were thought to be incapable of piecemeal resolution.

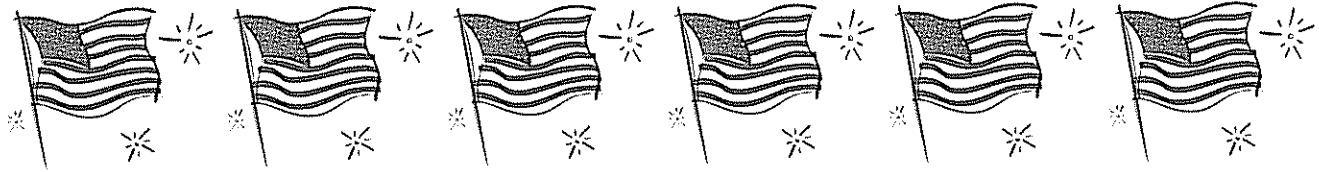
In February of 2004 Watermaster convened a process among the parties to the Judgment to address all of the above questions. This effort resulted in several months of meetings and a Herculean technical review. The meetings were suspended in July of 2004 and then resumed again in March of 2005 to allow the technical review to evaluate some of the management strategies being considered by the parties.

In August of 2005 an initial consensus among parties to the Judgment concerning a "Peace II Term Sheet" resulted in the Watermaster Board scheduling public workshops where numerous comments were received from stakeholders. Further technical analysis and written responses to questions were completed in April of 2006. The Watermaster Board authorized Watermaster Staff and General Counsel to prepare a "Facilitator Proposal" and distribute it for discussion among a new, broader group of stakeholders for evaluation.

On March 18, this process has formally concluded with the Stakeholder Proposal enclosed in your Board packet that has been unanimously supported by all stakeholders in attendance at the sessions. However, Watermaster has received correspondence from the City of Chino Hills that they remain concerned about the implementation of Article IX regarding management of Management Zone 1 issues. They have declared their right to oppose any and all measures in the Stakeholder Proposal if the MZ#1 issues are not resolved to their satisfaction.

Watermaster Staff and General Counsel do not believe the approval of the Stakeholder Proposal precludes any proposal on MZ#1. Nor does it pre-determine any specific outcome. Rather, Article IX constitutes a vessel capable of receiving whatever reasonable approach that is developed by the parties.

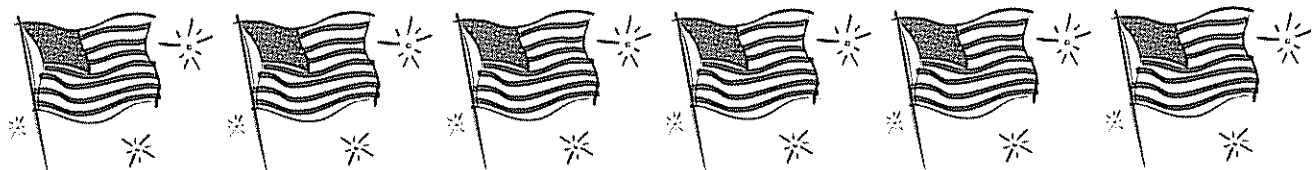
The Stakeholder Proposal will be sent out via email to each Watermaster Board Committee Member under a separate cover.



CHINO BASIN WATERMASTER

II. BUSINESS ITEM

- C. **MZ1 SUMMARY REPORT**
Consider Approval of the February
2006 MZ-1 Summary Report





CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, Ca 91730
Tel: 909.484.3888 Fax: 909.484.3890 www.cbwm.org

KENNETH R. MANNING
Chief Executive Officer

STAFF REPORT

DATE: May 25, 2006
TO: Watermaster Board Members
SUBJECT: MZ-1 Summary Report

SUMMARY

Issue – Pursuant to the Special Referee's report dated June 16, 2005, Watermaster staff prepared a report titled *Management Zone 1 Interim Monitoring Program, MZ-1 Summary Report*. This report presents a summary of all the data collected as part of the MZ-1 monitoring program (through September 2005) and the conclusions reached from the analysis of the monitoring data. The report also includes MZ-1 Guidance Criteria, which are a recommended groundwater management criteria for the management of subsidence in the southern part of MZ-1 (Chino). These guidance criteria will be the basis of the long-term subsidence management plan.

Recommendation – Approve the February 2006 MZ-1 Summary Report.

Fiscal Impact – To be determined. The MZ-1 Summary Report recommends the continuation of the monitoring activities that have been implemented to date. The cost to Watermaster to provide this monitoring and reporting will be about \$175,000 per year in 2006 dollars.

BACKGROUND

The Implementation Plan of the Optimum Basin Management Program (OBMP) called for an aquifer-system investigation of suspected pumping-induced land subsidence and ground fissuring that has occurred in the southern region of Management Zone 1 (MZ-1). Watermaster has coordinated and conducted the investigation under the guidance of the MZ-1 Technical Committee, which is composed of representatives from all major MZ-1 producers and their technical consultants. The results of the investigation are being used in the development of a long-term plan to minimize or abate future land subsidence and ground fissuring.

To date, the main conclusions derived from the investigation are:

1. The current state of aquifer-system deformation in south MZ-1 (in the vicinity of Ayala Park) is essentially elastic. Little, if any, inelastic (permanent) compaction is now occurring in this area, which is in contrast to the past when about 2.2 feet of land subsidence occurred, accompanied by ground fissuring, from about 1987-1995.

2. Groundwater production from the deep, confined aquifer system in this area causes the greatest stress to the aquifer system. In other words, pumping of the deep aquifer system causes water level drawdowns that are much greater in magnitude and lateral extent than drawdowns caused by pumping of the shallow aquifer system.
3. Water level drawdowns due to pumping of the deep aquifer system can cause inelastic (permanent) compaction of the aquifer-system sediments, which results in permanent land subsidence. The initiation of inelastic compaction within the aquifer system was identified during this investigation when water levels fell below a depth of about 250 feet in the PA-7 piezometer at Ayala Park.
4. Through this study, a previously undetected barrier to groundwater flow was identified. The barrier is located within the deep aquifer system and is aligned with the historical zone of ground fissuring. Pumping from the deep aquifer system is limited to the area west of the barrier, and the resulting drawdowns do not propagate eastward across the barrier. Thus, compaction occurs within the deep system on the west side of the barrier, but not on the east side, which causes concentrated differential subsidence across the barrier and creates the potential for ground fissuring.
5. InSAR and ground level survey data indicate that permanent subsidence in the central region of MZ-1 (north of Ayala Park) has occurred in the past and continues to occur today. The InSAR data also indicate that the groundwater barrier extends northward into central MZ-1. These observations suggest that the conditions that very likely caused ground fissuring near Ayala Park in the 1990s are also present in central MZ-1, and should be studied in more detail.

A workshop was held May 25, 2005 to update the Special Referee on progress of the investigation and development of the long-term plan for MZ-1. After the workshop, the Special Referee issued a report to the Court that summarized the workshop and requested that Watermaster:

- produce a MZ-1 Summary Report that describes the investigation results and conclusions to date
- notify the Court of the schedule for the completion of the long-term plan
- provide "guidance criteria" to the MZ-1 producers in an effort to minimize the potential for future subsidence and fissuring, pending completion of the long-term plan

The MZ-1 Summary Report contains the guidance criteria, which consist mainly of setting a "guidance" water level – 245 feet below the reference point for the PA-7 piezometer at Ayala Park – and recommends that groundwater production from a selected list of wells in MZ-1 not cause water levels to fall below the guidance level.

The report also outlines the process and schedule for developing a long-term management plan by June 2006. The primary objective of the long-term plan is to prevent additional permanent land subsidence that could initiate additional ground fissuring. A developing secondary objective is to optimize the use of existing groundwater production infrastructure. A key element of the long-term plan will be its adaptive nature, as new data are collected and periodically analyzed to evaluate the effectiveness of the long-term plan.

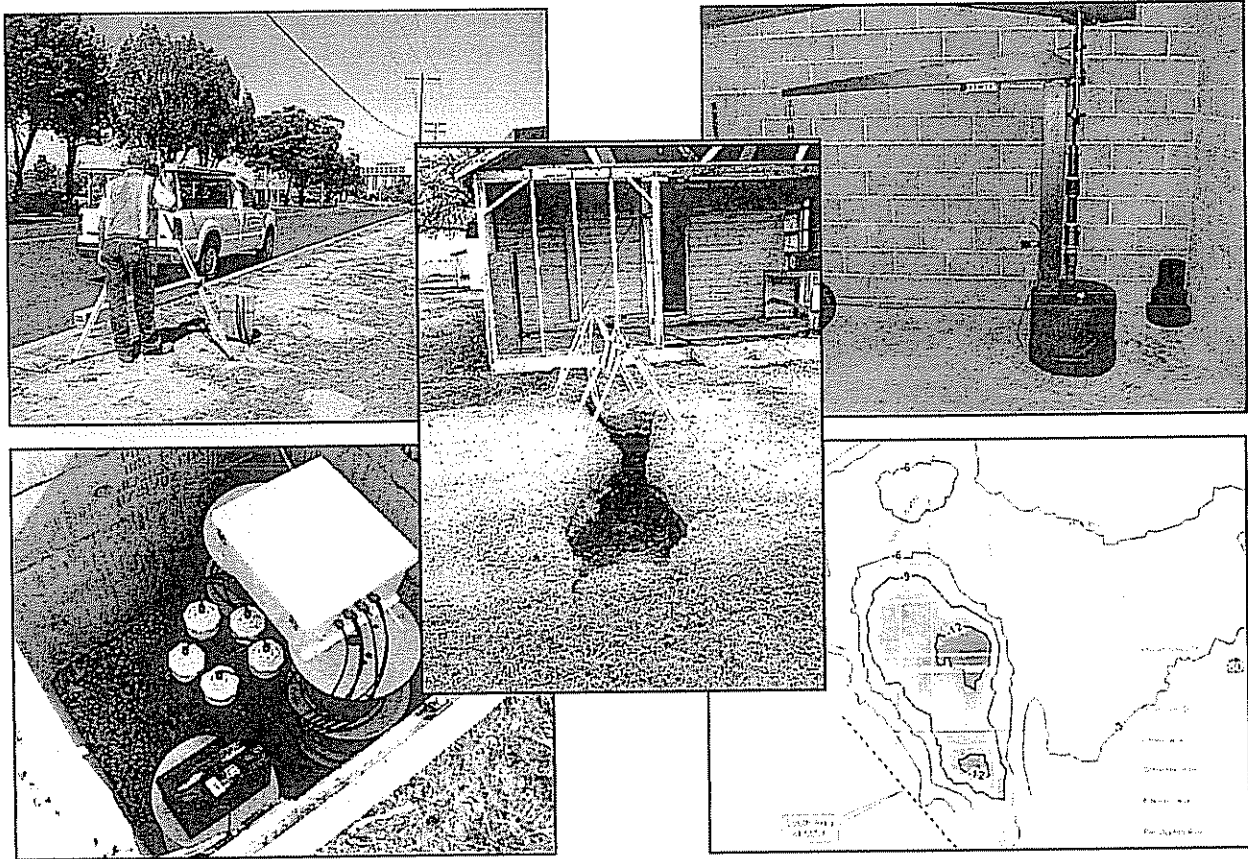
The guidance criteria and the long-term plan discussed above relate to the management of pumping-induced subsidence within the southern region of MZ-1, where associated ground fissuring damaged infrastructure in the early 1990s. However, this investigation has also revealed that the central region of MZ-1 has experienced in the past, and is currently experiencing, measurable land subsidence. This discovery has initiated an additional effort by Watermaster to characterize the subsidence mechanisms in this region through a slightly expanded monitoring effort. The adaptive nature of the long-term plan should accommodate the results that will emerge from the expanded monitoring effort in central MZ-1, so as to minimize the risk of future ground fissuring in this heavily urbanized region of Chino Basin.

The MZ1 Summary Report is best viewed in color which may be done by downloading this document from:
<ftp://citrix.wildermuthenvironmental.com/MZ1>

CHINO BASIN
OPTIMUM BASIN MANAGEMENT PROGRAM

Management Zone 1
Interim Monitoring Program

MZ-1 Summary Report



Prepared for
MZ-1 Technical Committee

Prepared by
Wildermuth Environmental, Inc.

February 2006

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION

CHINO BASIN
OPTIMUM BASIN MANAGEMENT PROGRAM

Management Zone 1
Interim Monitoring Program

MZ-1 Summary Report

Prepared for

MZ-1 Technical Committee

Prepared by

Wildermuth Environmental, Inc.

February 2006

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION

TABLE OF CONTENTS

EXECUTIVE SUMMARY	ES-1
1. BACKGROUND	1-1
Groundwater Withdrawals and Land Subsidence	1-1
History of Ground Fissuring and Land Subsidence in Chino Basin	1-3
Potential Causes of Land Subsidence	1-5
Development of the MZ-1 Interim Monitoring Program	1-6
2. MZ-1 INTERIM MONITORING PROGRAM	2-1
Results and Interpretations	2-1
Conclusions	2-6
3. ONGOING AND RECOMMENDED WORK	3-1
Continued Monitoring	3-1
Development of Analytical and Numerical Models	3-1
Expanded Monitoring	3-2
4. DEVELOPMENT OF THE LONG-TERM MANAGEMENT PLAN FOR MZ-1	4-1
Guidance Criteria to Minimize Subsidence and Fissuring	4-1
Development and Schedule of the Long-Term Plan	4-2
5. REFERENCES	5-1
 APPENDICES	
A. Special Referee's Report on Progress Made on Implementation of the Watermaster Interim Plan for Management of Subsidence	



LIST OF TABLES

- 1-1 Applicability of Potential Causes of Subsidence in Chino Basin
- 4-1 Guidance Criteria for MZ-1 Producers
- 4-2 MZ-1 Managed Wells

LIST OF FIGURES

- 1-1 Land Surface Deformation in Management Zone 1 – *Leveling Surveys and InSAR*
- 1-2 Land Surface Deformation in Chino, CA – *Leveling Surveys and InSAR*
- 1-3 Groundwater Level History in Southern MZ-1 (Shallow Wells)
- 1-4 Piezometric Monitoring Network – *MZ-1 Interim Monitoring Program*
- 1-5 Benchmark Survey Monuments – *MZ-1 Interim Monitoring Program*
- 2-1 Piezometric and Extensometer Data – *Ayala Park Piezometer/Extensometer Facility*
- 2-2 Stress-Strain Diagram – *PA-7 vs. Deep Extensometer*
- 2-3 MZ-1 Groundwater Barrier – *Evidence from Pumping Test*
- 2-4 Water Level Responses at Nearby Wells to Pumping at CH-19
- 2-5 Ground Level Survey Results – *April 2003 to April 2004*
- 2-6 Horizontal Displacement at Ayala Park Array of Monuments – *April 2003 to November 2003*
- 2-7 Horizontal Displacement at Ayala Park Array of Monuments – *November 2003 to April 2004*
- 2-8 InSAR Analysis of Subsidence – *1992 to 1995*
- 2-9 InSAR Analysis of Subsidence – *1996 to 2000*
- 4-1 MZ-1 Managed Wells – *MZ-1 Long-Term Monitoring Program*



ACRONYM AND ABBREVIATIONS LIST

AE	Associated Engineers
CA	California
CBWM	Chino Basin Watermaster
CIM	California Institution for Men
IMP	Interim Monitoring Program
MZ-1	Management Zone 1
OBMP	Optimum Basin Management Program
CH	Chino Hills
InSAR	Synthetic Aperture Radar Interferometry
MSL	mean sea level
PA	Piezometer A at Ayala Park Piezometer/Extensometer Facility
USGS	United States Geological Survey
WEI	Wildermuth Environmental Inc



THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION

EXECUTIVE SUMMARY

The Implementation Plan of the Optimum Basin Management Program (OBMP) called for an aquifer-system investigation of suspected pumping-induced land subsidence and ground fissuring that has occurred in the southern region of Management Zone 1 (MZ-1). Watermaster has coordinated and conducted the investigation under the guidance of the MZ-1 Technical Committee, which is composed of representatives from all major MZ-1 producers and their technical consultants. The results of the investigation are being used to develop management tools (models) that will assist in the development of a long-term plan to minimize or abate future land subsidence and ground fissuring.

To date, the main conclusions derived from the investigation are:

1. The current state of aquifer-system deformation in south MZ-1 (in the vicinity of Ayala Park) is essentially elastic. Little, if any, inelastic (permanent) compaction is now occurring in this area, which is in contrast to the past when about 2.2 feet of land subsidence occurred, accompanied by ground fissuring, from about 1987-1995.
2. Groundwater production from the deep, confined aquifer system in this area causes the greatest stress to the aquifer system. In other words, pumping of the deep aquifer system causes water level drawdowns that are much greater in magnitude and lateral extent than drawdowns caused by pumping of the shallow aquifer system.
3. Water level drawdowns due to pumping of the deep aquifer system can cause inelastic (permanent) compaction of the aquifer-system sediments, which results in permanent land subsidence. The initiation of inelastic compaction within the aquifer system was identified during this investigation when water levels fell below a depth of about 250 feet in the PA-7 piezometer at Ayala Park.
4. Through this study, a previously undetected barrier to groundwater flow was identified. The barrier is located within the deep aquifer system and is aligned with the historical zone of ground fissuring. Pumping from the deep aquifer system is limited to the area west of the barrier, and the resulting drawdowns do not propagate eastward across the barrier. Thus, compaction occurs within the deep system on the west side of the barrier, but not on the east side, which causes concentrated differential subsidence across the barrier and creates the potential for ground fissuring.
5. InSAR and ground level survey data indicate that permanent subsidence in the central region of MZ-1 (north of Ayala Park) has occurred in the past and continues to occur today. The InSAR data also indicate that the groundwater barrier extends northward into central MZ-1. These observations suggest that the conditions that very likely caused ground fissuring near Ayala Park in the 1990s are also present in central MZ-1, and should be studied in more detail.

A workshop was held May 25, 2005 to update the Special Referee on progress of the investigation and development of the long-term plan for MZ-1. After the workshop, the Special Referee issued a report to the Court that summarized the workshop and requested that Watermaster:

- produce a MZ-1 Summary Report (this report) that describes the investigation results and conclusions to date
- notify the Court of the schedule for the completion of the long-term plan
- provide "guidance criteria" to the MZ-1 producers in an effort to minimize the potential for future subsidence and fissuring, pending completion of the long-term plan

This report contains the guidance criteria, which consist mainly of setting a "control" water level – 245 feet below the reference point for the PA-7 piezometer at Ayala Park – and recommend that groundwater production from a selected list of wells in MZ-1 not cause water levels to fall below the control level.



EXECUTIVE SUMMARY
MZ-1 SUMMARY REPORT

This report also outlines the process and schedule for developing a long-term management plan by June 2006. The primary objective of the long-term plan is to prevent additional permanent land subsidence that could initiate additional ground fissuring. A developing secondary objective is to optimize the use of existing groundwater production infrastructure. A key element of the long-term plan will be its *adaptive* nature, as new data are collected and periodically analyzed to evaluate the effectiveness of the long-term plan.

The guidance criteria and the long-term plan discussed above relate to the management of pumping-induced subsidence within the southern region of MZ-1, where associated ground fissuring damaged infrastructure in the early 1990s. However, this investigation has also revealed that the central region of MZ-1 has experienced in the past, and is currently experiencing, measurable land subsidence. This discovery has initiated an additional effort by Watermaster to characterize the subsidence mechanisms in this region through a slightly expanded monitoring effort. The adaptive nature of the long-term plan should accommodate the results that will emerge from the expanded monitoring effort in central MZ-1, so as to minimize the risk of future ground fissuring in this heavily urbanized region of Chino Basin.

The monitoring and analyses associated with this investigation dovetail nicely with other Watermaster efforts associated with basin re-operation and hydraulic control.



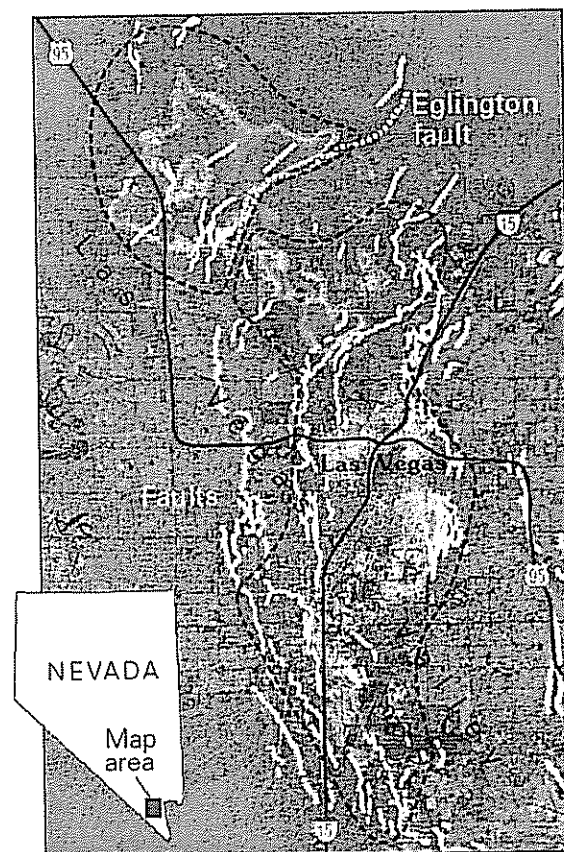
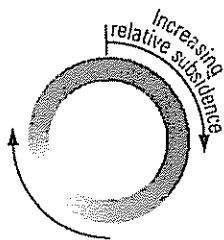
SECTION 1 – BACKGROUND
MZ-1 SUMMARY REPORT

several basins in Arizona. In many of these regions, earth fissuring occurred in areas of differential subsidence (*i.e.* where rates and accumulated magnitudes of subsidence vary over short horizontal distances).

Although drawdown of water levels is the driving force that causes land subsidence due to groundwater pumping, the geology of a groundwater basin also plays an important role in this process. Clay layers within the aquifer-system are relatively compressible materials. Therefore, aquifer-systems that contain thick and/or numerous clay layers are most susceptible to permanent compaction and land subsidence when groundwater is extracted. In addition, faults that act as groundwater barriers can focus and augment drawdown in the aquifer-system when pumping wells are located near these faults. When pumping and drawdown are concentrated on one side of a fault barrier, then differential land subsidence and ground fissuring are a common result (see Las Vegas, as an example).

This map graphic depicts land subsidence in the Las Vegas Valley that occurred from April 1992 to December 1997. The subsidence, attributed to aquifer-system compaction caused by groundwater production, was measured by remote sensing techniques (InSAR). Geologic faults (shown in white) appear to control the location of subsidence, and have been the focal point of earth fissure formation (USGS, 1999).

One color cycle represents about 4 inches of subsidence.



The scientific model that describes the phenomenon of pumping-induced land subsidence is termed the *aquitard-drainage model*. This model has been successfully applied to numerous cases of land subsidence world-wide. It has been incorporated into the industry-standard computer models of groundwater flow and is increasingly recognized as critical to the understanding of aquifer-system hydraulics (flow and storage) and mechanics (deformation). A brief summary of the aquitard-drainage model is below:



Aquitard-Drainage Model. Simply stated, an aquifer system consists of permeable sand and gravel layers (the aquifers) interbedded with less-permeable silt and clay layers (the aquitards). Pumping wells cause water-level drawdowns in the aquifers which, in turn, cause the aquitards to slowly drain into the aquifers. The draining allows aquitard pore pressures to decay toward equilibrium with the reduced heads in the adjacent aquifers. Since the pressure of the pore water provides some internal support for the sedimentary structure of the aquitards, this loss of internal support causes the aquitards to compress, resulting in a small amount of subsidence at the land surface. When the pumping wells turn off, and water levels recover in the aquifers, groundwater migrates back into the aquitards and they expand, resulting in a small amount of rebound at the land surface. Over a limited range of seasonal water level fluctuations this process can occur in a purely elastic fashion. That is, a recovery of water levels to their original values causes the land surface to rebound to its original elevation. However, when drawdown falls below a certain “threshold” level, elastic compression transitions to a non-recoverable inelastic compaction of the aquitards, resulting in permanent land subsidence. The “threshold” water level, referred to as the *preconsolidation stress*, is taken to be the maximum past stress to which the sedimentary structure had previously equilibrated under the gradually increasing load of accumulating sediments. [Note: The probable value of the virgin preconsolidation stress in the Chino Basin has not been documented, but studies in similar areas suggest that drawdowns in the range of 40 to 100 feet will typically exceed the initial threshold value.]

Drawdowns exceeding a previous threshold water level result in an increase in the value of maximum past stress, and thus the establishment of a deeper threshold, accompanied by an increment of inelastic aquitard compaction. Concomitantly, the compaction results in the one-time irreversible mining of groundwater from the aquitards. The benefits of this process include not only the obvious economic value of the water produced but also the often overlooked fact that, by establishing deeper thresholds, it increases the volume of confined groundwater storage available for cyclical drawdown and replenishment under strictly elastic conditions. The cost, of course, is the resulting deformation of the land surface and its impact on vulnerable infrastructure.

History of Ground Fissuring and Land Subsidence in Chino Basin

Ground Fissuring. One of the earliest indications that land subsidence was occurring in Chino Basin was the appearance of ground fissures in the City of Chino. These fissures appeared as early as 1973 (Fife et al., 1976), but an accelerated occurrence of ground fissuring ensued after 1991. Figure 1-1 shows the location of the fissures within the larger context of Management Zone 1 (MZ-1) and the Chino Basin. Figure 1-2 shows a detailed view of this area.



Surface expression of earth fissure that developed in a field north of CIM in February 1991.

Photo source: Geomatrix Consultants



Subsequent studies of the fissuring attributed the phenomenon to land subsidence (Fife et al., 1976; Kleinfelder, 1993, 1996; Geomatrix, 1994). The evidence to support this cause-and-effect relationship between the subsidence and fissuring is shown in Figure 1-2. In this figure, and as pointed out by Geomatrix (1994), the north-south trend of fissuring is located on the steep eastern limb of the main trough of subsidence that was mapped by ground level surveying (discussed below) – an area where east-west directed extensional stress should be associated with subsidence to the west. These observations and conclusions prompted efforts to quantify the magnitude of historical subsidence and to monitor the rates of on-going subsidence. These efforts included:

- Compilation and analysis of leveling survey data to estimate historical subsidence
- Compilation and analysis of remote sensing data to estimate historical subsidence
- Initiation of monitoring efforts to track on-going subsidence

Through these efforts, the history of land subsidence near the area of ground fissuring was characterized in good detail for the period after 1987, and in lesser detail for the period prior to 1987.

Recent Land Subsidence (Post-1987). Repeated leveling surveys were conducted within the City of Chino from 1987-1999 (Kleinfelder, 1993, 1996, 1999). Figure 1-1 shows the location and extent of the surveys within the larger context of MZ-1 and the Chino Basin. Figure 1-2 shows a close-up view of this area, and subsidence contours of the survey data. These contours delineate a subsidence trough generally aligned north-south with maximum subsidence during the 12-year period of 2.4 feet along Central Avenue between Eucalyptus and Schaefer Avenues (the trough axis). The subsidence trough extends approximately from Pipeline Avenue on the west to Benson Avenue on the east, and from Merrill Avenue on the south to the edge of the survey area on the north (Riverside Drive). The contours suggest that the subsidence trough extends further north of Riverside Drive, but the surveys did not include benchmarks north of Riverside Drive.

Remote sensing studies of subsidence were conducted (Peltzer, 1999a, 1999b) to further analyze subsidence in MZ-1. These studies employed Synthetic Aperture Radar Interferometry (InSAR), which utilizes radar imagery from an Earth-orbiting spacecraft to map ground surface deformation. Figures 1-1 and 1-2 show the results of these InSAR studies that independently confirmed the location and relative magnitude of subsidence in MZ-1 as defined by the leveling surveys, and indicated the occurrence of subsidence north of the area monitored by the leveling surveys (north of Riverside Drive).

The leveling surveys and the InSAR analyses both indicated that subsidence rates have slowed significantly since about 1995. In fact, the leveling surveys indicated that about 90% of the total subsidence measured along Central Avenue from 1987-1999 occurred prior to 1996.

Historical Land Subsidence (Pre-1987). Much less data is available to estimate regional subsidence prior to 1987. Geomatrix (1994) and Geoscience (2002) compared the leveling survey data (post-1987) to elevation data published on USGS 7.5-minute quadrangle maps (1933 and 1967). Geomatrix (1994) estimated as much as 3-4 feet of subsidence from 1967-1993 in some areas shown on Figure 1-2. Geoscience (2002) estimated a maximum of 3.7 feet of subsidence from 1933-1987 at the intersection of Pipeline Avenue and Riverside Drive. These subsidence estimates and their assumptions and limitations are currently being reviewed by Watermaster. If generally accurate, these estimates combined with the post-1987 survey data suggest that as much as 4-5 feet of subsidence has occurred during 1933-1999 in some areas of Chino south of State Highway 60.



Potential Causes of Land Subsidence

The main studies that were commissioned subsequent to the fissuring events in the early 1990s (Kleinfelder, 1993, 1996; Geomatrix, 1994) attributed the subsidence and fissuring phenomenon to the aquitard-drainage model. Watermaster arrived at the same conclusion (WEI, 1999) based on the presence of all requisite elements of the aquitard-drainage model in the southern portion of MZ-1 and other supporting evidence:

- **Presence of aquitards.** Geophysical and lithologic logs from numerous wells in the region indicate that the aquifer-system sediments that underlie the area of subsidence in MZ-1 contain many interbedded aquitard layers, which are susceptible to permanent compaction under reduced piezometric heads. In addition, during the early 1900s, much of the southern part of MZ-1 was an area of flowing-artesian wells (Mendenhall, 1908), indicating the existence of fine-grained confining layers (aquitards) at depth.
- **Reduced pore pressures within the aquifer-system.** The flowing-artesian groundwater conditions in southern MZ-1 also indicate that piezometric heads were at or above the land surface during the early 1900s. Water level histories at numerous relatively shallow wells in the region demonstrate that the piezometric heads (water levels) declined by about 140 feet from about 1940 to 1977, but then recovered by about 40 feet by 1999 (see Figure 1-3).

In addition, the accelerated occurrence of fissuring that commenced in 1991 was preceded by the completion and initial operation of a number of the deep production wells in 1989-1990. These wells are owned by the City of Chino Hills. Water level histories at these wells indicate that drawdowns within the deeper portions of the aquifer system caused by pumping these wells have exceeded 300 feet.

In both the shallow and deep zones of the overall aquifer system, the historical drawdowns were substantially greater than probable maximum value of the virgin threshold of inelastic compaction.

- **Other evidence.** The axis of maximum subsidence along Central Avenue, as delineated by ground level surveys (1987-1999), is aligned with the locations of several deep production wells owned by Chino Hills—suggesting a cause-and-effect relationship.
- **Similarity to other subsidence case studies.** There are numerous examples throughout the western United States where ground fissures have accompanied aquifer-system compaction and land subsidence within alluvial groundwater basins (Holzer, 1984). Geomatrix (1994) studied the ground fissures on CIM property and also reviewed case histories of fissuring throughout the southwestern United States. Their study noted similarities between the physical structure of the CIM fissures and the fissures described in the literature that were associated with areas of subsidence due to groundwater pumping and aquifer-system compaction.

There exist other potential causes of land subsidence that have been documented in other locations world-wide. Most of these causes can be immediately dismissed as explanations for the subsidence observed in Chino Basin, but others can not. Table 1-1 lists all potential causes of land subsidence, and a qualitative description of their applicability to subsidence and fissuring in Chino Basin.

Even though some of these potential subsidence mechanisms cannot be immediately dismissed as contributing to subsidence in Chino Basin, they are not likely. The aquitard-drainage model is based on physical laws of nature—namely, gravity and the compressibility of materials under load. And when the requisite elements of this model are all present (*i.e.* presence of aquitards, piezometric head declines, *etc.*), the question is not whether subsidence occurred, but rather, how much is the inevitable result of the aquitard-drainage mechanism?



By comparison, other potential causes of subsidence were reduced to unlikely and, at the most, minor contributory factors in Chino Basin, and as such, were never directly investigated by Watermaster.

Development of the MZ-1 Interim Monitoring Program

In the Optimum Basin Management Program (OBMP) Phase I Report (WEI, 1999), Watermaster identified the aquitard-drainage model as the most likely cause of the land subsidence and ground fissuring observed in MZ-1. Program Element 4 of the OBMP – *Develop and Implement a Comprehensive Groundwater Management Plan for Management Zone 1* called for the development and implementation of an interim management plan for MZ-1 that would:

- Minimize subsidence and fissuring in the short-term
- Collect information necessary to understand the extent, rate, and mechanisms of subsidence and fissuring
- Formulate a long-term management plan to reduce to tolerable levels or abate future subsidence and fissuring

The main part of the interim management plan was to develop and implement a monitoring and testing program in MZ-1 that would answer certain questions to enable the development of a long-term plan to minimize or abate subsidence and fissuring. These questions included:

1. How much subsidence is currently occurring in MZ-1?
2. How much of the current subsidence is an elastic, reversible process that will restore the land surface to its original elevation if water levels recover to their original values; or, in the alternative phraseology, how much, if any, is irreversible (permanent subsidence)?
3. How much subsidence did historical pumping cause in MZ-1?
4. How much of the historical subsidence was an elastic, reversible process, and how much, if any, was irreversible?
5. These questions give rise to the most critical questions: What was the historical threshold value of head decline at which the deformation of the sedimentary structure would have changed from an elastic compression to inelastic compaction? And additionally, what is that threshold value of head decline today?

In an attempt to minimize subsidence and fissuring in the short-term, the cities of Chino and Chino Hills agreed to jointly reduce groundwater production in MZ-1 by 3,000 acre-feet per year for the duration of the interim management plan. This agreement between the cities was termed the *Forbearance Agreement*.

Formation of the MZ-1 Technical Committee. The MZ-1 Technical Committee was formed to serve as a clearing house for technical information, as well as the source for full professional discussion, input and peer review by its members, for the benefit of Watermaster. The Technical Committee provides comment and assists Watermaster in the development of recommendations for consideration and potential action by Watermaster under the Interim Management Plan. In addition, the Technical Committee provides similar assistance to Watermaster in its effort to develop a long-term plan as provided in Program Element 4. The Technical Committee consists of representatives (and their technical consultants) from those parties to the Judgment that are presently producing groundwater within MZ-1. Each of the following producers is entitled to representation on the Committee: Chino, Chino Hills, Ontario, Upland, Pomona, Monte Vista



Water District, San Antonio Water Company, Southern California Water Company, CIM and the Agricultural Pool. Figure 1-1 shows the locations of wells owned by the producers listed above. The MZ-1 Technical Committee first convened on March 6, 2002, and has continued to meet once every 1-3 months.

Composition of the MZ-1 Interim Monitoring Program. The MZ-1 Technical Committee approved the scope and schedule for the MZ-1 Interim Monitoring Program (IMP) at the January 29, 2003 meeting. The IMP was developed and implemented by Watermaster to collect the information necessary to answer the five questions listed above. The data collected and analyzed as part of this effort are being utilized to develop effective management tools and, ultimately, a long-term management plan that will minimize or completely abate ground fissuring and subsidence in MZ-1.

The IMP is described in detail in the IMP Work Plan dated January 8, 2003 (WEI, 2003), but generally consists of three main elements: benchmark survey, InSAR, and aquifer-system monitoring. The benchmark surveys and the InSAR analyses monitor deformation of the land surface. Aquifer-system monitoring measures the hydraulic and mechanical changes within the aquifer-system that cause the land surface deformation. The methods involved in the implementation of each element are briefly described below:

Methods: Aquifer-System Monitoring. This work involves the measuring of stresses within the aquifer system (water-level changes) that cause land surface deformation as measured by benchmark surveys, InSAR, and the extensometers (described below). The objective is to establish the relationships between water-level changes in the aquifer system (stress) and aquifer-system deformation (strain).

Figure 1-4 shows location of the centerpiece of the aquifer-system monitoring program – the Ayala Park Extensometer – a highly sophisticated monitoring facility consisting of two multi-piezometers and a dual-extensometer. As the aquifer system undergoes various stresses due to groundwater production and recharge, the facility monitors the hydraulic response of the aquifer system at the piezometers and the mechanical response of the aquifer system at the extensometers. The facility is equipped with pressure transducers to measure water levels in the piezometers, linear potentiometers to measure the vertical aquifer-system deformation at the extensometers, and data loggers to record the data at frequent intervals (e.g. 15 minutes).

Piezometer construction and instrumentation was completed in mid-November 2002, at which time collection of piezometric data commenced. Dual-extensometer construction and instrumentation was completed in mid-July 2003, at which time collection of aquifer-system deformation data commenced.

Figure 1-4 also shows the nearby wells owned by CIM and the cities of Chino and Chino Hills that were equipped with pressure transducers and data loggers to record (1) water-level data and (2) the specific timing of pumping cycles at production wells.

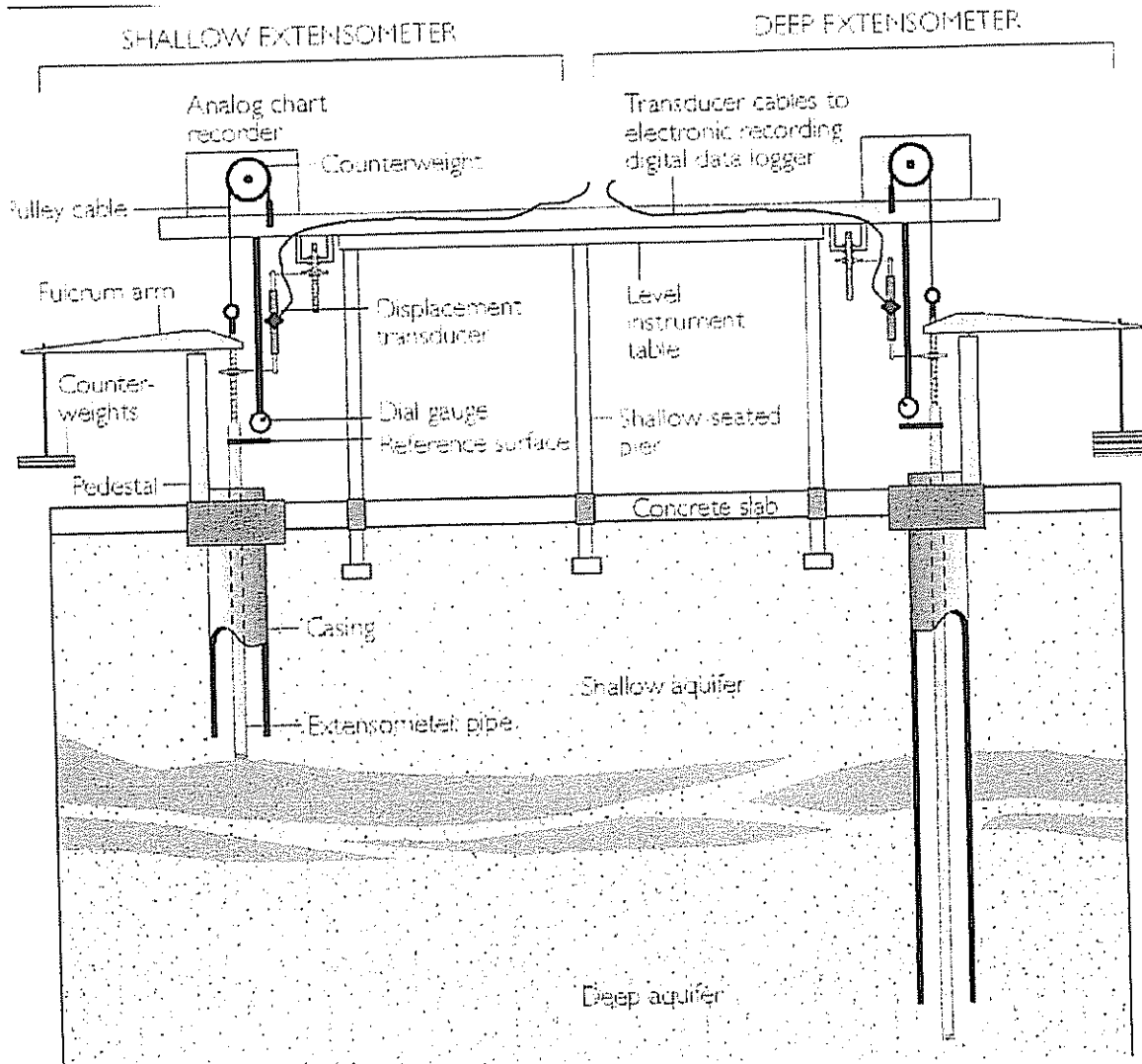
The IMP also called for Watermaster, with the assistance of the well owners, to conduct controlled aquifer stress tests (pumping tests) while monitoring water levels and groundwater production at nearby monitoring wells and production wells, as well as aquifer-system compaction and/or expansion at the dual-extensometer. These tests were performed in fall 2003, spring 2004, and fall 2004.

The data collected from this monitoring effort are being used to: (1) quantify and characterize the current state of aquifer-system deformation (i.e. elastic vs. inelastic), (2) determine the threshold value of head decline at which the deformation of the aquifer-system sediments changes from an elastic compression to



SECTION 1 – BACKGROUND
MZ-1 SUMMARY REPORT

inelastic compaction, (3) estimate aquifer-system parameters, such as the conductive and storage parameters of the aquifer and aquitard sediments, (4) reveal the existence of groundwater barrier(s) within the aquifer sediments, and (5) use all the above data as input to predictive computer models of compaction, subsidence, and groundwater flow to support the development of a long-term management plan.



A conceptual graphic of a dual extensometer, very similar to the facility at Ayala Park in Chino. Extensometers measure vertical deformation within an aquifer system. Typically, they are accompanied by piezometers that measure pore water pressure changes that cause deformation within the aquifer system.



Methods: Ground-Level Surveying. This work involves repeated benchmark surveying to measure vertical (and in some cases horizontal) ground surface deformation along selected profiles within Chino Basin – mainly in MZ-1. The benchmark surveys are being used to (1) establish a datum from which to measure land surface deformation during the IMP period, (2) allow determination of historical subsidence at any historical benchmarks that can be recovered, (3) “ground-truth” the InSAR data, and (4) assist in the development and evaluation of the long-term management plan.

A network of stable benchmark monuments was installed to supplement an existing network of benchmarks that was installed for the City of Chino in 1987. Associated Engineers (AE) completed monument installations (see Figure 1-5) and an initial survey of all monument elevations in April 2003. Repeat surveys are planned for April of each year during the IMP period.

The IMP work plan also called for the deep extensometer at Ayala Park (discussed below), which is anchored in sedimentary bedrock at about 1,400 ft bgs, to be used as the “starting benchmark” for all survey loops. To accomplish this, a Class-A benchmark was constructed outside the extensometer building to serve as the practical (i.e. actual) starting benchmark. To link this benchmark to the deep extensometer pipe, each survey event begins by referencing the benchmark to a marked spot on one of the piers that supports the extensometer instrument platform. These piers and the instrument platform represent a stable ground surface datum that is used to measure relative vertical displacement between the ground surface and the deep extensometer pipe (recorded every 15 minutes). The vertical displacement recorded at the deep extensometer between survey events, in addition to any vertical displacement measured between the starting benchmark and the pier, is then used to calculate the elevation at the starting benchmark outside the extensometer building. Then, relative vertical displacement between benchmarks is measured across the entire network to obtain current elevations.

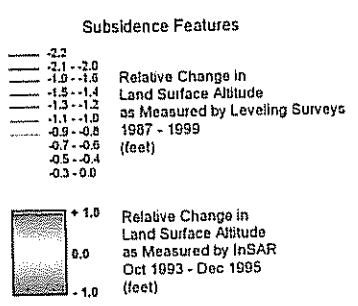
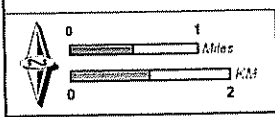
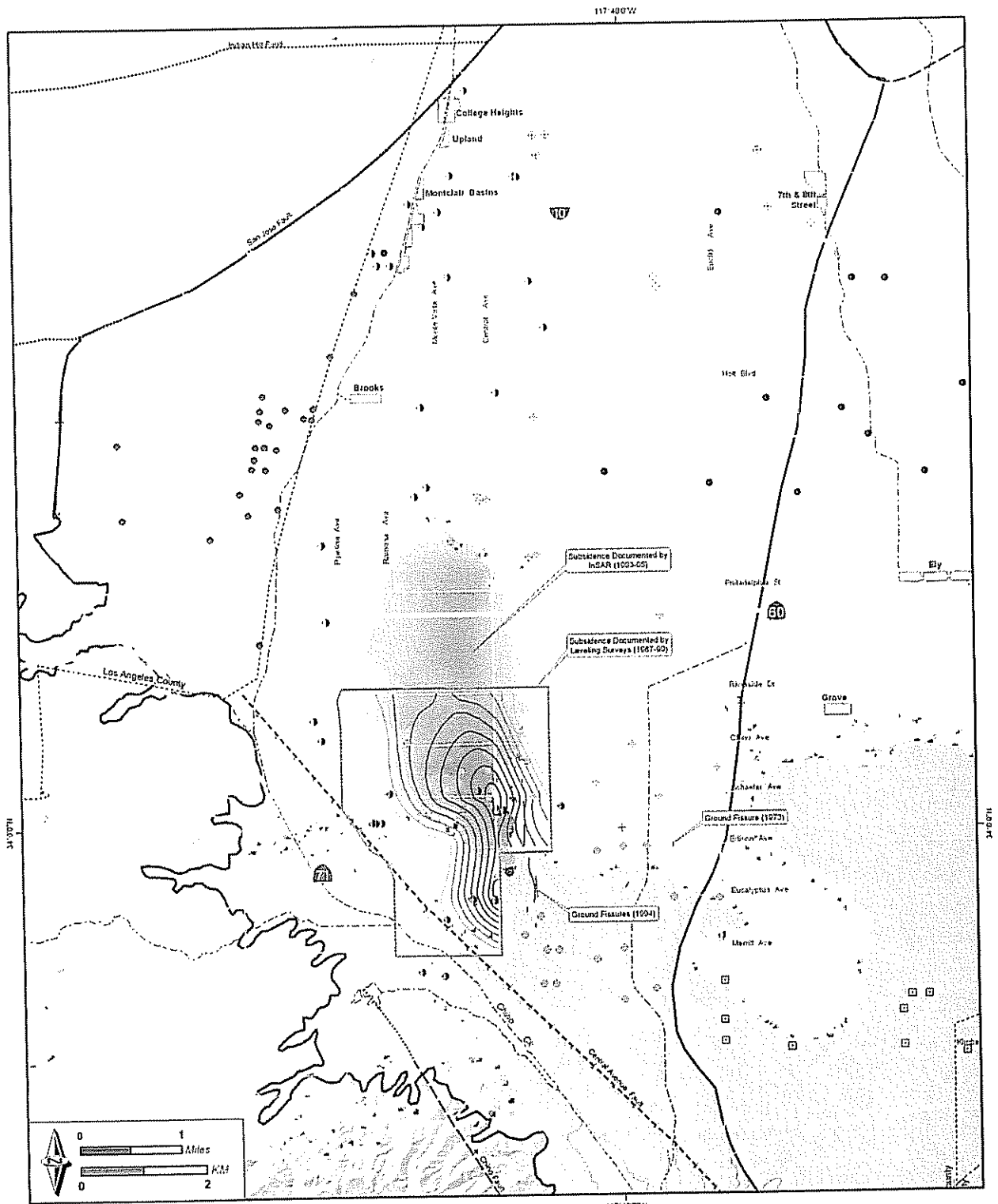
A key element of the MZ-1 benchmark network is the array of closely spaced benchmarks that have been established across the historic fissure zone in the immediate vicinity of the Ayala Park extensometers (Ayala Park Array). At this array, located along Edison and Eucalyptus Avenues, both vertical and horizontal displacements are measured. These horizontal and vertical displacements are defining two-dimensional profiles of land-surface deformation that can be related to the vertical distribution of aquifer-system compaction and expansion that is being recorded continuously at the extensometers. These surveys are being repeated semi-annually during the late spring and early fall periods of highest and lowest water levels in an attempt to monitor fissure movement, if any, that may be associated with elastic and/or inelastic aquifer-system deformation. (Note: the semi-annual survey frequency of the Ayala Park Array monuments is a modification to the IMP work plan, and was agreed upon by the MZ-1 Technical Committee at the September 24, 2003 meeting).

Methods: InSAR Analyses. InSAR is being used to characterize ground surface deformation in Chino Basin. This analysis will be performed for a historical period (1992-2000) and on an on-going basis thereafter. The advantage of InSAR is that it provides an aerially continuous representation of land surface deformation. These data are planned to be used to: (1) characterize the time history of land surface deformation in greater spatial and temporal detail than can be accomplished from the available historical ground-level survey data, (2) calibrate computer simulation models of subsidence and groundwater flow, and (3) assist in the evaluation of the effectiveness of the long-term management plan.



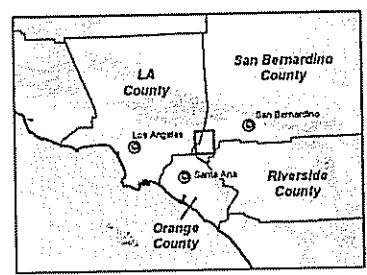
**Table 1-1
Applicability of Potential Causes of Subsidence in Chino Basin**

Potential Cause of Subsidence	Applicability to Chino Subsidence
Collapse of underground caverns	No caverns or soluble rocks are known to underlie the Chino Basin, and the geologic environment and history of the basin make their existence extremely unlikely.
Consolidation due to surface loading	No substantial surface loading has been applied, other than the construction of Prado Dam and the occasional short-lived accumulation of flood waters behind it. These are well south of the area of significant subsidence.
Consolidation of sediments over geologic time scales	This process is presumably occurring under the gradually increasing load of accumulating alluvial sediments, but at rates much too slow to be readily detectable over a period of decades. Under conditions of subaerial deposition the buildup of surficial sediments far exceeds their compaction at depth.
Desiccation and shrinkage of expansive soils	Swell/shrink properties of soils in the subsiding area have not been investigated. However, most of the area has been subject to agricultural and/or residential irrigation and is unlikely to have experienced serious desiccation, despite substantial lowering of the water table.
Settlement of soils due to ground shaking	Significant coseismic settlement of unconsolidated soils typically involves temporary liquefaction manifested in localized slumping and sand boils. These phenomena have not been reported during the seismic events of recent decades.
Drainage of organic soils	High organic soils do not occur in the subsiding area.
Hydrocompaction	Hydrocompaction occurs where thick accumulations of very dry soils are rewetted for the first time since deposition. The very shallow water tables and artesian conditions that historically characterized the area of recent subsidence rule out this phenomenon.
Solution of soluble subsurface deposits like salt	There is no evidence for the existence of soluble rocks underlying the Chino Basin.
Subsurface extraction of hydrocarbons	Not applicable. There are no known oil or gas extraction wells currently in operation in Chino Basin.
Tectonism	While the alluvial basins of California have obviously been subsiding over geologic time relative to their bounding mountain ranges, there is no evidence for a tectonic mechanism that would account for the localized and relatively rapid subsidence observed in the southwestern part of Chino Basin.
Thawing permafrost	Not applicable. Permafrost is soil or rock that remains below 0°C throughout the year, and forms when the ground cools sufficiently in winter to produce a frozen layer that persists throughout the following summer. These conditions do not occur in Chino Basin.
Aquifer-system compaction	Probable cause.



- Wells in MZ-1 by Owner**
- Ontario
 - Pomona
 - EAWC
 - Upland
 - SCWC
 - CIM
 - Chino Hills
 - Chino
 - IRWD

- Other Features**
- ⊙ Ayala Park Extensometer Facility
 - ⊠ Chino Basin Desalter Well (Existing)
 - Management Zone 1 Boundary
 - No InSAR Data



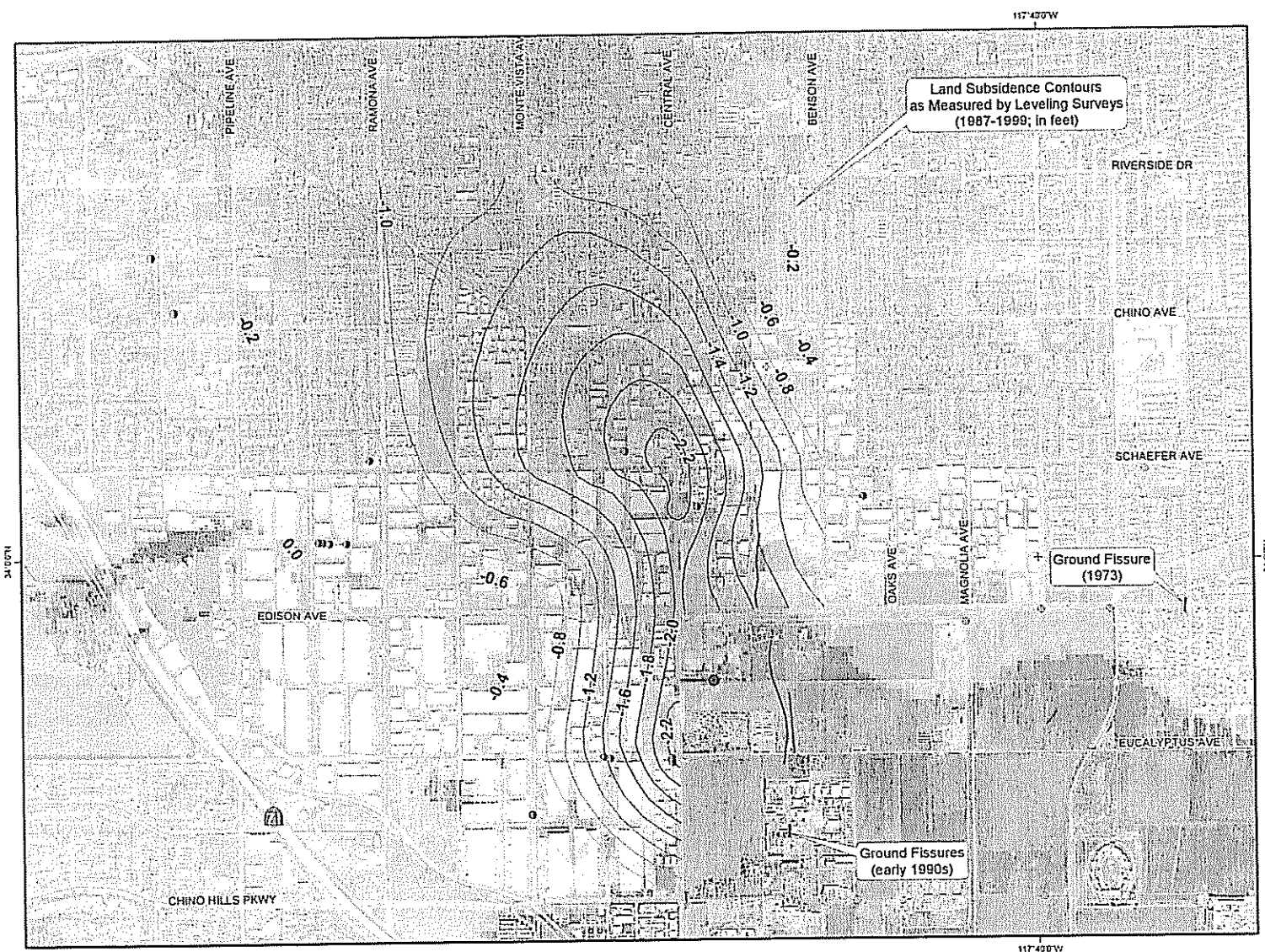
Land Surface Deformation in Management Zone 1
Leveling Surveys and InSAR

Prepared by:
WILDERMUTH
ENGINEERS & SURVEYORS
22641 Branhall Ave
Lake Forest, CA 92550
949-430-2129
www.wilder-muth.com

MZ-1 Summary Report
September 2005

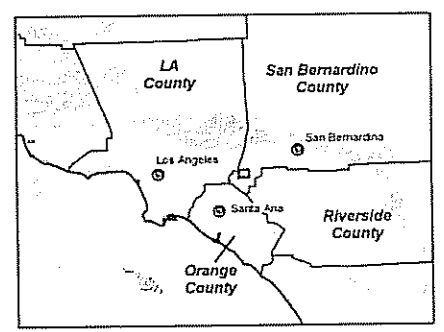
Author: FEM
Date: 2/26/2007
File: Figure_1-1.mxd

Figure 1-1



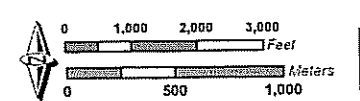
- Subsidence Features**
- Ground Fissure (dashed where approximated)
- Relative Change in Land Surface Altitude as Measured by InSAR Oct 1993 - Dec 1995 (feet)
- Legend for Relative Change in Land Surface Altitude: +1.0, 0.0, -1.0
- Wells in MZ-1 by Owner**
- Ontario
 - Pomona
 - SAWC
 - Upland
 - SCWC
 - CIM
 - Chino Hills
 - Chino
 - MWWD
- Other Features**
- Ayala Park Extensometer Facility

Note: Air photo background flown in April 2004.



Produced by:
WILDERMUTH
 ENVIRONMENTAL INC.
 22622 Estarline Drive
 Lake Forest, CA 92530
 FAX: 949.232.3232
 www.wildermuthenvironmental.com

Author: AEM
 Date: 20050927
 File: Figure_1-2.mxd

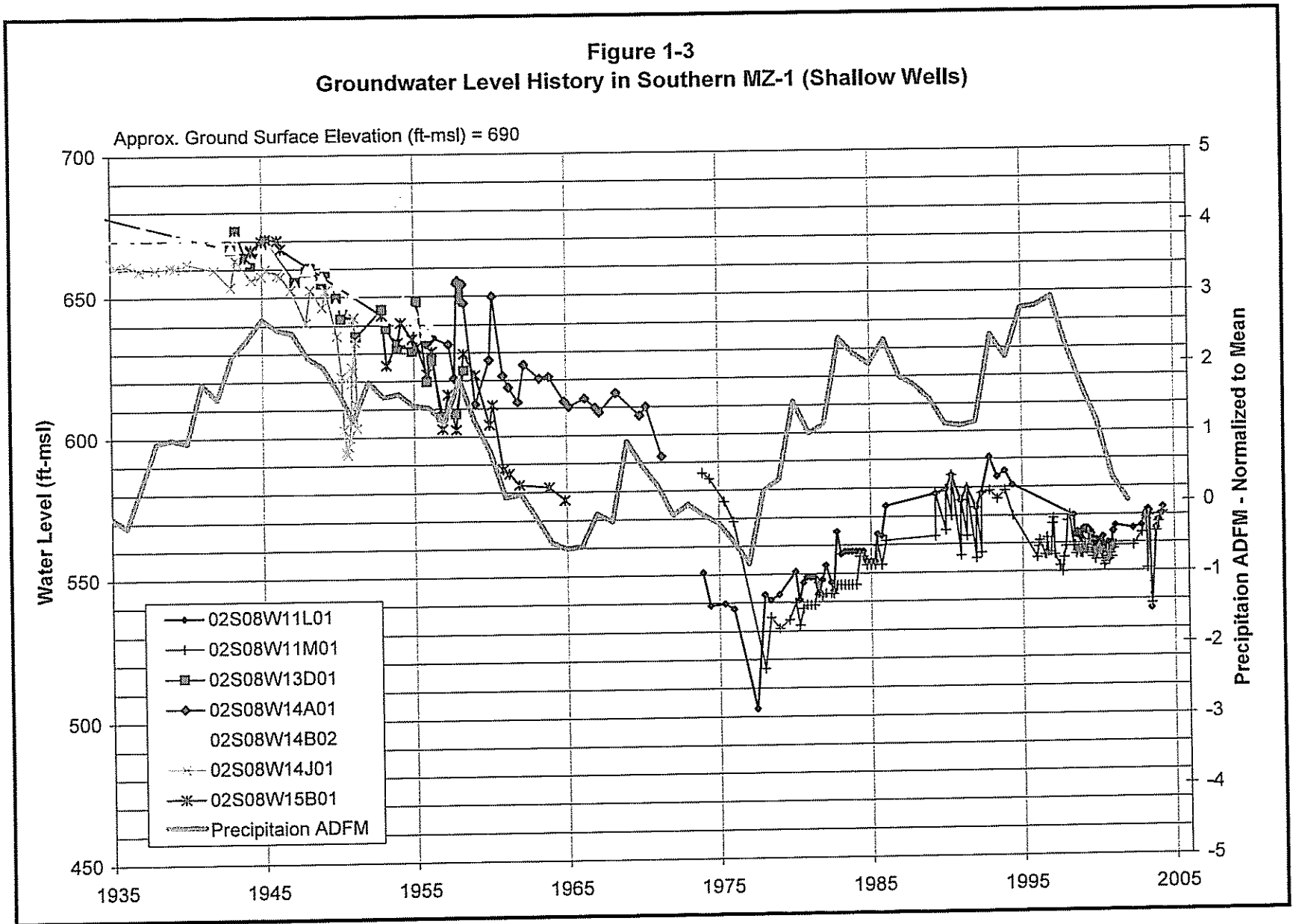


MZ-1 Summary Report
 September 2005

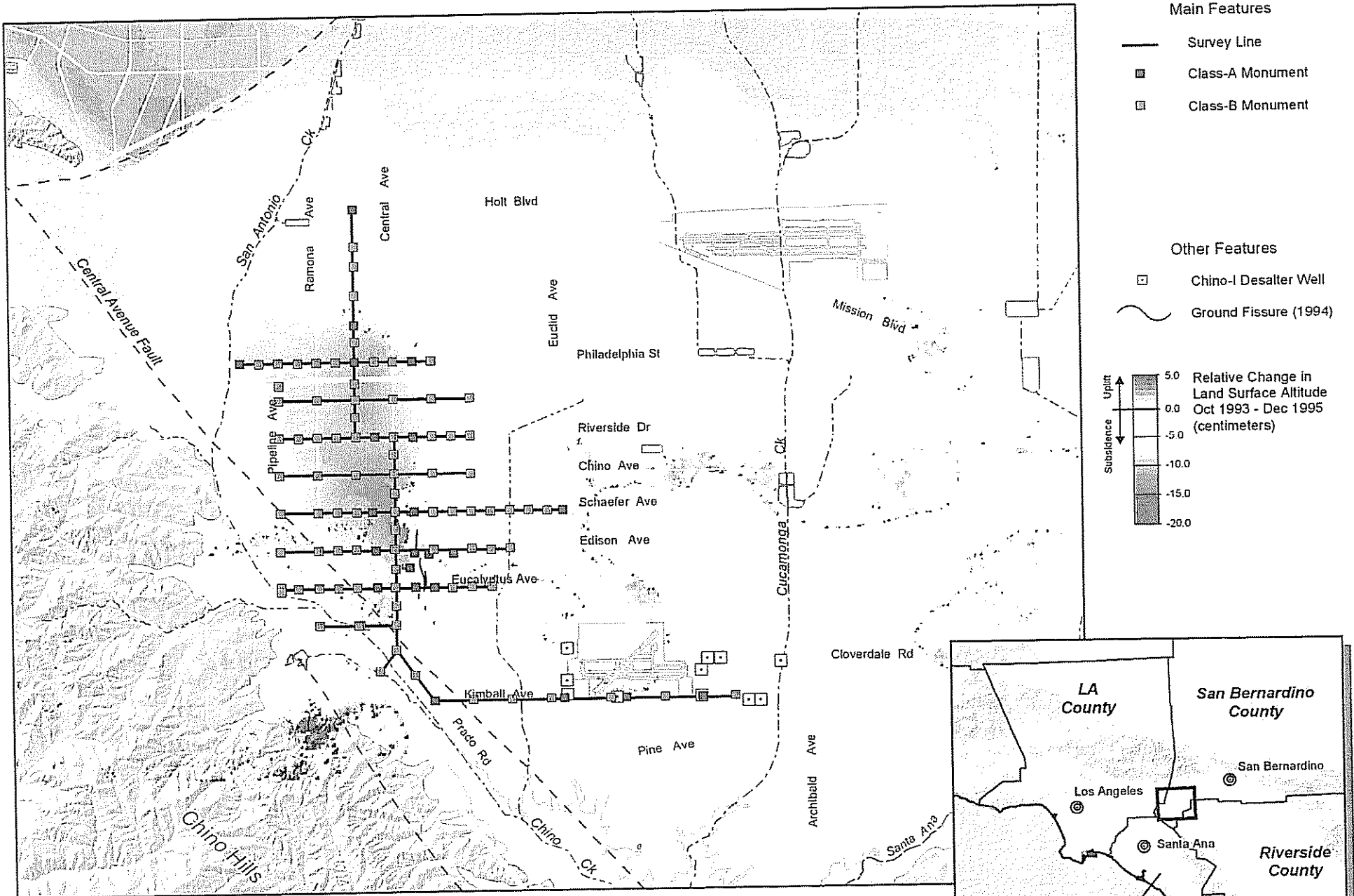
Land Surface Deformation in Chino, CA
 Leveling Surveys and InSAR

Figure 1-2

Figure 1-3
Groundwater Level History in Southern MZ-1 (Shallow Wells)



Figure_1-3.xls - Figure_1-3
10/4/2005

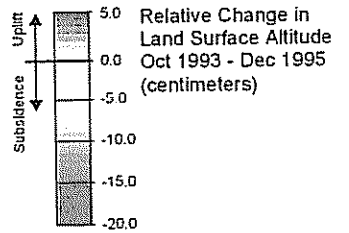


Main Features

- Survey Line
- Class-A Monument
- Class-B Monument

Other Features

- Chino-I Desalter Well
- ~ Ground Fissure (1994)



Benchmark Survey Monuments
MZ-1 Interim Monitoring Program



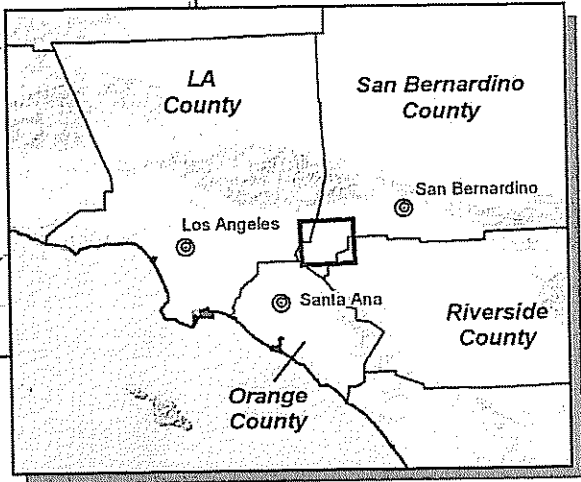
Figure 1-5

MZ-1 Summary Report
Ground Level Monitoring



Author: ABM
Date: 20050927
File: Figure_1-5.mxd

Produced by:
WILDERMUTH
ENVIRONMENTAL, INC.



0311

2. MZ-1 INTERIM MONITORING PROGRAM

This section describes the results, interpretations, and major conclusions derived from the Interim Monitoring Program (IMP) as of September 19, 2005.

Results and Interpretations

Aquifer-System Monitoring. The controlled testing and comprehensive monitoring of the aquifer-system (see Section 1) and subsequent data analyses has led to a number of key interpretations:

1. There appear to be two distinct aquifer systems in this area – a shallow, un-confined to semi-confined system from about 100-300 ft-bgs and a deep, confined system from about 400-1,200 ft-bgs.
2. Under current conditions of aquifer utilization in MZ-1, the aquifer-system deformation appears to be essentially elastic. At the Ayala Park Extensometer, about 0.14 feet of elastic land subsidence and rebound were observed during the pumping and recovery seasons of 2004-05. Minor amounts (~0.01 feet) of permanent compaction and associated land subsidence apparently occurred over this same period.
3. The relationships between aquifer-system stress (water level changes) and aquifer-system strain (vertical deformation of the sediment matrix) have been established by comparing piezometer data versus extensometer data. These relationships indicate the nature of the aquifer-system deformation (i.e. elastic vs. inelastic) and provide estimates of aquifer-system parameters for later use in aquifer-system models.
4. A deep aquifer-system pumping test in September 2004 appears to have transitioned the system from elastic to inelastic deformation. This provides a “threshold” water level at Ayala Park, below which further drawdown will result in inelastic compaction. The data derived from this test will assist in the creation of management tools for MZ-1 (e.g. groundwater flow and subsidence models).

A technical discussion related to the above interpretations follows:

Figure 2-1 shows the changes in thickness of the aquifer systems as recorded by the deep and shallow extensometers, completed at depths of 1,400 and 550 ft-bgs. It also shows the water-level fluctuations in two piezometers, PA-10 and PA-7, which are representative of the shallow aquifer system and the upper part of the deep aquifer system, respectively.

During periods of water-level decline in PA-7, both extensometers are recording compaction of the sediments. During periods of recovery in PA-7, both extensometers are generally recording elastic expansion. Note that for the data available, almost all of the compaction during the drawdown season is recovered as expansion during the recovery season.

During the late-spring (2004) pumping of the shallow aquifer system, while the deep system not pumped, the shallow extensometer recorded compression while the deep extensometer recorded an overall expansion. Subtracting the shallow record from the deep confirms that the deeper sediments continued a smooth expansion in response to continuing recovery of heads in the deeper parts of the aquifer system, as represented by the data from PA-7, which is screened from 438-448 ft-bgs. The shallow compression is seen to correlate closely with the drawdown recorded by PA-10, screened from 213-233 ft-bgs.

These observations clearly demonstrate the existence of the deep and shallow aquifer-systems in this region of MZ-1. Nearby pumping at wells that are screened in either the deep or shallow aquifer-systems result in distinct hydraulic and mechanical responses that are recorded at the Ayala Park piezometers and extensometers. These observations also demonstrate the importance, for analytical purposes, of



independently stressing the deep and shallow systems by pumping from only one at a time, so that the observed deformation can be more accurately attributed to production from a specific depth interval.

The relationships between water levels and aquifer-system deformation are further depicted in the stress-strain diagrams shown in Figure 2-2. In this diagram, increasing depth to water (drawdown due to pumping) is the measure of decreasing pore pressure and increasing effective intergranular stress. Increasing compression of the sediments is the resulting strain. When pumping diminishes or ceases, pore pressures recover, intergranular stress is reduced, and the aquifer system expands.

Figure 2-2 shows that the full thickness of sediments responds linearly to extended intervals of continuous drawdown or recovery, but with a large seasonal hysteresis attributable to the time lag involved in the delayed vertical propagation of pore pressure changes from the pumped aquifers into adjacent, poorly permeable aquitards. The parallel slopes of the compression and expansion trends represent the overall elasticity of the sedimentary section. Its inverse is the skeletal storativity, in hydrologic terminology.

Brief intervals of recovery during the drawdown season, and of drawdown during the recovery season, produce steeply sloping, more-or-less tight hysteresis loops. Their much steeper slope represents the (inverse) aggregate compressibility of the permeable pumped aquifers. The longer intervals of recovery and drawdown generate the more open hysteresis loops, as the delayed responses of immediately adjacent portions of the aquitards have time to influence the extensometers.

The parallelism of the seasonal drawdown and recovery stress-strain slopes in Figure 2-2 indicates that seasonal drawdown to 250 ft-bgs at this site is producing essentially elastic, recoverable deformation. However, the slope of the drawdown curve in 2004 begins to deviate from its elastic trend when the seasonal drawdown exceeds 250 ft-bgs indicating a transition to inelastic compaction within draining aquitard interbeds. A minor amount of non-recovered compaction is indicated by the offset of the recovery curve in 2005 to the right (direction of compression). On about September 19, 2005 water levels had recovered to the levels of pre-pumping conditions of 2004 (~105 ft-bgs at PA-7), and the offset of the stress-strain curve to the right (direction of compression) confirmed that about 0.01 ft of permanent compaction occurred during the pumping season of 2004.

The pumping and associated drawdown of water levels in 2004 was part of a controlled aquifer system stress test. The primary objective of this test was to transition the deformation of aquifer-system sediments from elastic compression to inelastic compaction. If successful, it would provide "threshold" piezometric heads at the extensometer location that should not be approached in the future if permanent (inelastic) compaction within the aquifer-system is to be avoided. This would also define a key parameter required for estimating the maximum elastic storage capacity of the confined aquifer-system.

For fear of exacerbating the ground fissuring, one limiting condition of the test that was agreed upon by the participating agencies was that pumping cease when inelastic compaction was identified. Although 0.01 feet of permanent compaction is relatively minor deformation, it is measurable and within the detection limits of the extensometer. The stress-strain diagram in Figure 2-2 indicates that at Ayala Park the aquifer-system transitioned from elastic compression to inelastic compaction when the water level in the PA-7 piezometer at Ayala Park fell below about 250 ft-bgs. The applicability of this limit at increasing distances from the piezometer/extensometer facility is dependent on an approximate replication of the tested pumping conditions (i.e. specific wells pumped, pumping rates, and pumping durations). A different areal distribution of pumping might cause localized inelastic compaction away from Ayala Park without drawing PA-7 below 250 feet or recording inelastic effects at the extensometer.



A different vertical distribution of extraction will stress the aquifer system in a different manner, and may result in a different threshold water level in PA-7.

Other objectives of the pumping test that were successfully accomplished were to (1) estimate key aquifer-system parameters that could be used in later modeling efforts, and (2) confirm and elucidate the existence of a groundwater barrier within the sediments below about 300 ft-bgs

Discovery of Groundwater Barrier. Multiple lines of evidence suggest that a previously unknown groundwater barrier exists within the deep aquifer-system in the same location as the fissure zone.

Controlled aquifer-system stress (pumping) tests in October 2003 and April 2004 provided piezometric response data that revealed a potential groundwater barrier within the sediments below about 300 ft-bgs and aligned north-south with the historic fissure zone. Figure 2-3 is a map that shows the locations of a pumping well perforated in the deep aquifer system (CH-19, 340-1,000 ft-bgs) and other surrounding wells that also are perforated exclusively in the deep system. Figure 2-4 shows the water level responses in these wells during various pumping cycles at CH-19. The groundwater barrier is evidenced by a lack of water level response in CH-18 (east of the fissure zone) due to pumping at CH-19 (west of the fissure zone). Image-well analysis of pumping-test responses also indicates that this barrier approximately coincides with the location of the historic zone of ground fissuring.

Ground level survey data (described in detail below) corroborate the water level data – also indicating the existence of the barrier and its coincident location with the fissure zone. Figure 2-6 shows that during the pumping season of 2003 (April to November) vertical displacement of the land surface (i.e. subsidence) was generally greater on the west side of the fissure zone where water-level drawdown was greatest. Figure 2-7 shows that during the recovery season of 2003-04 (November to April) vertical displacement of the land surface (i.e. rebound) was again greater on the west side of the fissure zone where water level recovery was greatest.

In other words, the groundwater barrier in the deep aquifer-system is aligned with the fissure zone and causes greater water level fluctuations on the west side of the barrier where the pumping is concentrated. These greater water level fluctuations on the west side of the barrier, in turn, cause greater deformation of the aquifer-system matrix which, in turn, causes greater vertical land surface deformation on the west side of the barrier. In addition, the pattern of horizontal displacement of benchmarks over the pumping and recovery seasons, as shown in Figures 2-6 and 2-7, likely reflects, in part, the differential compaction of the aquifer system across the fissure zone.

Similarly, the InSAR data in Figures 1-2 and 2-5 also corroborate the existence of the groundwater barrier by showing maximum subsidence west of the barrier and virtually no subsidence east of the barrier.

This spatial coincidence of the groundwater barrier and the historic fissure zone suggests a cause-and-effect relationship: the barrier causes differential water level declines, which cause differential aquifer-system compaction and a steep gradient of subsidence across the barrier, which can and likely has caused ground fissuring above the barrier.

Monitoring of Ground-Surface Deformation—Ground-Level Surveying. In late April 2004, AE performed the annual survey event across the entire network of benchmark monuments, including the measurements of horizontal displacements at the Ayala Park Array of monuments. The results of the ground level surveys were presented to the MZ-1 Technical Committee at its meeting. Also at this



meeting, the project manager from AE made a presentation to describe survey methodologies, accuracy, results, and challenges.

Figure 2-5 displays the vertical displacement at monuments that occurred from April 2003 to April 2004. Comparing monument elevations over the April-to-April period is meant to reveal the inelastic component of compaction, if any, which may be occurring in the region. The assumption here is that in April 2004 water levels in the region have recovered to the April 2003 levels; thus the measured vertical displacement does not include the elastic component of aquifer system deformation. Water levels measured as part of the IMP (in the vicinity of Ayala Park) support this assumption. Examination of Figure 2-5 shows that the monuments near Ayala Park experienced little to no subsidence over this time period. However, the monuments located in the northern portions of the surveyed area showed small but measurable subsidence of the land surface (on average about 0.04 feet). Maximum subsidence of about 0.08 feet was recorded at monuments located along Philadelphia Street between Pipeline and Ramona Avenues. Water level and groundwater production data have not been collected or analyzed as part of the IMP in these northern portions of the survey area; hence, it is not yet possible to classify the nature of the subsidence in this region (*i.e.* elastic vs. inelastic), since it is not known whether water levels in 2004 had recovered to their 2003 levels.

The color-coded background in Figure 2-5 represents the subsidence that occurred in the area over the October 1993 to December 1995 period as measured by InSAR. The subsidence shown by this InSAR data has been interpreted as primarily permanent subsidence caused by inelastic aquifer-system compaction. If so, the survey data in Figure 2-5 are indicating that the distribution of inelastic compaction in 2003-04 is significantly different than the distribution of inelastic compaction that occurred during the early 1990s. In particular, maximum permanent subsidence of about 1 foot in 1993-95 was measured in the vicinity of Ayala Park by InSAR, whereas in 2003-04 the survey data are indicating minimal permanent subsidence, if any, in this same area.

Figures 2-6 and 2-7 display the vertical and horizontal displacement at monuments of the Ayala Park Array that occurred from April 2003 to November 2003 and November 2003 to April 2004, respectively. The determination of horizontal displacement of monuments was accomplished through the processing of distance and angle measurements between adjacent monuments, and is based on the assumption that the southeastern monument was stable over the period of measurement. The methods used to measure the horizontal displacement of monuments at the Ayala Park Array are currently being refined by AE. These figures show:

- significant horizontal displacement of the ground surface over the course of the pumping and recovery seasons in the vicinity of the historic fissure zone
- the elastic nature of the land surface displacement over the course of the pumping and recovery seasons
- the apparent presence of a groundwater barrier within the deep aquifer system (see Section 5.3.4 below).

Groundwater production and water-level data show that pumping of wells perforated within the deep aquifer system (>300 ft-bgs) causes water-level drawdowns in the deep aquifer system on the order of 150 feet. However, these large drawdowns do not propagate east of the fissure zone. During the pumping season of 2003 (April to November) vertical displacement of the land surface (*i.e.* subsidence) was generally greater on the west side of the fissure zone where water-level drawdown was greatest. During



the recovery season of 2003-04 (November to April) vertical displacement of the land surface (i.e. rebound) was again greater on the west side of the fissure zone where water-level recovery was greatest.

In other words, the groundwater barrier in the deep aquifer system aligned with the fissure zone causes greater water-level fluctuations on the west side of the barrier where the pumping is concentrated. These greater water-level fluctuations west of the barrier cause greater deformation of the aquifer-system matrix which, in turn, causes greater vertical land surface deformation on the west side of the barrier. The InSAR data corroborate the existence of the groundwater barrier by showing maximum subsidence west of the barrier (0.2ft) and virtually no subsidence east of the barrier during the course of one pumping season (April-1993 to September 1993). In addition, the pattern of horizontal displacement of benchmarks over the pumping and recovery seasons likely reflects, in part, the differential compaction of the aquifer system across the fissure zone.

In June 2005, the entire network of monuments was surveyed for vertical displacement and, at the Ayala Park array of monuments, for horizontal displacement. The results of this survey are currently being processed.

Monitoring of Ground Surface Deformation—InSAR. Vexcel Corporation of Boulder, Colorado – a company that specializes in remote sensing and radar technologies – conducted a “proof of concept” study of historical synthetic aperture radar data that was acquired over the MZ-1 area. The objective of this study was to generate cumulative displacement maps over relatively short time steps (April to November 1993). The MZ-1 Technical Group deemed the study successful, and approved follow-up study by Vexcel to perform a comprehensive analysis of all historical synthetic aperture radar data (1992-2003) to characterize in detail the history of subsidence in MZ-1.

The comprehensive analysis was completed during the first quarter of calendar 2005. However, the usable data in this analysis only spanned the 1992-2000 period. Dr. David Cohen of Vexcel presented the InSAR results by to the MZ-1 Technical Committee in March 2005. Figures 2-8 and 2-9 display the summary results of the InSAR analysis of land subsidence for the periods of 1992-1995 and 1996-2000.

The InSAR results were generally consistent with the ground level survey data collected over a similar period with respect to the areal extent and magnitude of historical subsidence. The InSAR data show that:

- the rate of subsidence in the south area of MZ-1 has declined over time, particularly since about 1995.
- currently, the aquifer system is experiencing mainly elastic compression and expansion in the south area of MZ-1.
- the central area of MZ-1 is displaying greater rates of subsidence than the south area (near Ayala Park). This subsidence is probably due to aquifer system compaction, but pumping and water level data that would define this relationship have not yet been collected and analyzed in the central area of MZ-1.
- a steep gradient of subsidence exists across the fissure zone. The steep gradient extends north of the fissure zone to about Francis Street. In addition, the spatially continuous InSAR data show that the gradient of subsidence is steeper across the fissure zone than is shown by surveys of discrete benchmarks, which further supports the potential link between the subsidence and the fissuring. The existence of this steep gradient across the fissure zone also supports/reveals the existence and extent of the groundwater barrier.

Conclusions

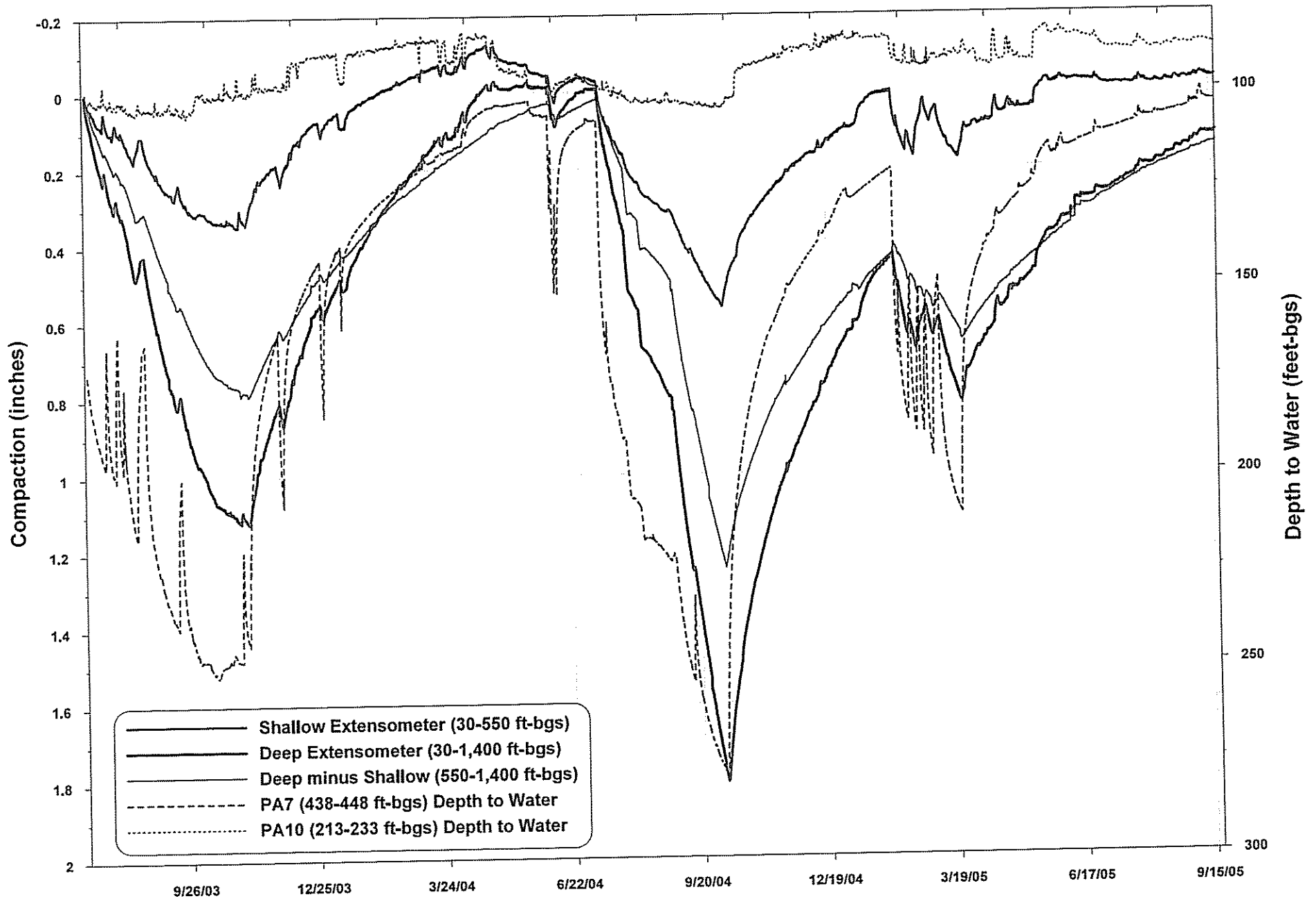


There are five major conclusions that have been derived from the IMP to date:

1. The current state of aquifer-system deformation in south MZ-1 (in the vicinity of Ayala Park) is essentially elastic. Little, if any, inelastic (permanent) compaction is now occurring in this area, which is in contrast to the past when about 2.2 feet of land subsidence occurred, accompanied by ground fissuring, from about 1987-1995.
2. Groundwater production from the deep, confined aquifer system in this area causes the greatest stress to the aquifer system. In other words, pumping of the deep aquifer system causes water-level drawdowns that are much greater in magnitude and lateral extent than drawdowns caused by pumping of the shallow aquifer system.
3. Water-level drawdowns due to pumping of the deep aquifer system can cause inelastic (permanent) compaction of the aquifer-system sediments, which results in permanent land subsidence. The initiation of inelastic compaction within the aquifer system was identified during this investigation when water levels fell below a depth of about 250 feet in the PA-7 piezometer at Ayala Park.
4. Through this study, a previously undetected barrier to groundwater flow was identified. The barrier is located within the deep aquifer system and is aligned with the zone of historical ground fissuring. Pumping from the deep aquifer system is limited to the area west of the barrier, and the resulting drawdowns do not propagate eastward across the barrier. Thus, compaction occurs within the deep system on the west side of the barrier, but not on the east side, which causes concentrated differential subsidence across the barrier and creates the potential for ground fissuring.
5. InSAR and ground-level survey data indicate that permanent subsidence in the central parts of MZ-1 (north of Ayala Park) has occurred in the past and continues to occur today. The InSAR data also indicate that the groundwater barrier extends northward into central MZ-1. These observations suggest that the conditions that very likely caused ground fissuring near Ayala Park in the 1990s are also present in central MZ-1, and should be studied in more detail.

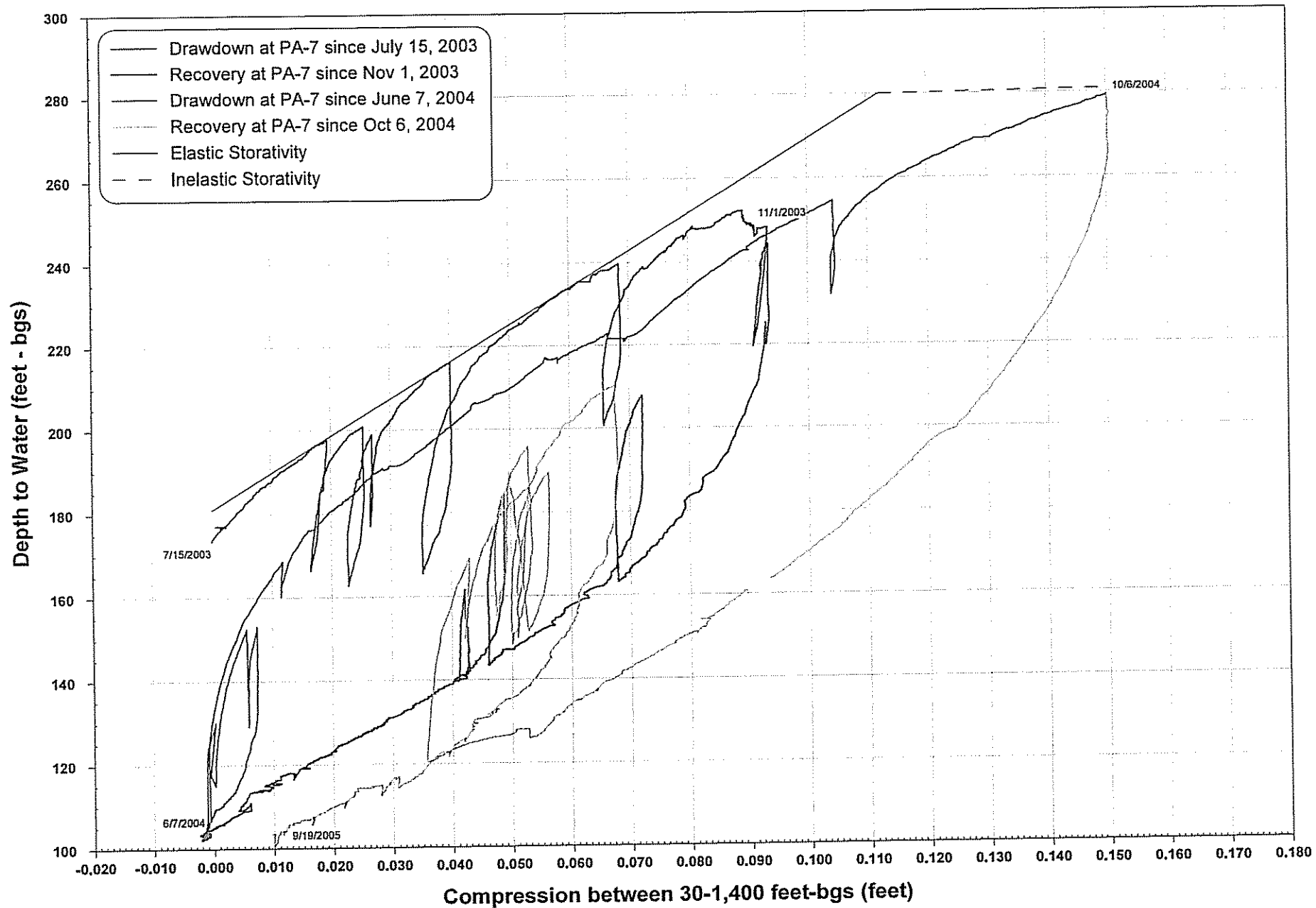


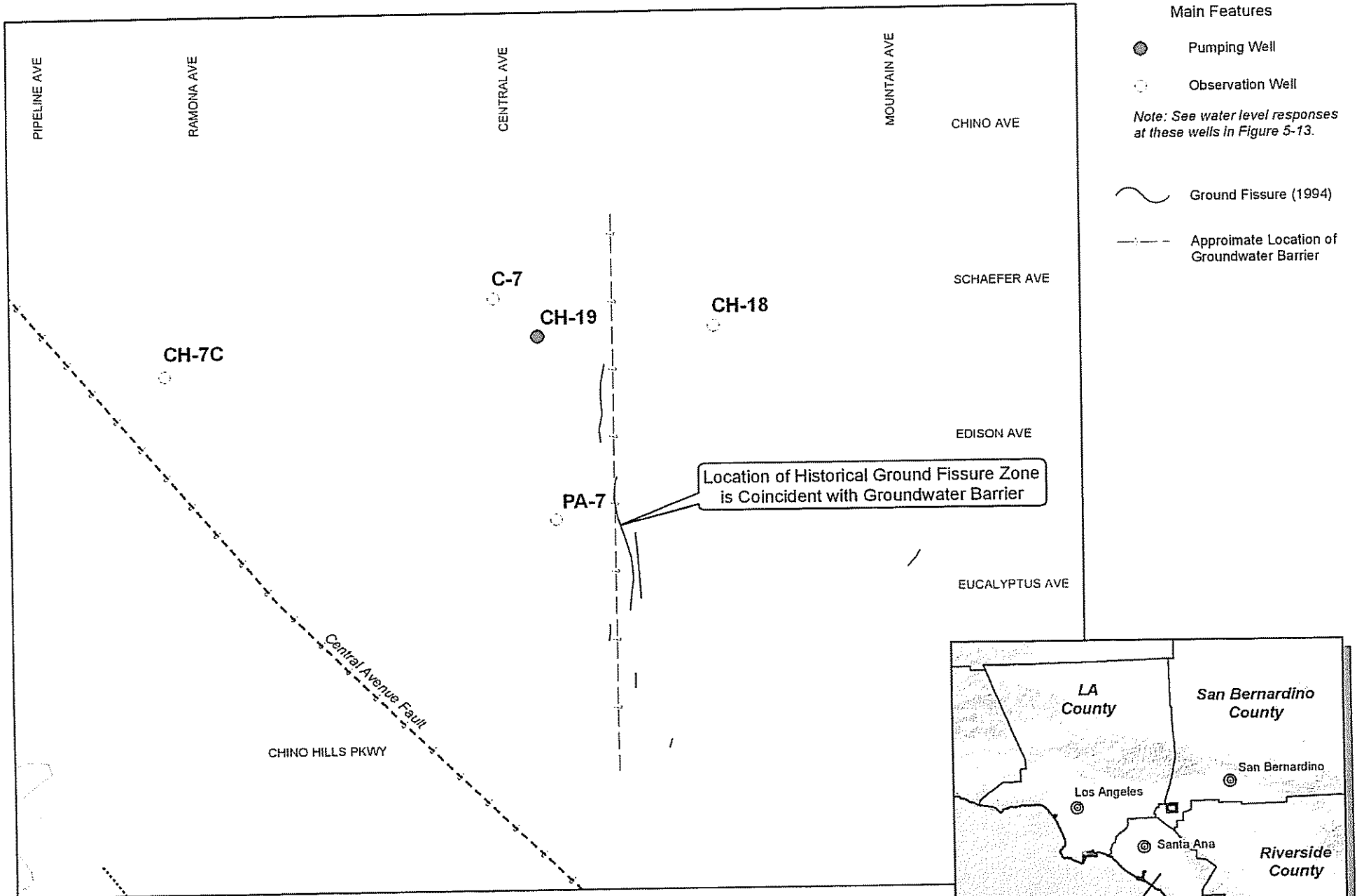
Figure 2-1 - Piezometric and Extensometer Data
Ayala Park Piezometer/Extensometer Facility



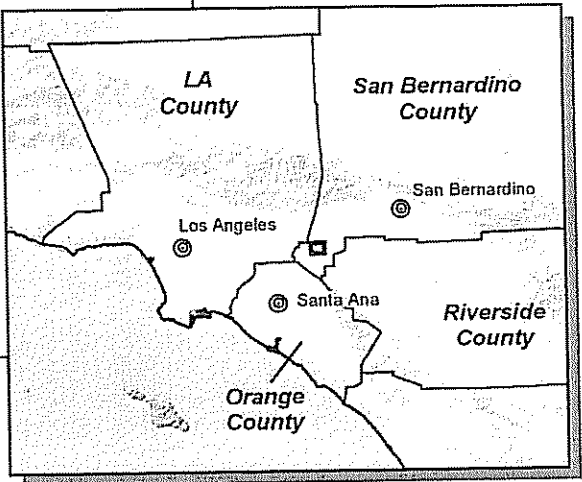
021
71

Figure 2-2 -- Stress-Strain Diagram
PA-7 vs. Deep Extensometer





- Main Features**
- Pumping Well
 - Observation Well
- Note: See water level responses at these wells in Figure 5-13.*
- ~ Ground Fissure (1994)
 - - - Approximate Location of Groundwater Barrier

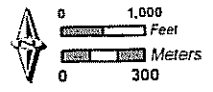


MZ-1 Groundwater Barrier
Evidence from Pumping Test



Figure 2-3

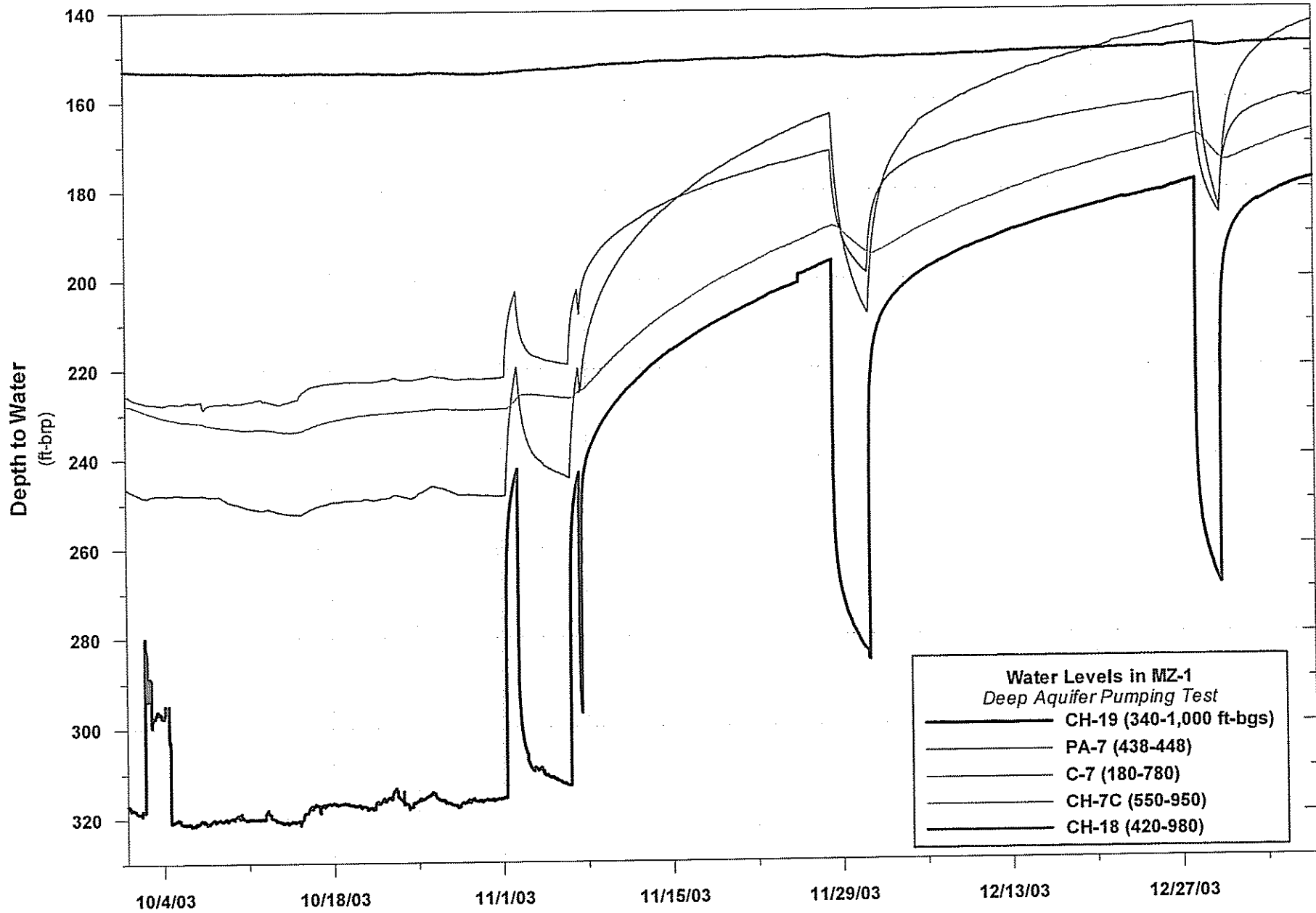
MZ-1 Summary Report
September 2005

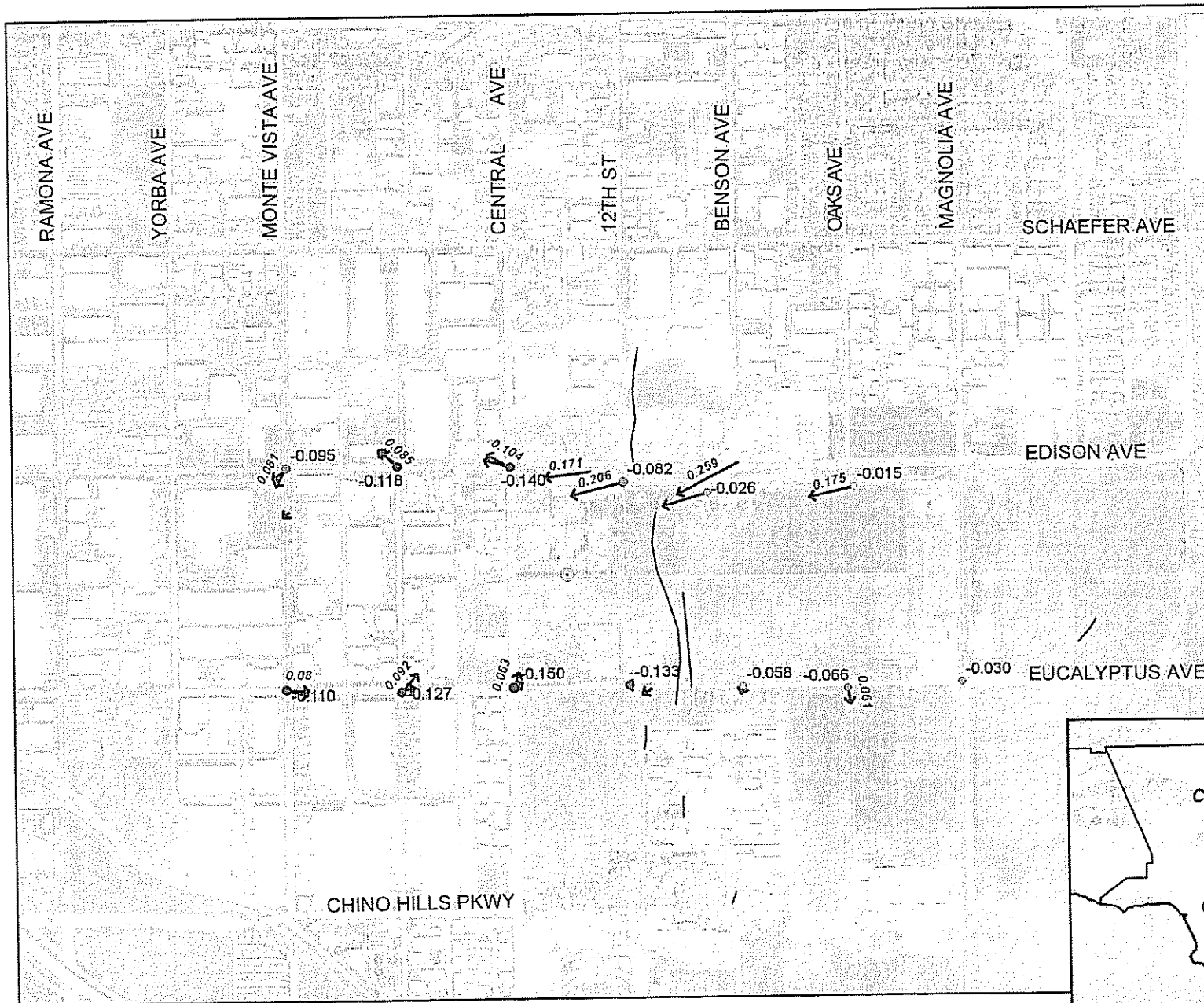


Author: AEM
Date: 20050927
File: Figure_2-3.mxd

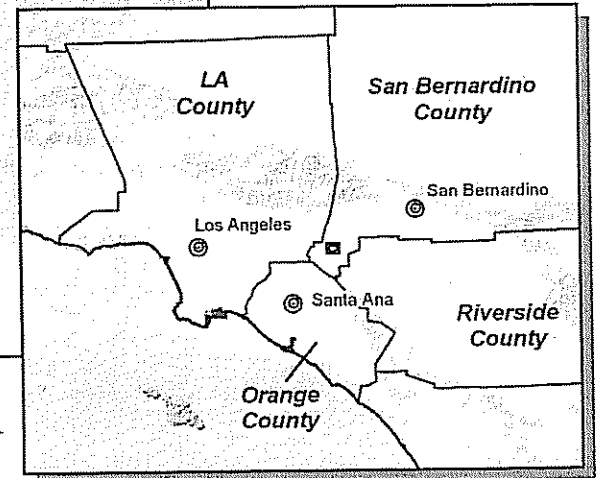
Produced by:
WILDERMUTH
ENVIRONMENTAL, INC.

Figure 2-4
Water Level Responses at Nearby Wells to Pumping at CH-19





- Results of Ground Level Surveys**
- -0.12 Vertical Displacement at Monument (ft)
 - ← 0.10 Horizontal Displacement at Monument (ft) Relative to SE Monument
 - Other Features
 - Ayala Park Extensometer
 - ~ Ground Fissure (early 1990s)



Horizontal Displacement at Ayala Park Array of Monuments
 April 2003 to November 2003



MZ-1 Summary Report
 September 2005

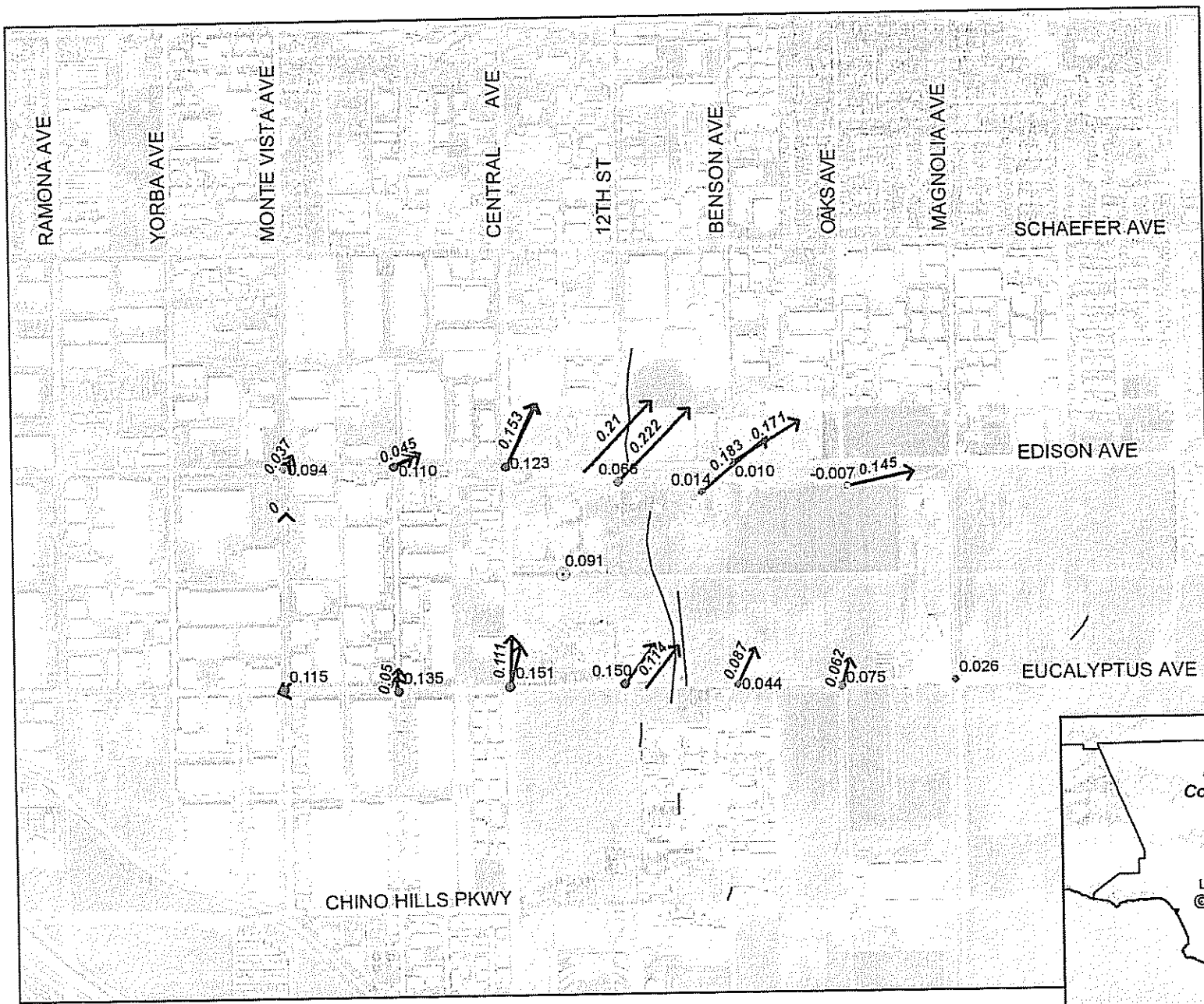


Author: AEM
 Date: 20050927
 File: Figure_2-6.mxd

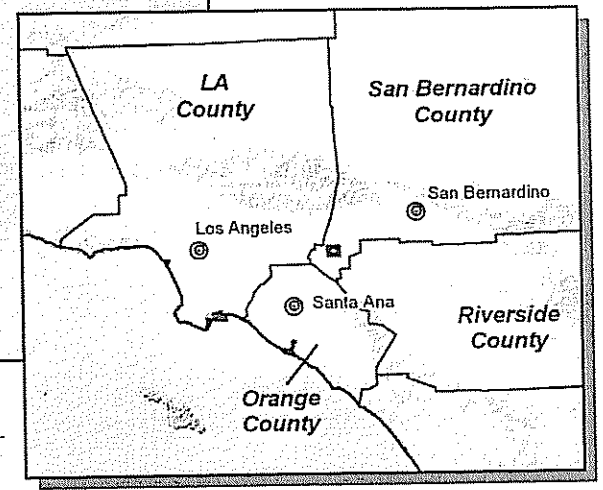
Produced by:
WILDERMUTH
 ENVIRONMENTAL, INC.

Figure 2-6

75
 179



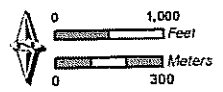
- Results of Ground Level Surveys**
- 0.15 Vertical Displacement at Monument (ft)
 - 0.10 Horizontal Displacement at Monument (ft) Relative to SE Monument
- Other Features**
- Ayala Park Extensometer
 - Ground Fissure (1994)



Horizontal Displacement at Ayala Park Array of Monuments
November 2003 to April 2004



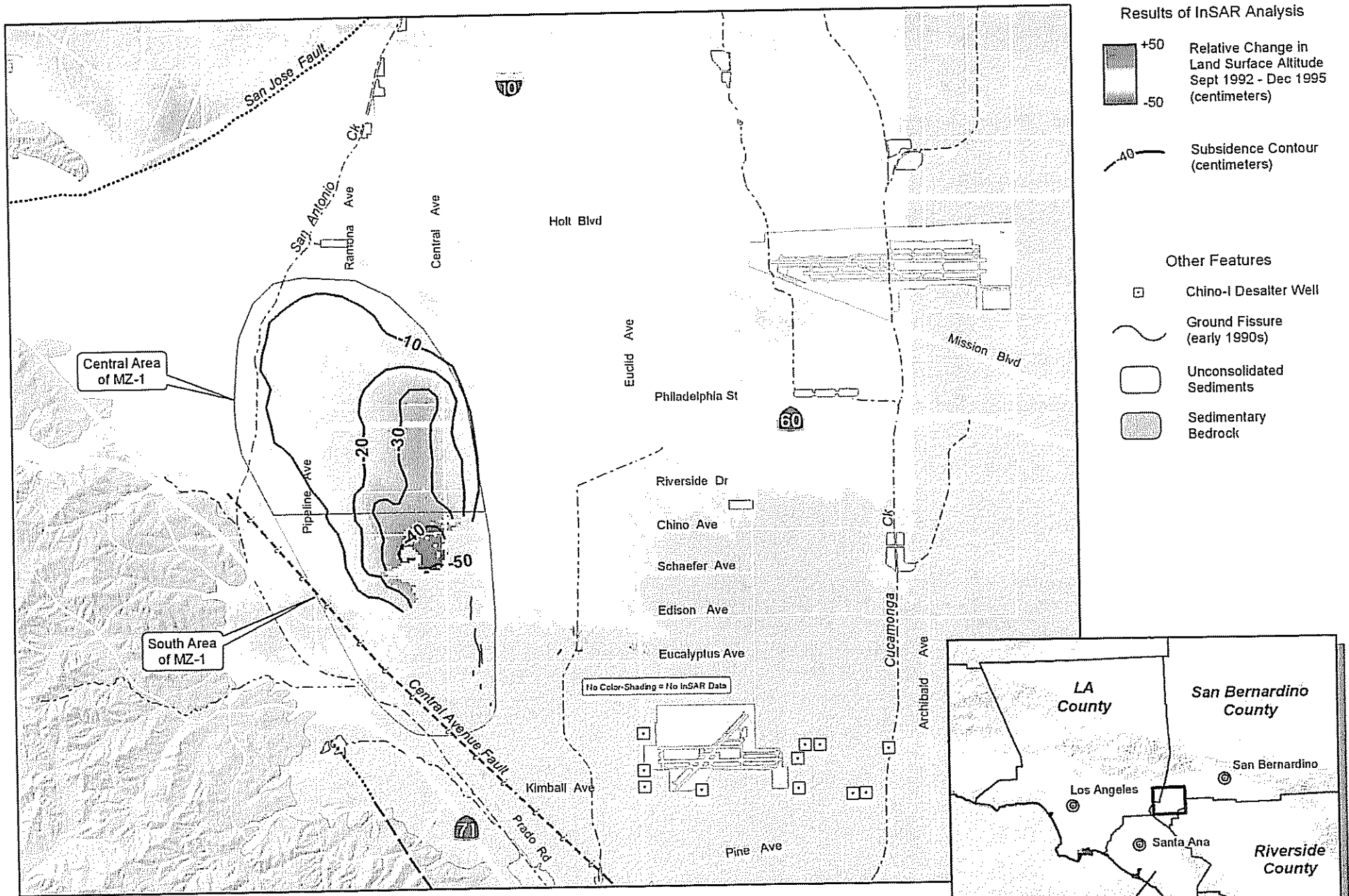
MZ-1 Summary Report
September 2005



Author: AEM
Date: 20050927
File: Figure_2-7.mxd

Produced by:
WILDERMUTH ENVIRONMENTAL INC.

Figure 2-7



Results of InSAR Analysis

- +50
 - 50
 - 40
- Relative Change in Land Surface Altitude Sept 1992 - Dec 1995 (centimeters)
- Subsidence Contour (centimeters)

Other Features

- Chino-I Desalter Well
- Ground Fissure (early 1990s)
- Unconsolidated Sediments
- Sedimentary Bedrock

InSAR Analysis of Subsidence
1992 to 1995



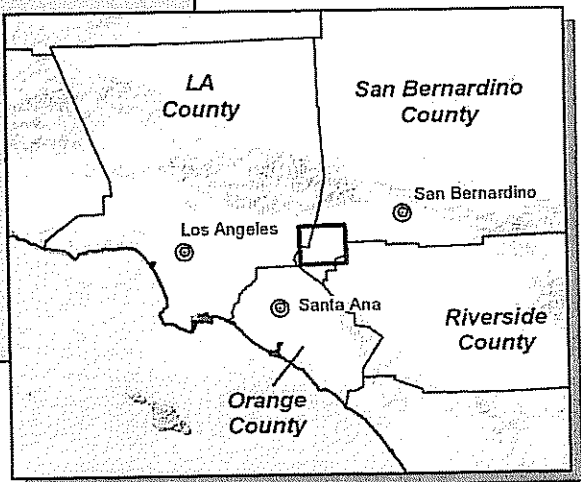
MZ-1 Summary Report
September 2005

Figure 2-8

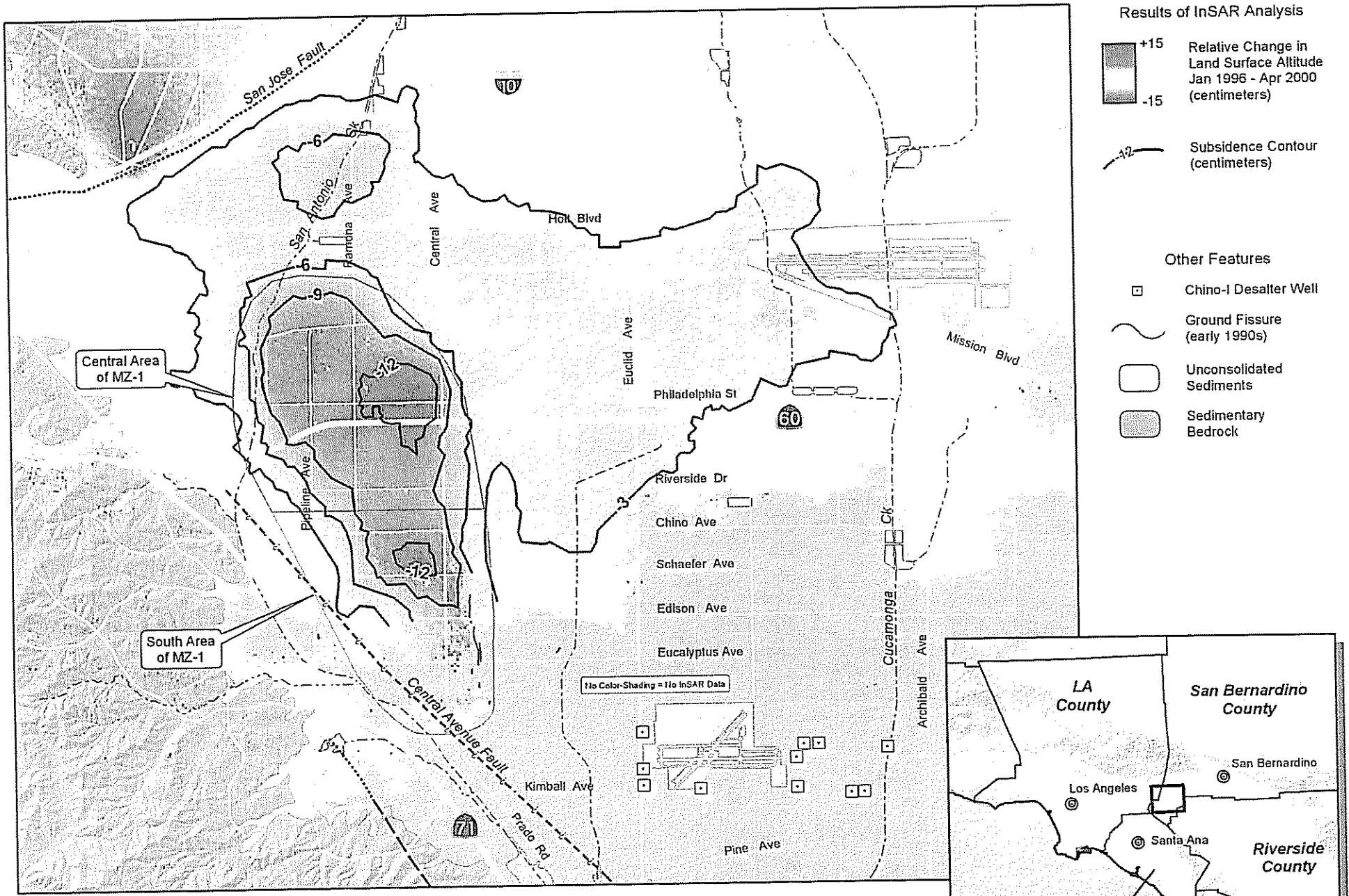


Author: AEM
Date: 20050927
File: Figure_2-8.mxd

Produced by:
WILDERMUTH ENVIRONMENTAL, INC.



7777

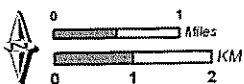


InSAR Analysis of Subsidence
1996 to 2000



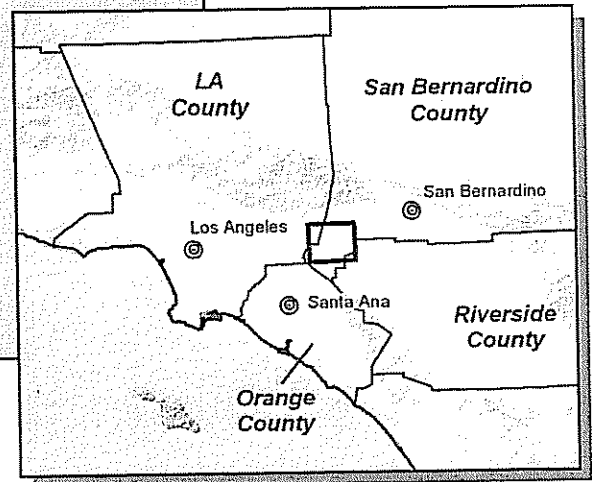
Figure 2-9

MZ-1 Summary Report
September 2005



Author: ABM
Date: 20050927
File: Figure_2-9.mxd

Produced by:
WILDERMUTH
LACROONMOUNTAIN, INC.



3. ONGOING AND RECOMMENDED WORK

This section describes:

- the ongoing work of the IMP, which includes the continued monitoring of the aquifer system and land surface deformation and the development of analytical and numerical models of groundwater flow and aquifer-system deformation.
- the work that is currently being implemented that was not initially part of the IMP, but has been recommended by MZ-1 Technical Committee and/or Watermaster based on data obtained during the IMP period. This work includes the expanded aquifer-system monitoring in the central area of MZ-1, and the monitoring of horizontal ground surface deformation along Schaefer Avenue.

Continued Monitoring

Aquifer-System Monitoring. Aquifer-system monitoring efforts will continue for the duration of the IMP. The MZ-1 Technical Committee will likely recommend that the aquifer-system monitoring efforts continue, albeit at a reduced scope, as part of the long-term management plan. Electronic data from the Ayala Park Extensometer facility and from water level recording transducers in surrounding wells will be collected and entered into the MZ-1 database once every two months. The purpose of this continued monitoring effort is to (1) continually evaluate the effectiveness of the long-term plan, and (2) verify the accuracy of the groundwater flow and subsidence models that are being used as management tools.

InSAR. The MZ-1 Technical Committee is recommending that on-going InSAR monitoring of land surface deformation be conducted on a semi-annual interval (spring and fall data acquisition and interferometric analysis) for the next two years. This analysis will (1) reveal seasonal and annual ground surface displacement across the entire MZ-1 area, and (2) be compared to ground-level survey data collected at the same interval (see Section 5.4.2 below) to help determine a long-term strategy to monitor ground surface deformation.

Ground Level Surveying. The MZ-1 Technical Committee is recommending that the entire network be surveyed twice per year for the next two years (during the spring and fall of each year). The ground level survey data will be compared against the InSAR data (see above) to help determine a long-term strategy to monitor ground surface deformation.

Development of Analytical and Numerical Models

The objectives of aquifer-system modeling in MZ-1 are:

- To evaluate fluid withdrawal as the mechanism of historical land subsidence and fissuring
- To predict the effects of potential basin management practices on groundwater levels and land subsidence and fissuring (forecasting tool)

In other words, if a model can be constructed that simulates past drawdown and associated land subsidence, then the model represents an additional line of evidence that fluid withdrawal was the mechanism of historical land subsidence. In addition, the model can be used to predict future drawdown and associated land subsidence that would result from potential basin management practices.

Three distinct modeling efforts will take place in sequence:

1. *Inverse analytical modeling.* This type of modeling will use groundwater level and production data collected as part of the aquifer-system stress testing (pumping tests) that were conducted in 2003 and



2004. The objectives are to determine the hydraulic and mechanical parameters of the aquifer-system and reveal XY-anisotropy. The results will be used in subsequent numerical modeling efforts.

2. *One-dimensional compaction modeling.* This type of modeling will use groundwater level and aquifer-system deformation data collected at the Ayala Park Piezometer/Extensometer Facility, as well as historical water level and subsidence data collected near Ayala Park. One objective is to determine the aquitard properties in the vicinity of Ayala Park. Areal extrapolation of aquitard properties will be based on geology and InSAR data, and the results will be used in the three-dimensional numerical modeling efforts (see Section 3). Another objective is to predict aquifer-system deformation due to predicted water level changes that may occur at Ayala Park in the future due to nearby pumping.
3. *Three-dimensional groundwater flow and subsidence modeling.* This type of modeling will use groundwater level and production data at all wells in the area and historical land subsidence data from ground level surveys and InSAR. Again, this model will attempt to match historical water level and subsidence data and, if successful, will serve as a forecasting tool for MZ-1 managers.

It is desirable that the calibration period for future groundwater flow and subsidence modeling begins before significant drawdown in MZ-1 (~1940). The comprehensive set of subsidence data in this region begins in 1987. If subsidence data exists prior to 1987, then it needs to be collected, evaluated, and linked to the post-1987 survey data if it is to be used in model calibration. Associated Engineers is currently investigating the quantity and quality of pre-1987 subsidence data in MZ-1, and will deliver a report containing these data in October 2005.

Expanded Monitoring

One of the key discoveries of the IMP has been the groundwater barrier located beneath the historic fissure zone. However, the northern and southern extent of this barrier is unknown. The MZ-1 Technical Committee is contemplating the expansion of the aquifer-system monitoring network to the north and south of its current extent to better characterize the location and effectiveness of the barrier. Further aquifer-system testing (i.e. pumping test) may be necessary as part of this effort.

The horizontal surveys will also be extended to the north over this two year period to include the benchmarks along Schaefer Avenue. The next survey of the entire monument network is planned for October 2005.



4. DEVELOPMENT OF THE LONG-TERM MANAGEMENT PLAN FOR MZ-1

Recall that the objective of the long-term management plan is to minimize or abate permanent land subsidence and ground fissuring in MZ-1. The modeling efforts described above will be critical to the development of the long-term plan, and the continual evaluation of plan in the future.

A workshop was held May 25, 2005 to update the Special Referee on IMP progress and development of the long-term management plan for MZ-1. The OBMP implementation plan called for the development of the long-term plan by June 2005. Because the modeling efforts were just begun in the summer of 2005, the Special Referee was notified before and during the workshop of the impending delay in the development of the long-term plan.

Subsequent to the workshop, the Special Referee issued a report to the Court (Appendix A). In the report, the Special Referee:

- indicated that the IMP progress and current activities are sufficient to warrant a delay in the development of a long-term plan
- indicated that it was incumbent upon Watermaster to request that the Court extend the period for completion of the long-term plan, and that Watermaster file with the Court a motion for an order to set a new schedule for the completion of the long-term plan
- requested that Watermaster produce a MZ-1 Summary Report (this report) that describes the IMP results and conclusions to date, and addresses outstanding issues such as other potential subsidence mechanisms and historical subsidence that pre-dates the 1990s
- requested that Watermaster provide "guidance criteria" to the MZ-1 producers in an effort to minimize the potential for future subsidence and fissuring until the completion of the long-term plan

Guidance Criteria to Minimize Subsidence and Fissuring

In response, Watermaster produced this summary report, and drafted a set of guidance criteria for MZ-1 producers. Again, the purpose of the guidance criteria is to minimize the risk of permanent subsidence and ground fissuring while the long-term plan is being developed. The guidance criteria are listed in Table 4-1 and below:

1. Table 4-2 lists the existing wells (hereafter the Managed Wells) and their owners (hereafter the Parties) that are the subject of these Guidance Criteria.
2. Figure 4-1 shows the area addressed by these Guidance Criteria (hereafter the Area of Subsidence Management). Within the boundaries of this area, both existing and newly-constructed wells are subject to being classified as Managed Wells. This is based upon the observed and/or predicted effects of pumping on groundwater levels and aquifer-system deformation. Initial Managed Well designations for wells that pumped during the IMP were based on effects measured at the Ayala Park Piezometer/Extensometer Facility. Additional Managed Well designations were made based on analysis of well construction and geology.
3. The Guidance Level is a specified depth to water measured in Watermaster's PA-7 piezometer at Ayala Park. It is defined as the threshold water level at the onset of inelastic compaction of the aquifer system as recorded by the extensometer, minus 5 feet. The 5-foot reduction is meant to be a safety factor to ensure that inelastic compaction does not occur. The Guidance Level is established by Watermaster based on the periodic review of monitoring data collected by Watermaster. The initial Guidance Level is 245 feet below the top of the PA-7 well casing.



4. If the water level in PA-7 falls below the Guidance Level, Watermaster recommends that the Parties curtail their production from designated Managed Wells as required to maintain the water level in PA-7 above the Guidance Level.
5. Watermaster will provide the Parties with real-time water level data from PA-7.
6. The Parties are requested to maintain and provide to Watermaster accurate records of the operation of the Managed Wells, including production rates and on-off dates and times. The Parties are requested to promptly notify Watermaster of all operational changes made to maintain the water level in PA-7 above the Guidance Level.
7. Watermaster recommends that the Parties allow Watermaster to continue monitoring piezometric levels at their wells.
8. Watermaster will evaluate the data collected as part of the MZ-1 Monitoring Program at the conclusion of each fiscal year (June 30) and determine if modifications, additions, and/or deletions to the Guidance Criteria are necessary. These changes to the Guidance Criteria could include (1) additions or deletions to the list of Managed Wells, (2) re-delineation of the Area of Subsidence Management, (3) raising or lowering of the Guidance Level, or (4) additions and/or deletions to the Guidance Criteria (including the need to have periods of water level recovery).
9. Watermaster cautions that some subsidence and fissuring may occur in the future even if these Guidance Criteria are followed. Watermaster makes no warranties that faithful adherence to these Guidance Criteria will eliminate subsidence or fissuring.

Development and Schedule of the Long-Term Plan

In a sense, the guidance criteria listed above are a *first draft* of the long-term plan. Over the next nine months (October 2005 to June 2006), Watermaster will conduct its modeling exercises and coordinate a series of meetings with MZ-1 producers that will likely lead to revisions of the guidance criteria.

Of particular interest to the affected Parties is the sixth criterion (6) listed above, which limits the timing of production from the Managed Wells to July through September of each year. It may be that the Managed Wells can be pumped at reduced rates over periods longer than three months, and still not cause drawdown below 245 feet at the PA-7 piezometer or inelastic compaction within the aquifer system. Watermaster's groundwater flow and subsidence models will help to address these unknowns prior to pumping by predicting:

- the water level response at PA-7 due to various proposed pumping scenarios, and
- the aquifer-system compaction response due to the water level responses.

In June 2006, after the MZ-1 meetings and modeling exercises, Watermaster will release an expanded *second draft* of the guidance criteria, which will be defined as the official long-term plan for MZ-1. A key element of the long-term plan will be the verification of the model predictions and the protective nature of the guidance criteria as related to permanent land subsidence and ongoing fissuring. This verification will be accomplished through continued monitoring and reporting by Watermaster and revision of the guidance criteria when appropriate (see Criterion 11 above). In this sense, the long-term plan will be adaptive.

The guidance criteria and the long-term plan discussed above relate to the management of pumping-induced subsidence within south MZ-1 (the Area of Subsidence Management in the terminology of the



guidance criteria). Recall that central MZ-1 is currently experiencing measurable land subsidence, and is the focus of an expanded effort to monitor piezometric levels and land surface deformation. An adaptive long-term plan will accommodate the results and modified recommendations that will emerge from the expanded monitoring of central MZ-1.

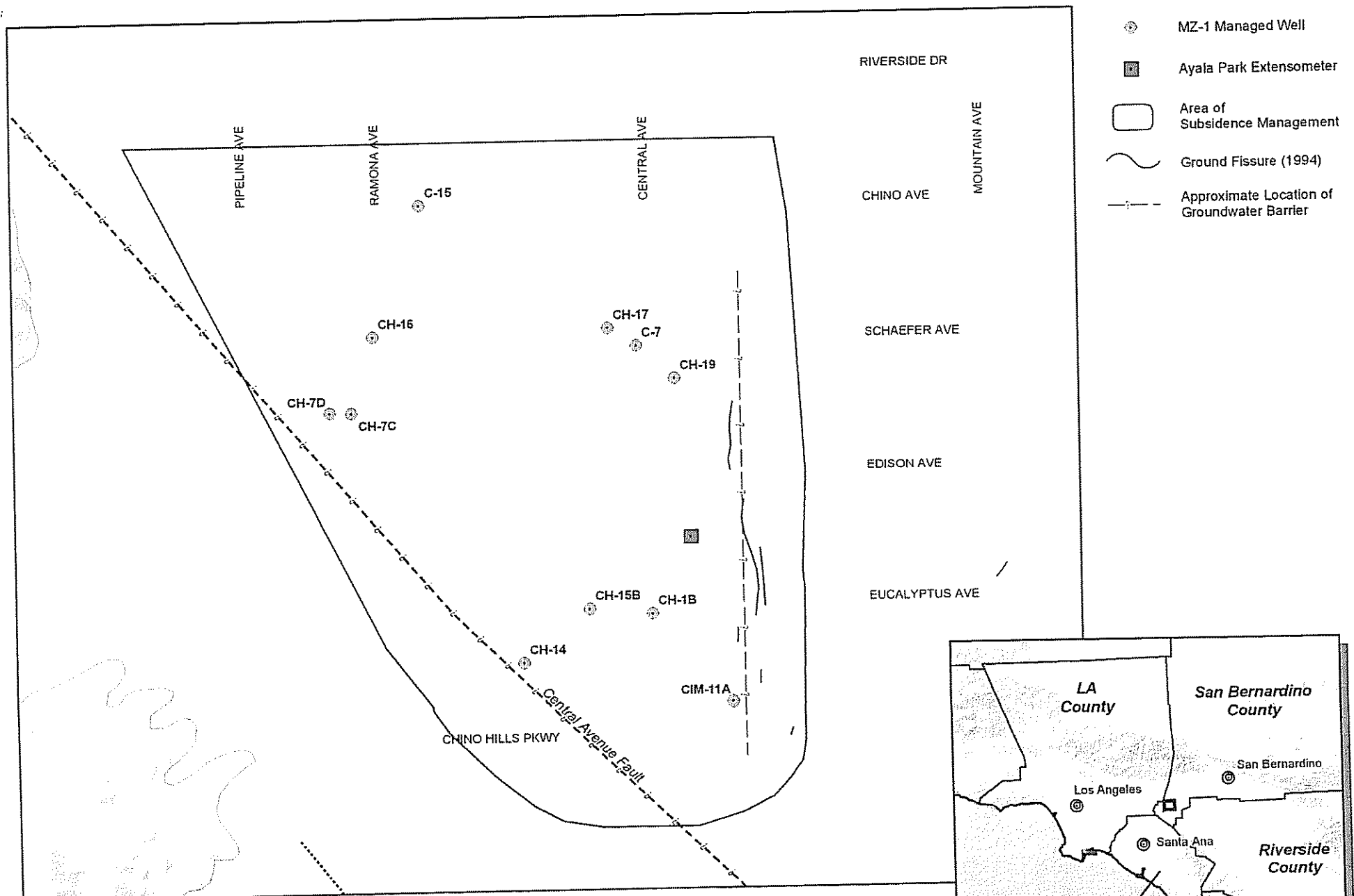


Table 4-1
Guidance Criteria for MZ-1 Producers

1. Table 4-2 lists the existing wells (hereafter the Managed Wells) and their owners (hereafter the Parties) that are the subject of these Guidance Criteria.
2. Figure 4-1 shows the area addressed by these Guidance Criteria (hereafter the Area of Subsidence Management). Within the boundaries of this area, both existing and newly-constructed wells are subject to being classified as Managed Wells. This is based upon the observed and/or predicted effects of pumping on groundwater levels and aquifer-system deformation. Initial Managed Well designations for wells that pumped during the IMP were based on effects measured at the Ayala Park Piezometer/Extensometer Facility. Additional Managed Well designations were made based on analysis of well construction and geology.
3. The Guidance Level is a specified depth to water measured in Watermaster's PA-7 piezometer at Ayala Park. It is defined as the threshold water level at the onset of inelastic compaction of the aquifer system as recorded by the extensometer, minus 5 feet. The 5-foot reduction is meant to be a safety factor to ensure that inelastic compaction does not occur. The Guidance Level is established by Watermaster based on the periodic review of monitoring data collected by Watermaster. The initial Guidance Level is 245 feet below the top of the PA-7 well casing.
4. If the water level in PA-7 falls below the Guidance Level, Watermaster recommends that the Parties curtail their production from designated Managed Wells as required to maintain the water level in PA-7 above the Guidance Level.
5. Watermaster will provide the Parties with real-time water level data from PA-7.
6. The Parties are requested to maintain and provide to Watermaster accurate records of the operation of the Managed Wells, including production rates and on-off dates and times. The Parties are requested to promptly notify Watermaster of all operational changes made to maintain the water level in PA-7 above the Guidance Level.
7. Watermaster recommends that the Parties allow Watermaster to continue monitoring piezometric levels at their wells.
8. Watermaster will evaluate the data collected as part of the MZ-1 Monitoring Program at the conclusion of each fiscal year (June 30) and determine if modifications, additions, and/or deletions to the Guidance Criteria are necessary. These changes to the Guidance Criteria could include (1) additions or deletions to the list of Managed Wells, (2) re-delineation of the Area of Subsidence Management, (3) raising or lowering of the Guidance Level, or (4) additions and/or deletions to the Guidance Criteria (including the need to have periods of water level recovery).
9. Watermaster cautions that some subsidence and fissuring may occur in the future even if these Guidance Criteria are followed. Watermaster makes no warranties that faithful adherence to these Guidance Criteria will eliminate subsidence or fissuring.

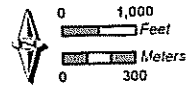
**Table 4-2
MZ-1 Managed Wells**

CBWM_ID	Owner	Well Name	Status	Screened Interval ft-bgs	Capacity gpm
600487	Chino Hills	1B	Inactive	440-470, 490-610, 720-900, 940-1180	up to 1200
600687	Chino Hills	7C	Inactive	550-950	—
600498	Chino Hills	7D	Inactive	320-400, 410-450, 490-810, 850-930	400
600495	Chino Hills	14	Inactive	350-860	300-400
600488	Chino Hills	15B	Active	360-440, 480-900	1500
600489	Chino Hills	16	Inactive	430-940	800
600499	Chino Hills	17	Active	300-460, 500-980	700
600500	Chino Hills	19	Active	340-420, 460-760, 800-1000	1100-1500
3600461	Chino	7	Inactive	180-780	
600670	Chino	15	Inactive	270-400, 626-820	
3602461	CIM	11A	Active	135-148, 174-187, 240-283, 405-465, 484-512, 518-540	500-600



MZ-1 Managed Wells
 MZ-1 Long-Term Monitoring Program

Figure 4-1



Author: AEM
 Date: 20060226
 File: Figure_4-1.mxd

Produced by:
 WILDERMUTH ENVIRONMENTAL, INC.

5. REFERENCES

- Fife, D.L., Rodgers, D.A., Chase, G.W., Chapman, R.H., and E.C. Sprotte. 1976. Geologic Hazards in Southwestern San Bernardino County, California: California Division of Mines and Geology Special Report 113, 40 p.
- Geomatrix Consultants, Inc. 1994. Final Report Ground Fissuring Study, California Department of Corrections, California Institution for Men, Chino, California. Project No. 2360. San Francisco, CA.
- Geoscience Support Services, Inc. 2002. Preliminary Geohydrologic Analysis of Subsidence in the Western Portion of the Chino Basin (Draft). Prepared for: City of Chino Hills. August 29, 2002.
- Holzer, T.L. 1984. Ground failure induced by ground-water withdrawal from unconsolidated sediment. *Rev. Eng. Geol*, 6:67-105.
- Kleinfelder, Inc. 1993. Geotechnical Investigation, Regional Subsidence and Related Ground Fissuring, City of Chino, California. Project No. 58-3101-01. Diamond Bar, CA.
- Kleinfelder, Inc. 1996. Chino Basin Subsidence and Fissuring Study, Chino, California. Project No. 58-5264-02. Diamond Bar, CA.
- Kleinfelder, Inc. 1999. Update of Subsidence Map, Chino, California. Project No. 58-9040-01. Diamond Bar, CA.
- Mendenhall, W. C. 1908. Ground waters and irrigation enterprises in the foothill belt, southern California: USGS Water-Supply Paper 219, p. 39-42, plates III and V.
- Peltzer, G. 1999a. Subsidence Monitoring Project: City of Chino. March 14, 1999.
- Peltzer, G. 1999b. Subsidence Monitoring Project: City of Chino. May 9, 1999.
- United States Geological Survey (USGS). 1999. Land subsidence in the United States / edited by Devin Galloway, David R. Jones, S.E. Ingebritsen. USGS Circular 1182. 175 p.
- Wildermuth Environmental, Inc. 1999. Optimum Basin Management Program. Phase I Report. Prepared for the Chino Basin Watermaster. August 19, 1999.
- Wildermuth Environmental, Inc. 2003. Management Zone 1 (MZ-1) Interim Monitoring Program Work Plan. Optimum Basin Management Program. Prepared for Chino Basin Watermaster. January 8, 2003.



**APPENDIX A – SPECIAL REFEREE’S REPORT ON PROGRESS MADE ON IMPLEMENTATION OF
THE WATERMASTER INTERIM PLAN FOR MANAGEMENT OF SUBSIDENCE**

1 ELLISON, SCHNEIDER & HARRIS L.L.P.
Anne J. Schneider, Esq. (Bar No. 72552)
2 2015 H Street
Sacramento, California 95814-3109
3 Telephone: (916) 447-2166

4 SPECIAL REFEREE

5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

SUPERIOR COURT OF THE STATE OF CALIFORNIA
COUNTY OF SAN BERNARDINO, RANCHO CUCAMONGA DIVISION

CHINO BASIN MUNICIPAL WATER DISTRICT,
Plaintiff,

v.

THE CITY OF CHINO,
Defendants.

CASE NO. RCV 51010
Judge: Honorable J. Michael Gunn

Date: TBD
Time:
Dept:

SPECIAL REFEREE'S REPORT ON PROGRESS MADE ON
IMPLEMENTATION OF THE WATERMASTER INTERIM PLAN
FOR MANAGEMENT OF SUBSIDENCE

TABLE OF CONTENTS

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

I. INTRODUCTION 1

II. 2002 COURT ORDER 2

III. COMPLIANCE WITH 2002 COURT ORDER 2

 A. Regular Reports by Watermaster 2

 B. Pumping Forbearance Agreements 3

 C. Court Order and Deadlines 3

IV. INTERIM PLAN WORK 3

 A. Technical Work Completed to Date 3

 B. Recommended Additional Technical Work 5

 C. Long-Term Plan Schedule 6

V. RECOMMENDATION OF SPECIAL REFEREE 6

 A. Preparation of a Summary Report on MZ1 Technical Work 6

 B. Watermaster Issuance of Guidance Criteria 7

 C. Long-Term Plan and Schedule 8

 D. Expanded Monitoring in MZ1 9

VI. CONCLUSION 9

1 ELLISON, SCHNEIDER & HARRIS L.L.P.
2 Anne J. Schneider, Esq. (Bar No. 72552)
3 2015 H Street
4 Sacramento, California 95814-3109
5 Telephone: (916) 447-2166

6 SPECIAL REFEREE

7
8 SUPERIOR COURT OF THE STATE OF CALIFORNIA
9 COUNTY OF SAN BERNARDINO, RANCHO CUCAMONGA DIVISION

10
11 CHINO BASIN MUNICIPAL WATER)
12 DISTRICT,)
13)
14)
15)
16)
17)
18)
19)
20)
21)
22)
23)
24)
25)
26)
27)
28)

Plaintiff,)
v.)
THE CITY OF CHINO,)
Defendants.)

CASE NO. RCV 51010
Judge: Honorable J. Michael Gunn
SPECIAL REFEREE'S REPORT ON
PROGRESS MADE ON IMPLEMEN-
TATION OF THE WATERMASTER
INTERIM PLAN FOR MANAGE-
MENT OF SUBSIDENCE
Date: TBD
Time:
Dept:

I. INTRODUCTION

A workshop was held May 25, 2005, as a follow-up to the workshop held August 29, 2002. The second workshop was originally scheduled to be held in 2003, pursuant to Court Order Concerning Watermaster's Interim Plan for Management of Subsidence, dated October 17, 2002 ("2002 Order"). The second workshop was postponed until substantial data collection and analysis had been completed.

The scope of the workshop was limited to presentation of technical data and analysis completed to date related to the Watermaster Interim Plan for Management of Subsidence ("Interim Plan"). The presentation was made by Mr. Malone of Wildermuth Environmental, Inc., Watermaster Engineering Consultant. Mr. Malone, Mr. Wildermuth, and Mr. Riley addressed questions posed

1 by the Special Referee, technical expert Joe Scalmanini, and several others. Consistent with use of
2 a workshop format, cross-examination was not allowed. A transcript of the workshop has been
3 prepared and will be filed with the Court by Watermaster.

4 II. 2002 COURT ORDER

5 In the 2002 Order, Judge Gunn directed Watermaster to:

- 6 (1) Implement the Interim Plan Monitoring Program for subsidence, including all work
7 related to piezometers, extensometers, ground-level monitoring, aquifer testing, and
8 other actions to study, analyze, and interpret subsidence and fissuring in MZ1 and to
9 determine causes in sufficient detail that they can be managed through a long-term
10 plan;
- 11 (2) Continue the MZ1 Technical Committee work and have the Technical Committee
12 serve in an advisory capacity to assist Watermaster in developing a long-term
13 subsidence management plan for MZ1;
- 14 (3) Develop a long-term management plan by fiscal year 2004/2005;
- 15 (4) Submit quarterly reports to the court on all interim and long-term efforts to address
16 MZ1 subsidence and fissuring problems, including documentation of participation,
17 forbearance, impacts, and other "noteworthy details that pertain to the goal of
18 forbearance to minimize subsidence and fissuring";
- 19 (5) Schedule a follow-up workshop for July 17, 2003; and
- 20 (6) File reports at least quarterly to apprise the court of any actions pending that could
21 cause the "jurisdiction issue" to resurface.

22 III. COMPLIANCE WITH 2002 COURT ORDER

23 A. Regular Reports by Watermaster

24 Watermaster has regularly reported to the court, through its status reports, on the progress
25 of all work related to Management Zone 1 ("MZ1") subsidence issues. Watermaster has also
26 reported that it is not aware of any pending legal actions which have raised issues concerning the
27 court's jurisdiction related to subsidence. The City of Chino ("Chino") has annually asked for
28 continuances of its Paragraph 15 Motion. The process has been that Chino requests continuance
after both Chino and the City of Chino Hills ("Chino Hills") have committed to forbear some
pumping. (Our files reflect that Chino requested a continuance to September 1, 2005, but we do not
have a copy of a court order approving that continuance.) Watermaster has reported that the MZ1
Technical Advisory Committee has been actively meeting.

////

1 **B. Pumping Forbearance Agreements**

2 Annual forbearance agreements have been entered into for the past three years by Chino and
3 Chino Hills. On April 28, 2005, Watermaster approved continuation of the forbearance agreements
4 for a fourth year. The fourth year of forbearance will be fiscal year 2005/2006.

5 **C. Court Order and Deadlines**

6 Two of the deadlines set forth in the 2002 Order have not been met. First, a long-term
7 management plan for MZ1 was to have been completed this fiscal year (by July 1, 2005). Second,
8 a follow-up Special Referee workshop was not held in July 2003, but, instead, was postponed in
9 order that a substantial body of work could be completed to study and assess the MZ1 issues.

10 **IV. INTERIM PLAN WORK**

11 **A. Technical Work Completed to Date**

12 The purpose of the second workshop was to hear a description of the work and study that has
13 been done since the MZ1 Interim Plan was begun, to ascertain whether any conclusions have been
14 reached, and to obtain a description of the activities that are being undertaken now and that remain
15 to be done. Mr. Malone's presentation on the technical work and analysis to date formed the bulk
16 of the workshop. He provided a very detailed description of the monitoring and other technical work
17 that has been undertaken. Ongoing efforts have included installation of piezometers and an
18 extensometer, installation of transducers to monitor water levels in a network of wells, and ground-
19 level and InSAR monitoring for subsidence. Mr. Malone reported several discoveries which he
20 characterized as significant, including discovery of a groundwater barrier at depth in a location
21 approximately coincident with the fissuring that has occurred, and that there are two very distinct
22 aquifer systems. (Reporter's Transcription ("RT") at pp. 44-47)

23 Mr. Malone also indicated that all of the potential causes of the subsidence and fissuring
24 which had been previously suggested had been reviewed, but that the Interim Plan work has focused
25 on the hypothesis that the subsidence and fissuring have been caused by subsurface fluid withdrawal:

26 We reviewed all these [other potential causes of subsidence], but what we zeroed in
27 on was the subsurface withdrawal as our hypothesis. That's what we identified as the
28 most likely cause of the subsidence that we had observed in the City of Chino . . . so
our hypothesis was that the groundwater production caused land subsidence and
fissuring in Chino Basin. . . We also noted that it was likely, or that we were

1 hypothesizing that the production from the confined aquifer system was the main
2 cause of this recent episode of subsidence and fissuring that was measured in the
3 early 1990's. So this is what we designed our monitoring program to test, whether
4 or not this hypothesis was correct.

5 (RT at pp. 32-33) There was no further discussion on the record regarding the nature of the review
6 that was done as to other potential causes of the subsidence and fissuring.

7 A primary focus of the technical work has been to determine at what point subsidence creates
8 inelastic compaction versus subsidence which is elastic and can recover. Mr. Malone described the
9 process to identify:

10 . . . the threshold where the deformation process transitions from elastic to inelastic.
11 By doing that, we'd be defining the usable volume of the storage reservoir, under
12 what range of water levels can we operate where we're not causing inelastic
13 compaction. And that would be a very key finding to any long-term management
14 plan that might develop out of this study.

15 (RT at pp. 43-44) The presentation included detailed descriptions of "stress-strain diagrams" which
16 reflect data on the elastic versus inelastic response of the system to pumping. Mr. Malone drew
17 attention to a "key point" that there appears to have been about two one-hundredths of a foot (0.02
18 ft.) of permanent compaction over the 2004 pumping season. (RT at pp. 58-59) He indicated that
19 the ". . . inelastic threshold was crossed at about 250 feet below ground surface during the latter part
20 of the pumping season." (RT at p. 60) Mr. Malone made it very clear that it is necessary to wait for
21 "fully recovered water levels" before drawing any final conclusions that the system transitions from
22 elastic to inelastic compaction when water levels are somewhere below 250 feet below ground
23 surface. (RT at p. 95)

24 In response to questions as to whether there are sufficient data available now to develop a
25 long-term plan, Mr. Malone responded that:

26 . . . When we operate in the forbearance agreement where we pump during the
27 pumping season, but we allow the system to recover during the wintertime months,
28 . . . we've demonstrated that we're operating generally in an elastic range. . . And so
29 to how far we can step out of that same pumping pattern and still operate within the
30 elastic range, we have not determined that yet. But the models hold the promise of
31 determining that.

32 (RT at p. 93)

33 Mr. Malone explained that the next step in the investigation is to create groundwater models

1 to "... simulate the groundwater production's effects on groundwater levels." (RT at p. 91) The
2 model will: "... help us provide that linkage between groundwater production and groundwater
3 levels that would provide a tool to evaluate any management plan that might come out of this." (RT
4 at p. 107)

5 In response to a question, Mr. Malone indicated that there are not plans to do further testing
6 in the southern part of MZ1:

7 We feel like if the stress-strain diagram goes to where it seems to be going, that
8 we've identified this threshold of preconsolidation stress that is the transition
9 between inelastic and elastic compaction. . . I don't think we have any further
10 questions that we're trying to answer in this southern part of Management Zone 1.
11 We're going to be developing the models that will help us provide that linkage
12 between groundwater production and groundwater levels. . .

13 (RT at p. 107)

14 **B. Recommended Additional Technical Work**

15 Mr. Malone recommended that technical work be continued in the southern part of MZ1 and
16 that certain technical work be started in the central MZ1 area to the north. For the southern MZ1
17 area, the recommendation is that monitoring continue (RT at pp. 97-99) and that some of the
18 dedicated piezometers be replaced (RT at pp. 103-104). In addition, numerical models would be
19 developed (a one-dimensional compaction model and a three-dimensional groundwater flow and
20 subsidence model). The three-dimensional model would link:

21 ... the areal and vertical distribution of pumpage to water level fluctuations and then
22 the ultimate deformation that occurs in the aquifer system. . . We've been working
23 mostly on this link between water level fluctuation and deformation. The model will,
24 then, now take us from that to include pumpage, how it affects water level
25 fluctuations, and then how the water level fluctuations affect deformation.

26 (RT at pp. 99-100)

27 Mr. Malone also discussed expanding the investigation of subsidence, initially via
28 monitoring, to the central region of MZ1, including the installation of water level transducers in
existing wells. (RT p. 107) Mr. Malone characterized as speculative the potential need to construct
a new monitoring facility or facilities in the central region, including a multi-piezometer and/or
extensometer. (RT at p. 102) He clarified that ground-level survey data, InSAR data, and water-
level data should be collected in the central MZ1 area before any conclusion would be reached on

1 the need for piezometers or an extensometer. (*Id.*) Expansion of the subsidence investigation into
2 the central region of MZ1 is prompted by the observation of some historical subsidence in the area,
3 confounded to some degree by the lack of any known local pumping in the immediate subsidence
4 area. (RT at pp. 76, 80, 83-84, 87)

5 C. Long-Term Plan Schedule

6 There was not extensive discussion at the workshop on either a long-term plan or a schedule
7 for completion of a plan. Mr. Malone indicated that InSAR surveys and ground surveys will be
8 conducted in both fall 2005 and spring 2006. (RT at p. 104) The modeling would be completed in
9 the spring of 2006, with a modeling report to follow that summer. (*Id.*) Mr. Wildermuth responded
10 to a question regarding scheduling by indicating that several more years of studies and model
11 development and analysis would be required, followed by 12 months to reach an agreement on a
12 long-term plan. (RT at p. 109) This timing is consistent with the discussion in the 2002 workshop.
13 At that workshop, in response to the question of how long it would take to start developing a long-
14 term plan given optimal agreement by all parties, Mr. Wildermuth stated that he thought it would
15 take three to five years (2002 Workshop Transcript at page 101.) Mr. Slater also clarified at the 2002
16 workshop that Mr. Wildermuth's three to five years were for the "data development side" and that
17 "the business deal probably follows soon thereon, and one would expect maybe twelve months to
18 wrap that piece up." (2002 Workshop Transcript at p. 103.)

19 V. RECOMMENDATION OF SPECIAL REFEREE

20 A. Preparation of a Summary Report on MZ1 Technical Work

21 A substantial body of technical work has been completed in the southern MZ1 area.
22 However, conclusions are still preliminary:

23 . . . With our stress-strain diagram . . . we're seeing that these head declines can
24 induce permanent compaction. But again this is a preliminary conclusion because
25 it is still pending fully recovered water levels. We're waiting for those water levels
to be fully recovered to see if any inelastic compaction did occur over the last
pumping season.

26 (RT at p. 95) When sufficient time has elapsed for water levels to have fully recovered, it is our
27 view that a summary report on all of the work presented at the workshop would be extremely helpful.
28 Even though no modeling has been completed, there appear to be sufficient data to conclude that

1 | there is a threshold depth to water that, if crossed, will likely lead to new inelastic compaction and
2 | subsidence and ground fissuring. That information should be made available to the parties in a
3 | summary report as soon as possible. Based on Mr. Malone's presentation, it should be feasible to
4 | prepare such a report by the middle of August. When the three-dimensional model is prepared, a
5 | modeling report will be written. In the meantime, there are important data and preliminary findings
6 | that can be made available very soon that will be of immediate use to the pumpers within MZ1.

7 | A further recommendation related to a summary report is that the summary report should also
8 | address the other potential causes of subsidence and fissuring that have been suggested in the past.
9 | If any of those items cannot be readily addressed, then the summary report should recommend how
10 | they will be addressed. While the detailed monitoring and testing has been substantial, they have
11 | not apparently addressed whether subsidence and fissuring might have been partially the result of
12 | mechanisms other than deep groundwater pumping. The continuing possibility that other
13 | mechanisms may also be responsible for subsidence is a potential impediment to development of the
14 | long-term plan.

15 | As part of this discussion, the summary report should discuss any information related to
16 | whether any significant subsidence predated the notable subsidence and fissuring since the early
17 | 1990's, and should describe the historical surveying investigation commissioned by Watermaster to
18 | address that issue. An important outstanding question is whether any pre-1990's subsidence that
19 | may have occurred correlates with, or can be attributed to, the large historical changes in
20 | groundwater levels that predated the Judgment.

21 | **B. Watermaster Issuance of Guidance Criteria.**

22 | Near the close of the workshop, there was some discussion of what would be included in a
23 | long-term plan, including possibly expanding the study area to include the central MZ1 region. (RT
24 | at pp. 123 *et seq.*) The concept of a long-term MZ1 management plan has been part of the
25 | Watermaster program since it was first articulated in 1999 in the Optimum Basin Management
26 | Program Phase 1 Report. A long-term management plan was to be formulated during the interim
27 | plan period, and would be based on investigations, monitoring programs and data assessment. It
28 | would be adaptive in nature. The workshop discussion noted that the technical work that has been

1 done and that will be done will form the basis for a long-term plan. Mr. Wildermuth indicated that:

2 . . . we haven't felt until very recently, last maybe six or eight months, that we were
3 at a point where we are getting close to coming up with conclusions from which we
4 could build a plan on, pull the parties together and talk about their deal making to
5 implement a plan.

6 (RT at p. 125) As discussed, above, however, development of a long-term plan itself does not appear
7 to be imminent.

8 In response to questions regarding the possibility of phasing the long-term plan, Mr.
9 Wildermuth discussed the option of bifurcating the ". . . southern and central portion, try to get the
10 southern portion going, and then based on the interests of the stakeholders, do something in the
11 central area." (RT at p. 125) Mr. Wildermuth also suggested that Watermaster's long-term plan
12 could range from being "guidance information" to something more aggressive. (RT at p. 108)

13 The concept of providing guidance criteria is a compelling one. It appears, based on the
14 presentation at the workshop, that Watermaster can very soon alert pumpers in the southern MZ1
15 area that there is a substantial risk that lowering water levels to below approximately 250 to 260 feet
16 below ground surface will result in new inelastic compaction and subsidence. This type of
17 information should formally be made available to the parties as soon as possible, presumably as soon
18 as a summary report on the MZ1 technical work is completed. The guidance criteria would be issued
19 by Watermaster in a timely fashion, to be followed by the long-term plan development which
20 necessarily will require a longer period to complete.

21 C. Long-Term Plan and Schedule

22 It is incumbent upon Watermaster now to request that the court extend the period for
23 completion of a long-term plan for MZ1. The overall testimony indicated that several more years
24 of technical and modeling work will be required, followed by approximately a year of negotiations
25 among the parties. The Watermaster should propose a schedule to the court which takes into account
26 the continuation of data collection and modeling work in the main MZ1 area as well as technical
27 work in the central MZ1 area. A date should be established for completion of a long-term plan.

28 Whether the long-term plan is ultimately characterized as a management plan is an issue for
the parties to address. Based on presentation and discussion at the workshop, it is clear that, at the

1 | very least, an ongoing monitoring program by Watermaster will be required so that the parties have
2 | full and sufficient information available to them to inform their decisions.

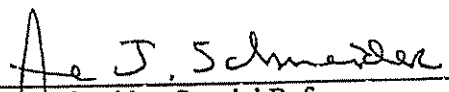
3 | **D. Expanded Monitoring in MZ1**

4 | The presentation at the workshop, while focused on monitoring and studies in the southern
5 | MZ1 area, indicated that some monitoring work can and should be done in the central MZ1 area,
6 | including installation of transducers in wells, and ground and InSar ground-level monitoring. More
7 | costly and complex efforts involving piezometers and an extensometer would logically be held in
8 | abeyance pending assessment of data collected. A phased long-term plan could include provision
9 | for central MZ1 monitoring work and studies, with future efforts considered and scheduled on an
10 | as-needed basis, while more definitive conclusions are drawn in the southern MZ1 area based on the
11 | extensive work already focused in that area. As noted above, the central MZ1 area appears to
12 | warrant additional investigation in light of detectable subsidence in spite of no significant pumping
13 | stress in the immediate subsidence area. Such additional investigation would also appear important
14 | in light of the overall concept of basin reoperation and hydraulic control, which could result in
15 | locally lower groundwater levels in parts of the basin.

16 | **VI. CONCLUSION**

17 | The workshop was very productive. Mr. Malone's presentation was excellent. The
18 | Watermaster does not require court approval to direct the preparation of a summary report on the
19 | MZ1 technical work or to issue guidance criteria. The Watermaster, however, should file with the
20 | court a motion for an order to set a schedule for the completion of a long-term plan.

21 | Dated: June 16, 2005

22 | 
23 | Anne J. Schneider, Special Referee

CHINO BASIN WATERMASTER
Case No. RCV 51010
Chino Basin Municipal Water District v. The City of Chino

PROOF OF SERVICE

I declare that:

I am employed in the County of San Bernardino, California. I am over the age of 18 years and not a party to the within action. My business address is Chino Basin Watermaster, 9641 San Bernardino Road, Rancho Cucamonga, California 91730; telephone (909) 484-3888.

On June 21, 2005 I served the following:

Special Referee's Report on Progress Made on Implementation of the Watermaster Interim Plan for Management of Subsidence

BY MAIL: in said cause, by placing a true copy thereof enclosed with postage thereon fully prepaid, for delivery by United States Postal Service mail at Rancho Cucamonga, California, addresses as follows:

See attached service list:
Mailing List 1

BY PERSONAL SERVICE: I caused such envelope to be delivered by hand to the addressee.

BY FACSIMILE: I transmitted said document by fax transmission from (909) 484-3890 to the fax number(s) indicated. The transmission was reported as complete on the transmission report, which was properly issued by the transmitting fax machine.

BY ELECTRONIC MAIL: I transmitted notice of availability of electronic documents by electronic transmission to the email address indicated. The transmission was reported as complete on the transmission report, which was properly issued by the transmitting electronic mail device.

I declare under penalty of perjury under the laws of the State of California that the above is true and correct.

Executed on June 21, 2005 in Rancho Cucamonga, California.


PAULA S. MOLTER
Chino Basin Watermaster

RICHARD ANDERSON
1365 W. FOOTHILL BLVD
SUITE 1
UPLAND, CA 91786

RODNEY BAKER
COUNSEL FOR EGGWEST &
JOHNSON
PO BOX 438
COULTERVILLE, CA 95311-0438

PATRICK BAUER
ARROWHEAD WATER COMPANY
5772 JURUPA RD
ONTARIO, CA 91761-3672

BOB BEST
NAT'L RESOURCE CONS SVCS
25864 BUSINESS CENTER DR K
REDLANDS, CA 92374

BRUCE CASH
UNITED WATER MGMT CO INC
1905 BUSINESS CENTER DR
SUITE 100
SAN BERNARDINO, CA 92408

STEVE CORTNER
VULCAN MATERIALS COMPANY
PO BOX 39756
LOS ANGELES, CA 90039

DAVID B. COSGROVE
RUTAN & TUCKER
611 ANTON BLVD
SUITE 1400
COSTA MESA, CA 92626

JENNY DE BOER
9155 RIVERSIDE DR
ONTARIO, CA 91761

JOE DELGADO
BOYS REPUBLIC
3493 GRAND AVENUE
CHINO HILLS, CA 91709

GLEN DURRINGTON
5512 FRANCIS ST
CHINO, CA 91710

DICK DYKSTRA
10129 SCHAEFER
ONTARIO, CA 91761-7973

RALPH FRANK
755 LAKEFIELD RD #E
WESTLAKE VILLAGE, CA 91361

CARL FREEMAN
L.D. KING
2151 CONVENTION CENTRE WAY
ONTARIO, CA 91764

PAUL DEUTSCH
GEOMATRIX CONSULTANTS, INC.
2444 MAIN ST., SUITE 215
FRESNO, CA 93721

JIM GALLAGHER
SOUTHERN CALIFORNIA WATER CO
2143 CONVENTION CENTER WAY
SUITE 110
ONTARIO, CA 91764

DON GALLEANO
4220 WINEVILLE RD
MIRA LOMA, CA 91752-1412

PETER HETTINGA
14244 ANON CT
CHINO, CA 91710

PETE HALL
PO BOX 519
TWIN PEAKS, CA 92391

LISA HAMILTON
GE/MGR ENV REMEDIATION PRGM
640 FREEDOM BUSINESS CTR
KING OF PRUSSIA, PA 19406

CARL HAUGE
SWRCB
PO BOX 942836
SACRAMENTO, CA 94236-0001

SUSAN TRAGER
LAW OFFICES OF SUSAN M. TRAGER
19712 MACARTHUR BLVD
SUITE 120
IRVINE, CA 92612

JOEL KUPERBERG
OCWD GENERAL COUNSEL
RUTAN & TUCKER, LLP
611 ANTON BLVD., 14TH FLOOR
COSTA MESA, CA 92626-1931

ANNESLEY IGNATIUS
COUNTY OF SAN BERNARDINO FCD
825 E 3RD ST
SAN BERNARDINO, CA 92415-0835

W. C. "BILL" KRUGER
CITY OF CHINO HILLS
2001 GRAND AVE
CHINO HILLS, CA 91709

SHARON JOYCE
STATE OF CA CDC
1515 S STREET, ROOM 314-F
SACRAMENTO, CA 95814

BOB THOMPSON
CONSULTANT TO SENATOR SOTO
822 N EUCLID AVE, SUITE A
ONTARIO, CA 91762

KRONICK ET AL
KRONICK MOSKOVITZ TIEDEMANN
& GIRARD
400 CAPITOL MALL, 27TH FLOOR
SACRAMENTO, CA 95814-4417

RONALD LA BRUCHERIE
12953 S BAKER AVE
ONTARIO, CA 91761-7903

MARILYN LEVIN
300 S SPRING ST
11TH FLOOR N TOWER
LOS ANGELES, CA 90013-1232

CARLOS LOZANO
STATE OF CA YTS
15180 S EUCLID
CHINO, CA 91710

ALAN MARKS
COUNSEL – COUNTY OF SAN
BERNARDINO
157 W 5TH STREET
SAN BERNARDINO, CA 92415

SANDY OLSON
WALNUT VALLEY WATER DISTRICT
271 BREA CANYON RD
WALNUT, CA 91789

BOB KUHN
669 HUNTERS TRAIL
GLENORA, CA 91740

ROBB QUINCY
CITY OF UPLAND
PO BOX 460
UPLAND, CA 91786

RICK REES
GEOMATRIX
2450 EAST RINCON STREET
CORONA, CA 92879

ROBERT REITER
SAN BERNARDINO VALLEY MWD
PO BOX 5906
SAN BERNARDINO, CA 92412-5906

LES RICHTER
CALIFORNIA SPEEDWAY
PO BOX 9300
FONTANA, CA 92334-9300

DAVID RINGEL
MONTGOMERY WATSON
PO BOX 7009
PASADENA, CA 91109-7009

AL LOPEZ
CBWM BOARD MEMBER
PO BOX 1773
CORONA, CA 92878

DAVID SCRIVEN
KRIEGER & STEWART
ENGINEERING
3602 UNIVERSITY AVE
RIVERSIDE, CA 92501

SENATOR NELL SOTO
STATE CAPITOL
ROOM NO 4066
SACRAMENTO, CA 95814

BILL STAFFORD
MARYGOLD MUTUAL WATER CO
9725 ALDER ST
BLOOMINGTON, CA 92316-1637

DAVID STARNES
MOBILE COMMUNITY MGMT CO
1801 E EDINGER AVE, SUITE 230
SANTA ANA, CA 92705

CRAIG STEWART
GEOMATRIX CONSULTANTS INC
510 SUPERIOR AVE, SUITE 200
NEWPORT BEACH, CA 92663

ROBERT BOWCOCK
INTEGRATED RESOURCES MGMNT
405 N. INDIAN HILL BLVD
CLAREMONT, CA 91711-4724

CHRIS SWANBERG
DEPT OF CORRECTIONS – LEGAL
AFFAIRS DIVISION
PO BOX 942883
SACRAMENTO, CA 94283-0001

SWRCB
PO BOX 2000
SACRAMENTO, CA 95809-2000

MICHAEL THIES
SPACE CENTER MIRA LOMA INC
3401 S ETIWANDA AVE, BLDG 503
MIRA LOMA, CA 91752-1126

JOHN THORNTON
PSOMAS AND ASSOCIATES
3187 RED HILL AVE, SUITE 250
COSTA MESA, CA 92626

R.E. THRASH III
PRAXAIR
5705 AIRPORT DR
ONTARIO, CA 91761

GEOFFREY VANDEN HEUVEL
CBWM BOARD MEMBER
7551 KIMBALL AVE
CHINO, CA 91710

SYBRAND VANDER DUSSEN
10573 EDISON AVE
ONTARIO, CA 91761

SYP VANDER DUSSEN
14380 EUCLID
CHINO, CA 91710

JOHN ANDERSON
CBWM BOARD MEMBER
12475 CEDAR AVENUE
CHINO, CA 91710

STEVE ARBELBIDE
417 PONDEROSA TR
CALIMESA, CA 92320

VIC BARRION
11559 PEMBROOKE
LOMA LINDA, CA 92354

ERIC WANG
SUNKIST GROWERS
760 E SUNKIST ST
ONTARIO, CA 91761

ROBERT NEUFELD
CBWM BOARD CHAIRMAN
14111 SAN GABRIEL CT
RANCHO CUCAMONGA, CA 91739

PAUL HOFER
11248 S TURNER AVE
ONTARIO, CA 91761

PAUL HAMRICK
JURUPA COMMUNITY SVCS DIST
11201 HARREL ST
MIRA LOMA, CA 91752

Distribution List Name: Committee List 1- Court Filings, Water Transactions

Members:

Andy Malone	amalone@wildermuthenvironmental.com
Anne Schneider	ajs@eslawfirm.com
April Woodruff	awoodruff@ieua.org
Arnold Rodriguez	jarodriguez@sarwc.com
Art Kidman	akidman@mkblawyers.com
Barbara Swanson	Barbara_Swanson@yahoo.com
Bill Kruger	citycouncil@chinohills.org
Bill Rice	brice@rb8.swrcb.ca.gov
Bill Stafford	bills@goldcom.com
Bill Thompson	bthompson@ci.norco.ca.us
Bob Feenstra	feenstra@milkiproducers.org
Bob Kuhn	bgkuhn@aol.com
Bonnie Tazza	bonniet@cvwdwater.com
Boyd Hill	bhill@mkblawyers.com
Brenda Fowler	balee@fontanawater.com
Brian Hess	bhess@niagarawater.com
Butch Araiza	butcharaiza@mindspring.com
Carole McGreevy	cmcgreevy@jcsd.us
Chris Swanberg	chris.swanberg@corr.ca.gov
Cindy LaCamera	clacamera@mwdh2o.com
Craig Stewart	cstewart@geomatrix.com
Curtis Aaron	caaron@fontana.org
Dan Arrighi	darrighi@sgvwater.com
Dan Hosteller	dghosteller@csupomona.edu
Dan McKinney	dmckinney@rhlaw.com
Daniel Cozad	dcozad@sawpa.org
Danni Maurizio	DMaurizio@CBWM.ORG
Dave Argo	argodg@bv.com
Dave Crosley	DCrosley@cityofchino.org
Dave Hill	dhill@ieua.org
Dave Schroeder	cbwcd.email@verizon.net
David B. Anderson	danders@water.ca.gov
David DeJesus	davidclcgm@aol.com
David Ringel	david.ringel@mwhglobal.com
Diane Sanchez	dianes@water.ca.gov
Don Galleano	donald@galleanowinery.com
Duffy Blau	Duffy954@aol.com
Eric Garner	elgamer@bbklaw.com
Frank Brommenschenkel	frank.brommen@verizon.net
Fred Fudacz	ffudacz@nossaman.com
Fred Lantz	flantz@ci.burbank.ca.us
Garth Morgan	gmorgan@ieua.org
Gene Koopman	GTKoopman@aol.com
Gerard Thibeault	gthibeault@rb8.swrcb.ca.gov
Gerry Black	gblack@FontanaWater.com
Glen Whritenour	gwhritenour@reliantenergy.com
Gordon P. Treweek	GTreweek@CBWM.ORG
Grace Cabrera	grace_cabrera@ci.pomona.ca.us
Henry Pepper	henry_pepper@ci.pomona.ca.us
James Jenkins	cnomgr@airports.sbcounty.gov
James P. Morris	jpmorris@bbklaw.com
Janine Wilson	Janine@CBWM.ORG
Jarlath Oley	joley@mwdh2o.com
Jean Cihigoyenetche	Jean_CGC@hotmail.com
jeeinc@aol.com	jeeinc@aol.com
Jeff Pierson	jpierson@intexcorp.com
Jerry King	jking@psomas.com
Jess Senecal	JessSenecal@lagerlof.com
Jill Willis	jwillis@bbklaw.com
Jim Bryson	jbryson@fontanawater.com
Jim Hill	jhill@cityofchino.org
Jim Markman	jmarkman@rwglaw.com
Jim Taylor	jim_taylor@ci.pomona.ca.us

Jim@city-attorney.com
jimmy@city-attorney.com
Joe Graziano
Joe P LeClaire
Joe Scalmanini
Joel Moskowitz
John Anderson
John Hayball
John Huitsing
John Rossi
John Schatz
John Vega
Judy Schurr
Julie Saba
Kathy Kunysz
Kathy Tiegs
Ken Jeske
Ken Kules
Kimberly Arce
Lisa Hamilton
Mark Hensley
Robert W Bowcock

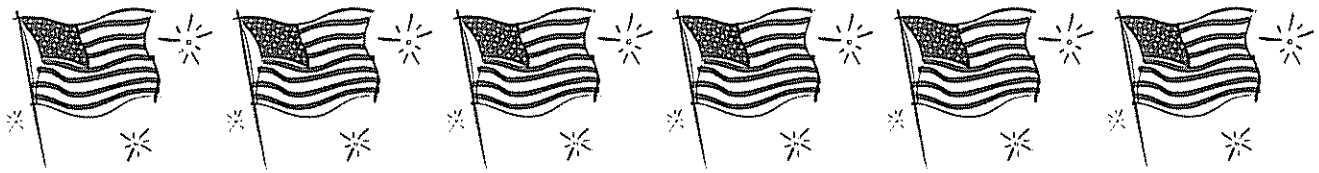
Jim@city-attorney.com
jimmy@city-attorney.com
jgraz4077@aol.com
jjeclaire@wildermuthenvironmental.com
jscal@jsce.com
jsm6@ix.netcom.com
janderson@ieua.org
john.hayball@sce.com
johnh@milkiproducers.org
jrossi@wmwd.com
jschatz13@cox.net
johnv@cvwdwater.com
jschurr@earthlink.net
jsaba@ieua.org
kkunysz@mwdh2o.com
ktiegs@ieua.org
kjeske@ci.ontario.ca.us
kkules@mwdh2o.com
KArce@HatchParent.com
Lisa.Hamilton@corporate.ge.com
mhensley@localgovlaw.com
bbowcock@irmwater.com

Distribution List Name: Committee List 2 - Court Filings, Water Transactions

Members:

Marilyn Levin	marilyn.levin@doj.ca.gov
Mark Kinsey	mkinsey@mvwd.org
Mark Ward	mark_ward@ameron-intl.com
Mark Wildermuth	mwildermuth@wildermuthenvrionmental.com
Martha Davis	mdavis@leua.org
Martin Rauch	martln@rauchcc.com
Michael Fife	Mfife@hatchparent.com
Michelle Staples	mstaples@jdplaw.com
Mike Del Santo	mike_deisanto@catellus.com
Mike Maestas	mmaestas@chinohills.org
Mike McGraw	mjmccgraw@FontanaWater.com
Mike Thies	mthies@spacecenterinc.com
Mohamed El-Amamy	melamamy@cl.ontario.ca.us
Nathan deBoom	nathan@milkproducers.org
Pam Wilson	pwilson@hatchparent.com
Paul Hamrick	weslie@jcsd.us
Paul Hofer	farmwatchtoo@aol.com
Paula Molter	PMolter@CBWM.ORG
Pete Hall	richard.okeefe@corr.ca.gov
Peter Von Haam	peter.vonhaam@doj.ca.gov
Phil Krause	pkrause@parks.sbcounty.gov
Phil Rosentrater	prosentrater@wmwd.com
Raul Garibay	raul_garibay@cl.pomona.ca.us
Ray Wellington	rwellington@sawaterco.com
Richard Atwater	Atwater@leua.org
Rick Hansen	rhansen@lvmwd.com
Rick Rees	rrees@geomatrix.com
Rita Kurth	ritak@cvwdwater.com
Robert DeLoach	robertd@cvwdwater.com
Robert Dougherty	RED@covcrowe.com
Robert Neufeld	N78098@aol.com
Robert Neufeld	robertn@cvwdwater.com
Robert Rauch	robert.rauchcc@verizon.net
Robert W Bowcock	bbowcock@irmwater.com
Robert W. Nicholson	rwnicholson@sgvwater.com
Ron Craig	RonC@rbf.com
Ron Small	ron.small@dgs.ca.gov
Sandy Lopez	slopez@cl.ontario.ca.us
Scott Burton	sburton@cl.ontario.ca.us
Sharon Joyce	SJoyce@executive.corr.ca.gov
Stacy MacBeth (smacbeth@jcsd.us)	smacbeth@jcsd.us
Steve Arbelbide	sarbelbide@californiasteel.com
Steve Kennedy	skennedy@bbmblaw.com
Steven Lee	slee@rhlaw.com
Tej Pahwa	lpahwa@dtsc.ca.gov
Terry Callin	tcallin@verizon.net
Timothy Ryan	tjryan@sgvwater.com
Tom Bunn	TomBunn@Lagerlof.com
Tom Love	TLove@leua.org
Tom McPeters	THMcP@aol.com
Tracy Tracy	ttracy@mvwd.org
Virginia Grebbien	vgrebbien@ocwd.com
Wayne Davison	ciwcpm@earthlink.net
William J. Brunick	bbrunick@bbmblaw.com
WM Admin Staff	

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION

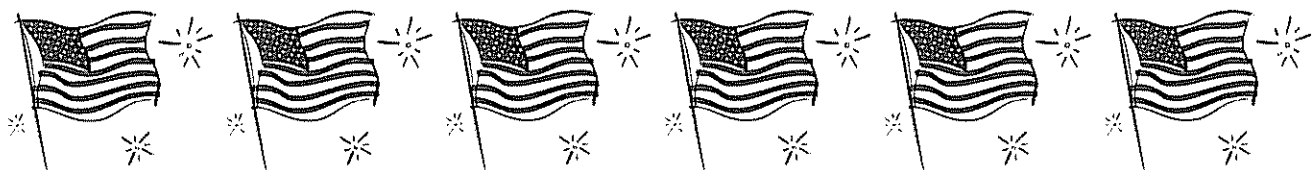


CHINO BASIN WATERMASTER

III. REPORTS/UPDATES

A. WATERMASTER ENGINEERING CONSULTANT REPORT

2. Proposed WDRs for Recharge of Imported
Water



California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501-3348

NOTICE OF PUBLIC HEARING

For
RESOLUTION NO. R8-2006-0042
ORDER NO. R8-2006-0005

For
**INITIAL STUDY AND NEGATIVE DECLARATION AND ISSUANCE OF GENERAL WASTE
DISCHARGE REQUIREMENTS FOR THE INJECTION/PERCOLATION OF IMPORTED STATE
PROJECT WATER, COLORADO RIVER WATER OR IMPORTED WELL WATER TO RECHARGE
GROUNDWATER MANAGEMENT ZONES WITHIN THE SANTA ANA REGION**

On the basis of preliminary staff review and application of lawful standards and regulations, the California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Water Board), proposes to adopt an initial study and negative declaration and issue general waste discharge requirements for the injection/percolation of imported State Project Water, Colorado River water or imported well water to recharge groundwater management zones within the Santa Ana. Region.

The Board is seeking comments concerning the proposed initial study and negative declaration and general waste discharge requirements and the potential effects of the discharges on the water quality and beneficial uses of the affected receiving waters.

The Board will hold a public hearing to consider adoption of the proposed waste discharge requirements as follows:

DATE: May 19, 2006
TIME: 9:00 a.m.
PLACE: City Council Chambers of Loma Linda
25541 Barton Road
City of Loma Linda

Interested persons are invited to submit written comments on the proposed Resolution No. R8-2006-0042 and Order No. R8-2006-0005. Interested persons are also invited to attend the public hearing and express their views on issues relating to the proposed Order and submission. Oral statements will be heard, but should be brief to allow all interested persons time to be heard. For the accuracy of the record, all testimony (oral statements) should be submitted in writing.

Although all comments that are provided up to and during the public hearing on this matter will be considered, receipt of comments by May 1, 2006 would be appreciated so that they can be used in the formulation of the draft Order that will be transmitted to the Board two weeks prior to the hearing. The draft Order may contain changes resulting from comments received from the public. To view and/or download a copy of the draft Order, please access our website at www.waterboards.ca.gov/santaana on or after May 8, 2006.

The Board's proposed Order, related documents, and all comments and petitions received may be inspected and copied at the Regional Board office, 3737 Main Street, Suite 500, Riverside, CA 92501-3348 (phone 951-782-4130) by appointment scheduled between the hours of 9:00 a.m. and 3:00 p.m., Monday through Friday. Copies of the proposed Order will be mailed to interested persons upon request to J. Shami (951) 782-3288.

Any person who is physically challenged and requires reasonable accommodation to participate in this Regional Board Meeting should contact Felipa Carrillo at (951) 782-3285 no later than May 8, 2006.

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION

California Regional Water Quality Control Board
Santa Ana Region

May 19, 2006

Staff Report

ITEM:

SUBJECT: General Waste Discharge Requirements for the injection/percolation of imported State Project Water, Colorado River Water or imported well water to recharge groundwater management zones within the Santa Ana Region – Groundwater Replenishment Projects Order No. R8-2006-0005

I DISCUSSION:

Background

The Regional Water Board adopted a revised Water Quality Control Plan for the Santa Ana Region (hereinafter Basin Plan) that became effective on January 24, 1995. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters in the Santa Ana Region addressed through the plan. More recently, the Basin Plan was amended significantly to incorporate revised boundaries for groundwater subbasins, now termed “management zones”, new nitrate-nitrogen and TDS objectives for the new management zones, and new nitrogen and TDS management strategies applicable to both surface and ground waters. The Regional Water Board adopted the Basin Plan Amendment on January 22, 2004. The State Water Resources Control Board (State Water Board) and Office of Administrative Law (OAL) approved the Amendment on September 30, 2004 and December 23, 2004, respectively. The surface water standards provisions of the Amendment are awaiting approval by the U.S. Environmental Protection Agency but do not bear significantly on these proposed general waste discharge requirements. This Order implements provisions of the Amendment that are related to groundwater management zones.

The Nitrogen/TDS Basin Plan Amendment was the culmination of a multi-year, multi-million dollar (\$3.5+M) effort sponsored by the N/TDS Task Force, with extensive participation by and close coordination with Regional Board staff. The Task Force included 22 water supply and wastewater management agencies and other stakeholders throughout the Region. The effort was initiated because of concerns that (1) the nitrate-nitrogen and TDS groundwater quality objectives specified in the Basin Plan had been established in a relatively short time in early (1970s) basin planning work for the Region and might not have benefited from a high level of scientific rigor, and (2) the established objectives would likely place significant restrictions on wastewater recycling, which was expected to be increasingly needed to meet the Region’s rapidly growing demand for water supply.

The Task Force’s recommendations for changes to the Basin Plan, including new groundwater management zones, new TDS and nitrate-nitrogen objectives for those zones and revised TDS and nitrogen management strategies, were the result of intensive, rigorous scientific evaluation of relevant water quality, geologic and hydrologic data. In addition, as described next, certain

members of the Task Force pursued evaluations and developed recommendations based on consideration of the requirements of the State's antidegradation policy (SWRCB Resolution No. 68-16), leading to the development of "Maximum Benefit" TDS and nitrate-nitrogen objectives and water resource management commitments for specific groundwater management zones.

Several agencies proposed that alternative TDS and/or nitrate-nitrogen water quality objectives less stringent than those developed by the Task Force based on historical water quality (the so-called "antidegradation" objectives) be adopted for specific groundwater management zones. The underlying intent of these proposals was to assure that the TDS and nitrate-nitrogen objectives for specific management zones were consistent with and would accommodate the water and wastewater resource management plans of the involved agencies, including the use of recycled water for groundwater recharge and reuse. Since the less stringent objectives would allow a lowering of water quality, the agencies were required to satisfy antidegradation requirements, that is, to demonstrate that their proposed objectives would protect beneficial uses, and that water quality consistent with maximum benefit to the people of the state would be maintained.

Appropriate beneficial use protection/maximum benefit demonstrations were made by the Chino Basin Watermaster/Inland Empire Utilities Agency, the Yucaipa Valley Water District and the City of Beaumont/San Timoteo Watershed Management Authority to justify alternative "maximum benefit" objectives for the Chino North, Cucamonga, Yucaipa, Beaumont and San Timoteo groundwater management zones. These "maximum benefit" proposals, which are described in detail in Chapter 5 – Implementation of the Amended Basin Plan, entail commitments by the agencies to implement specific projects and programs. While these agencies' efforts to develop these proposals indicate their strong interest to proceed with these commitments, unforeseen circumstances may impede or preclude it. To address this possibility, the Basin Plan Amendment included both the "antidegradation" and "maximum benefit" objectives for the subject groundwater management zones (See Table 4-1 of the amended Basin Plan, included in this general WDR as Attachment A). Chapter 5 of the amended Basin Plan specifies the requirements for implementation of these objectives. Provided that these agencies' commitments are met, then the agencies have demonstrated maximum benefit, and the "maximum benefit" objectives included in Table 4-1 of the amended Basin for these waters apply for regulatory purposes. However, if the Regional Board finds that these commitments are not being met and that "maximum benefit" is thus not demonstrated, then the "antidegradation" objectives for these waters will apply. Chapter 5 of the amended Basin Plan also describes the mitigation requirements that will apply should discharges based on "maximum benefit" objectives occur unsupported by the demonstration of "maximum benefit".

Rationale for Issuance of the Proposed Waste Discharge Requirements

Importation of State Project Water (SPW) and Colorado River Water (CRW) has long been a key part of the water supply plan within the Region. With the recent completion of new water conveyance systems, a number of agencies plan to increase recharge of groundwater management zones in the Santa Ana Region with these imported sources of supply when they are plentiful. In addition, water supply agencies are investigating the feasibility of importing or transferring groundwater pumped from one management zone for use/recharge in other areas of the Region. These agencies also plan to extract this stored water when potable water demand is high. These projects include those proposed by Elsinore Valley Municipal Water District for the Back Basin Groundwater Storage Project, Eastern Municipal Water District's Grant Avenue Recharge Project,

and the San Geronio Pass Water Agency's Brookside South Streambed Recharge Project. Other projects are in the planning stages.

To date, the Regional Board has not regulated groundwater recharge projects using imported SPW, CRW or well waters, even where the concentrations of nitrogen, TDS (or other) constituents exceeded relevant Basin Plan objectives. However, given the increased number and magnitude of the water recharge projects being contemplated, and in view of the extensive commitments that have been and will be made by dischargers and other stakeholders in the Region to develop and implement the new TDS and nitrate-nitrogen objectives, it is appropriate and in fact legally required to assure that those projects are consistent with the objectives. Otherwise, Basin Plan objectives could be violated and the TDS and nitrate-nitrogen management activities undertaken by certain stakeholders could be compromised by the recharge activities of others. To assure that imported water groundwater recharge projects do not cause or contribute to violations of applicable water quality standards, particularly the established groundwater objectives for Total Dissolved Solids (TDS) and nitrate-nitrogen, staff recommends the adoption of Order No. R8-2006-0005.

The proposed Order requires prospective dischargers to file: (a) a Notice of Intent (NOI) to comply with the terms and conditions of these General Waste Discharge Requirements (WDRs) or a report of waste discharge (ROWD); (b) the applicable first annual fee as required by Title 23, CCR, Section 2200; (c) a project map; (d) evidence of California Environmental Quality Act (CEQA) compliance; and (e) a monitoring plan. In addition, for projects that would affect groundwater management zones for which both maximum benefit and antidegradation TDS and nitrate-nitrogen objectives have been established in the Basin Plan ("maximum benefit management zones", the proposed Order requires dischargers to file with the NOI (or ROWD) documentation that demonstrates that the project is consistent with the applicable maximum benefit programs and commitments identified in the Basin Plan. This requirement may be satisfied by the submittal of a letter from the agency (-ies) responsible for the maximum benefit programs for the affected groundwater management zones that confirms that the proposed project(s) is consistent with the maximum benefit program.

Upon review of the NOI (or ROWD) by Regional Board staff, a determination will be made as to whether or not coverage under these General WDRs is appropriate. The Regional Board's Executive Officer would issue a discharge authorization letter to the discharger after staff has determined that proposed discharges can be covered under these General WDRs. If proposed discharges cannot be regulated under these general WDRs, the discharger will be notified by a letter from the Regional Board's Executive Officer or designee and alternative discharge requirements will be drafted. Where a proposed project that would affect groundwater maximum benefit management zones is not consistent with the maximum benefit program, Board staff will recommend waste discharge requirements that require compliance with the antidegradation TDS and nitrate-nitrogen water quality objectives.

II. REGULATORY BASIS FOR WASTE DISCHARGE REQUIREMENTS

This Order includes requirements that implement the Water Quality Control Plan (Basin Plan), which was adopted by the Regional Board on March 11, 1994. The Basin Plan was approved by the Office of Administrative Law and became effective on January 24, 1995. On January 22, 2004, the Regional Water Board adopted Resolution No. R8-2004-0001, amending the Basin Plan to incorporate revised boundaries for groundwater subbasins, now termed "management

zones”, new nitrate-nitrogen and TDS objectives for the new management zones, and new nitrogen and TDS management strategies applicable to both surface and ground waters. The State Water Resources Control Board and Office of Administrative Law (OAL) approved the N/TDS Amendment on September 30, 2004 and December 23, 2004, respectively. This Plan specifies water quality objectives and beneficial uses for the waters of the Santa Ana Region.

The existing and potential beneficial uses of underlying groundwater management zones in the Santa Ana Region include municipal and domestic supply, agricultural supply, industrial process supply, and industrial service supply.

The proposed Order specifies numeric and narrative limits for the constituents expected to be present in the discharges. The specified limits are consistent with the Basin Plan objectives and other state requirements.

In some instances, the TDS or nitrogen quality of the imported water proposed for recharge may exceed the TDS or nitrate-nitrogen water quality objectives for the specific groundwater management zone where the groundwater recharge is to occur. In these circumstances, project proponents have proposed to divert storm runoff into the recharge basins to assure that recharge of the combined flows meets the TDS and/or TN objectives of the groundwater management zone. This Order allows proponents to flow weight the TDS or TN quality of surface water and storm water for recharge.

Monitoring is the primary means of ensuring that waste discharge requirements are met. It is also the basis for enforcement actions against dischargers who are in violation of the waste discharge requirements issued by the Regional Board. All dischargers enrolled under this general permit will be required to conduct monitoring in accordance with a monitoring program issued by the Executive Officer. Each monitoring and reporting program will be customized for each enrollee based on the characteristics of the water to be used for recharge. The typical required constituents and frequency of analyses are tabulated in the self-monitoring program attached to this general permit as "Typical Monitoring and Reporting Program (MR&P) No. R8-2006-0005." This monitoring and reporting program will be revised as appropriate for each discharger. An increase of the parameters or frequency of monitoring will be required if monitoring data show the presence of specific pollutants of concern that are not limited in this Order. This Order may be reopened to include effluent limitations for such constituents. A reduction of the parameters or frequency of monitoring may be implemented with prior approval of the Executive Officer when monitoring data demonstrate that such reduction is warranted.

The Order also requires the discharger to monitor for Total Trihalomethanes (THM)¹, 1-4 Dioxane, Methyl-tert-butyl ether (MTBE), Perchlorate and N-Nitrosodimethylamine (NDMA) on a quarterly basis. These constituents have been determined to be present in imported water at low concentrations. If any of these constituents are detected at levels above the concentrations shown in the Table below, the discharger will be required to accelerate monitoring for that specific constituent to monthly. If the detected concentrations are persistent and considerable²,

¹ Sum of bromodichloromethane, dibromochloromethane, bromoform and chloroform

² Persistent and considerable is defined as being detected at levels 10 times the concentration shown in the table for three consecutive months during the accelerated monitoring.

the discharger may be required to implement measures to reduce discharges of such constituent(s) into the ground and apply for an individual permit.

Parameter	Concentration (ug/L)
1-4 Dioxane	3 ³
Total Trihalomethanes (THM)	100 ³
N-Nitrosodimethylamine (NDMA)	0.01 ⁴
Methyl-tert-butyl ether (MTBE)	13 ⁴
Perchlorate	6 ⁴

This Order requires the discharger to conduct an annual monitoring of constituents with primary contaminant levels (MCLs) and secondary MCLs. If any of these constituents are detected in the annual scan at levels above the MCLs, the discharger is required to conduct accelerated monitoring for that specific constituent to determine whether such parameters are persistent and considerable and should be limited in this Order.

The proposed discharge limitations and monitoring and reporting program should be adequate to protect the beneficial uses of the waters in the area.

RECOMMENDATION:

Adopted Order No. R8-2006-0005 as presented.

Comments were solicited from the following:

- State Water Resources Control Board, Office of the Chief Counsel – Jorge Leon
- State Water Resources Control Board, Division of Water Quality – Jim Maughan
- State Department of Water Resources - Glendale
- State Department of Health Services, Santa Ana –
- State Department of Health Services, San Bernardino – Sean McCarthy
- State Department of Health Services, San Diego – Steven Williams
- Orange County Public Facilities and Resources Department - Chris Crompton
- Orange County Health Care Agency - Seth Daugherty
- Orange County Water District – Nira Yamachika
- Riverside County Environmental Health Department - Sandy Bonchek
- San Bernardino County Department of Public Works, Environmental Management Division – Naresh Varma
- San Bernardino County Environmental Health Department – Daniel Avera
- South Coast Air Quality Management District - Barry Wallerstein
- Orange County Coastkeeper – Garry Brown
- Lawyers for Clean Water C/c San Francisco Baykeeper
- Elsinore Valley Municipal Water District
- Yucaipa Valley Water District
- City of Beaumont – Alan Kapanicas
- Inland Empire Utilities Agency – Patrick O. Shields

³ Based on CDHS' notification Level
⁴ Based on CDHS' MCL.

Santa Ana Watershed Project Authority – Daniel Cozad
Santa Ana River Dischargers Association
San Geronio Pass Water Agency
Orange County Coastkeeper
Lawyers for Clean Water C/c San Francisco Baykeeper
Chino Basin Watermaster
San Timoteo Watershed Management Authority
Wildermuth Environmental Inc. – Mark Wildermuth
Attached mailing list

California Regional Water Quality Control Board
Santa Ana Region

Order No. R8-2006-0005

GENERAL WASTE DISCHARGE REQUIREMENTS FOR THE
INJECTION/PERCOLATION OF IMPORTED STATE PROJECT WATER, COLORADO
RIVER WATER OR IMPORTED WELL WATER TO RECHARGE GROUNDWATER
MANAGEMENT ZONES WITHIN THE SANTA ANA REGION – GROUNDWATER
REPLENISHMENT PROJECTS

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Water Board), finds that:

1. The Regional Water Board adopted a revised Water Quality Control Plan for the Santa Ana Region (hereinafter Basin Plan) that became effective on January 24, 1995. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters in the Santa Ana Region addressed through the plan. More recently, the Basin Plan was amended significantly to incorporate revised boundaries for groundwater subbasins, now termed “management zones”, new nitrate-nitrogen and TDS objectives for the new management zones, and new nitrogen and TDS management strategies applicable to both surface and ground waters. This Basin Plan Amendment was adopted by the Regional Water Board on January 22, 2004. The State Water Resources Control Board (State Water Board) and Office of Administrative Law (OAL) approved the Amendment on September 30, 2004 and December 23, 2004, respectively. The surface water standards provisions of the Amendment are awaiting approval by the U.S. Environmental Protection Agency. The groundwater-related components of the N/TDS Amendment became effective upon approval by OAL. Accordingly, these waste discharge requirements implement relevant, groundwater-related components of the N/TDS Amendment.
2. The adoption of the N/TDS Amendment resulted from an intensive and scientifically rigorous effort by stakeholders throughout the Region to address nitrogen and TDS water quality objectives and management strategies. Given the increased number and magnitude of water recharge projects being contemplated in the Region, and in view of the extensive commitments that have been and will be made by dischargers and other stakeholders in the Region to develop and implement the new TDS and nitrogen objectives, it is appropriate, as well as legally necessary, to assure that those projects are consistent with the objectives. Failure to assure proper regulation of recharge projects could result in violations of Basin Plan objectives and compromise TDS and nitrogen management strategies implemented by other parties. The adoption of these general waste discharge requirements for groundwater recharge projects will facilitate groundwater replenishment projects needed to assure a reliable water supply and will assure that such projects are conducted in accordance with the Basin Plan.

General Waste Discharge Requirements - Groundwater Replenishment Projects

3. As shown in Chapter 4 of the Basin Plan as amended by the N/TDS Amendment, two sets of TDS and nitrate-nitrogen objectives have been adopted for certain groundwater management zones (Chino North, Cucamonga, Yucaipa, San Timoteo and Beaumont Groundwater Management Zones (GMZ)): the “maximum benefit” objectives and more stringent objectives based on historic ambient quality (the “antidegradation” objectives). The application of the “maximum benefit” objectives for these Management Zones is contingent on the implementation of commitments by identified responsible parties to implement specific water and wastewater resources management programs. These parties include the Chino Basin Watermaster and Inland Empire Utilities Agency (Chino North, Cucamonga GMZs), the City of Beaumont and the San Timoteo Watershed Management Authority (San Timoteo and Beaumont GMZs) and the Yucaipa Valley Water District (Yucaipa and San Timoteo GMZs). The maximum benefit commitments of these agencies are delineated in Chapter 5 of the Basin Plan, as amended by the N/TDS Amendment and include compliance dates for the implementation of specific activities. These programs are part of a coordinated effort by the agencies to develop and implement projects that will assure reliable water supplies to meet rapidly increasing demands in this area.
4. This Order implements relevant portions of the N/TDS Amendment by specifying effluent limitations and other requirements based on the nitrate-nitrogen and TDS objectives for the groundwater management zones. Where both “maximum benefit” and “antidegradation” objectives apply, effluent limitations and other requirements based on both sets of objectives are specified. Provided that the maximum benefit commitments shown in the N/TDS Amendment are satisfied, then the requirements of the Order that address the “maximum benefit” objectives apply. If the Regional Board finds that the maximum benefit commitments are not being met, then the requirements of the Order that address the “antidegradation” TDS and nitrate-nitrogen objectives for these GMZ apply.
5. Entity(ies)/individual(s) proposing to recharge State Project water, Colorado River water or other imported water, including well water, into groundwater management zones within the Santa Ana Region are hereinafter referred to as “discharger” and are subject to the terms and conditions of this Order.
6. The existing and potential beneficial uses of underlying groundwater basins in the Santa Ana Region include:
 - a. Municipal and domestic supply,
 - b. Agricultural supply,
 - c. Industrial service supply, and
 - d. Industrial process supply.
7. The requirements contained in this Order are necessary to implement the Basin Plan.

8. Dischargers seeking coverage under these General WDRs must file with the Regional Board: (a) a Notice of Intent (NOI) to comply with the terms and conditions of these General WDRs or a Report of waste discharge (ROWD); (b) the applicable first annual fee as required by Title 23, CCR, Section 2200; (c) a project map; (d) evidence of California Environmental Quality Act (CEQA) compliance; and (e) a proposed monitoring plan. Upon review by Regional Board staff, a determination will be made as to whether or not coverage under these General WDRs is appropriate. A letter from the Regional Board Executive Officer will notify the Discharger when coverage under these General WDRs is authorized and will include project-specific monitoring and reporting requirements. If necessary, individual requirements will be developed to address projects that cannot be authorized under these General WDRs.
9. A Negative Declaration in compliance with CEQA has been adopted for these General WDRs. The environmental impacts from new discharges authorized by these General WDRs have been found to be less than significant.
10. The Regional Board has notified interested agencies and persons of its intent to prescribe general waste discharge requirements for groundwater cleanup discharges resulting from the cleanup of groundwater, and has provided them with an opportunity to submit their written views and recommendations.
11. The Regional Board, in a public hearing, heard and considered all comments pertaining to the general waste discharge requirements for discharges of treated groundwater resulting from groundwater cleanup projects.

IT IS HEREBY ORDERED that the Discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder shall comply with the following:

A. DISCHARGE SPECIFICATIONS

1. The discharge of wastes containing constituent concentrations in excess of the following limits is prohibited:

Constituent	12-Month Average Concentration Limit ¹
Total Dissolved Solids (TDS)	TDS Water Quality Objective as shown in the Attachment "A" corresponding to the affected Groundwater Management Zone

¹ 12-Month average concentration limit means the highest allowable average of monthly discharges over the last twelve months, calculated as the sum of all monthly discharges measured during last twelve months divided by the number of monthly discharges measured during that time period.

Constituent	12-Month Average Concentration Limit ¹
Total Inorganic Nitrogen (TIN)	TIN Water Quality Objective as shown in the Attachment "A" corresponding to the affected Groundwater Management Zone

2. The pH of the discharge shall be within the range of 6 to 9 pH units.
3. The discharge of treated water through injection wells/percolation trenches shall not cause degradation of the receiving groundwater.

B. PROHIBITIONS

1. The discharge of waste that may affect the beneficial uses of the groundwater is prohibited.
2. The discharge of wastes to property not owned or controlled by the discharger is prohibited.
3. The discharge of any substances in concentrations toxic to human, animal, plant or aquatic life is prohibited.

C. PROVISIONS

1. Neither the treatment nor the discharge of waste shall create, or threaten to create, a nuisance or pollution as defined by Section 13050 of the California Water Code.
2. For projects that would affect groundwater management zones with established TDS and nitrate-nitrogen objectives based on both "maximum benefit" and "antidegradation", the Discharger shall obtain confirmation from the agency (-ies) responsible for implementing relevant maximum benefit commitments², as specified in Tables 5-8a, 5-9a and 5-10a of the Basin Plan, that their proposed project is consistent with the agency's maximum benefit program. This confirmation shall be submitted as part of the NOI or ROWD. Absent this confirmation, the Discharger is required to comply with the TDS and nitrate-nitrogen limitations of this Order that are based on the antidegradation objectives.
3. The Executive Officer shall determine whether the proposed discharge is eligible for coverage under these general waste discharge requirements, after which, the Executive Officer may;

² Includes the following agencies: Chino Basin Watermaster/Inland Empire Utilities Agency, the Yucaipa Valley Water District and the City of Beaumont/San Timoteo Watershed Management Authority

- a. Authorize the proposed discharge by transmitting a "Discharge Authorization Letter" to the discharge proponent (now an "authorized discharger") authorizing the initiation of the discharge under the conditions of this Order and any other conditions consistent with this Order that are necessary to protect the beneficial uses of the receiving waters; or,
 - b. Require the discharge proponent to obtain individual waste discharge requirements prior to any discharge to waters of the State within the Santa Ana Region.
4. The discharge authorization letter from the Executive Officer shall specify any conditions necessary to protect the beneficial uses of the receiving waters and shall specify the Self-Monitoring Program for the proposed discharge in accordance with this Order. The discharge authorization letter may be terminated or revised by the Executive Officer at any time.
 5. The discharger shall comply with all requirements of this Order and the terms, conditions and limitations of the discharge authorization letter.
 6. The discharger shall comply with the monitoring and reporting program R8-2006-0005 issued by the Executive Officer. Revision of this monitoring and reporting program by the Executive Officer may be necessary to confirm that the discharger is in compliance with the requirements and provisions contained in this Order. Revisions may be made by the Executive Officer at any time during the term of this Order, and may include a reduction or an increase in the number of constituents to be monitored, the frequency of monitoring or the number and size of samples collected.
 7. Compliance with the 12-month average limit specified under Discharge Specifications A.1. shall be determined by the arithmetic mean of the last twelve monthly averages.
 8. Compliance with the effluent limitations shall be based on the practical quantitation levels (PQL) specified in Attachment "A" of M&RP No. R8-2006-0005 or on the lower detection limits achieved by the discharger. The discharge shall be considered to be in compliance with an effluent limitation that is less than or equal to the PQL specified in Attachment "A" of M&RP No. R8-2006-0005 if the arithmetic mean of all test results for the monitoring period is less than the constituent effluent limitation. Analytical results that are less than the specified PQL shall be assigned a value of zero.
 9. Compliance determinations shall be based on available analyses for the time interval associated with the effluent limitation. Where only one sample analysis is available in a specified time interval (e.g., weekly, monthly, quarterly), that sample shall serve to characterize the discharge for the entire interval.
 10. Compliance based on a single sample analysis shall be determined where appropriate, as described below:

- a. When the effluent limitation is greater than or equal to the PQL, compliance shall be determined based on the effluent limitation in either single or multiple sample analyses.
 - b. When the effluent limitation is less than the PQL, compliance determinations based on analysis of a single sample shall only be undertaken if the concentration of the constituent of concern in the sample is greater than or equal to the PQL.
11. The discharger must comply with all of the requirements of this Order. Any violation of this Order constitutes a violation of the California Water Code and is grounds for enforcement action, termination of this Order, revocation and reissuance of this Order, denial of an application for reissuance of this Order, or a combination thereof.
 12. The discharger shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.
 13. The discharger shall take all reasonable steps to minimize any adverse impact to receiving waters resulting from noncompliance with any requirements specified in this Order, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.
 14. The discharger shall maintain a copy of this Order at the site so that it is available to site operating personnel at all times. Key operating personnel shall be familiar with its content.
 15. The discharger shall notify the Regional Board in advance of any planned physical alterations or additions to the permitted facility or changes in operation including any material change or proposed change in the character, location or volume of the discharge or activity that may result in noncompliance with these waste discharge requirements.
 16. The discharger shall permit Board staff:
 - a. Entry upon premises in which an effluent source is located, or in which any required records are kept;
 - b. Access to copy any records required to be kept under the terms and conditions of this Order;
 - c. Inspection of monitoring equipment records; and
 - d. To sample any discharge.

17. The discharger shall report any discharge of waste that may endanger health or the environment. Any information shall be provided to the Executive Officer (909-782-4130) and the Office of Emergency Services (800-852-7550), if appropriate, as soon as the discharger becomes aware of the circumstances. A written report shall be submitted within five (5) days and shall contain a description of the discharge and its cause, the period of discharge, including exact dates and times and, if the discharge has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the discharge.
18. The California Water Code provides that any person who violates a waste discharge requirement or a provision of the California Water Code is subject to civil penalties of up to \$5,000 per day, \$10,000 per day, or \$25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to \$10 per gallon per day, or \$20 per gallon per day of violation; or some combination thereof, depending on the violation, or upon the combination of violations.

D. REQUIRED REPORTS AND NOTICES

1. The discharger shall give advance notice to the Regional Board of any planned changes in the permitted facility or activity that may result in noncompliance with these waste discharge requirements.
2. In the event of any change in control or ownership of land or waste discharge facilities currently owned or controlled by the discharger, the discharger shall notify the succeeding owner or operator of the existence of their authorization to discharge wastewater under this general permit by letter, a copy of which together with the signed agreement between previous owner and the new owner accepting responsibility and liability for complying with this general permit shall be forwarded to the Executive Officer.
3. Upon completion of the project, the discharger shall notify the Executive Officer of the Regional Board in writing about cessation of the discharge and shall request for termination of coverage under this general permit.

E. APPLICATION REQUIREMENTS

1. At least 60 days before the intended start of a new discharge or individual permit expiration, the discharger shall submit an application for coverage under this Order. The authorization letter from the Executive Officer is required prior to commencement of the discharge. The application shall consist of the following information:
 - a. Notice of Intent to be covered under this general permit.

- b. A report that shall include the following:
- 1) Characterization of the proposed wastewater discharge. A representative water sample shall be analyzed for all 126-priority pollutants³ listed in Attachment B of the M&RP, TDS and nitrate-nitrogen.
 - 2) The name and location where groundwater recharge is planned;
 - 3) The groundwater management zone(s) that would be affected by the discharge;
 - 4) The estimated average and maximum daily flow rates;
 - 5) The frequency and duration of the discharge;
 - 6) A description of the proposed treatment system (if appropriate); and
 - 7) A map showing locations and sizes of recharge basins or aquifer storage/recovery wells.
 - 8) For discharges that would affect groundwater management zones with both maximum benefit and antidegradation TDS and nitrate-nitrogen objectives, confirmation from the agency/-ies responsible for maximum benefit commitments (see Provisions C.2.) that the discharge is consistent with the maximum benefit program.
- c. Any other information deemed necessary by the Executive Officer.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on May 19, 2006.

Gerard J. Thibeault
Executive Officer

³ Test methods shall be in accordance with 40 CFR 136. For testing organic volatile compounds use EPA Method 8260 and report entire suite of detected constituents. The method detection limit and detection level attained shall also be reported with the test results.

General Groundwater Recharge Waste Discharge Requirements

Groundwater Management Zones	Water Quality Objective (mg/L)		
	TDS	TIN Limit for ReInjection Projects	TIN Limit for Recharge/ Percolation Projects
Big Bear Valley*	220	5.0	6.67
Beaumont "maximum benefit"++	290	5.0	3.47
Beaumont "antidegradation" ++	230	1.5	2.00
Bunker Hill – A	310	2.7	3.60
Bunker Hill – B	260	7.3	7.33
Colton	410	2.7	3.60
Chino – North "maximum benefit" ++	300	5.0	6.67
Chino 1 – "antidegradation" ++	280	5.0	6.67
Chino 2 – "antidegradation" ++	250	2.9	3.87
Chino 3 – "antidegradation" ++	260	3.5	4.67
Chino – East @	730	10.0	5.60
Chino – South @	680	4.2	13.33
Cucamonga "maximum benefit" ++	260	5.0	5.87
Cucamonga "antidegradation" ++	210	2.4	3.20
Lytle	240	1.5	2.00
Rialto	230	2.0	2.67
San Timoteo "maximum benefit" ++	300	5.0	3.87
San Timoteo "antidegradation" ++	300	2.7	3.60
Yucaipa "maximum benefit" ++	330	5.0	6.67
Yucaipa "antidegradation" ++	320	4.2	5.60
Arlington	980	10	13.33
Bedford **	--	--	--
Coldwater	380	1.5	2.00
Elsinore	480	1.0	1.33
Lee Lake**	--	--	--
Riverside – A	440	6.2	5.87

General Groundwater Recharge Waste Discharge Requirements

Groundwater Management Zones	Water Quality Objective (mg/L)		
	TDS	TIN Limit for ReInjection Projects	TIN Limit for Recharge/ Percolation Projects
Riverside – B	290	7.6	10.13
Riverside – C	680	8.3	11.07
Riverside – D	810	10.0	13.33
Riverside – E	720	10.0	13.33
Riverside – F	580	9.5	12.67
Temescal	770	10.0	13.33
Warm Springs**	-	-	-
SAN JACINTO RIVER BASIN			
Garner Valley*	300	2.0	2.66
Idyllwild Area**	--	--	--
Canyon	220	2.5	2.13
Hemet - South	730	4.1	5.47
Lakeview – Hemet North	520	1.8	2.40
Menifee	1020	2.8	3.73
Perris North	570	5.2	6.27
Perris South	1260	2.5	3.33
San Jacinto – Lower	520	1.0	1.33
San Jacinto – Upper	320	1.4	1.87
LOWER SANTA ANA RIVER BASIN			
La Habra**	--	--	--
Santiago **	--	--	--
Orange	580	3.4	4.53
Irvine	910	5.9	7.87

++ "Maximum benefit" objectives apply unless Regional Board determines that the maximum benefit commitments shown in Tables 5-8a, 5-9a and 5-10a are not being met; in that case, "antidegradation" objectives would apply (see discussion in Chapter 5 of the Basin Plan).

** Numeric objectives not established; narrative objectives apply

California Regional Water Quality Control Board
Santa Ana Region

Monitoring and Reporting Program No. R8-2006-0005

GENERAL WASTE DISCHARGE REQUIREMENTS FOR THE
INJECTION/PERCOLATION OF IMPORTED STATE PROJECT WATER, COLORADO
RIVER WATER OR IMPORTED WELL WATER TO RECHARGE GROUNDWATER
MANAGEMENT ZONES WITHIN THE SANTA ANA REGION

A. MONITORING REQUIREMENTS

1. All chemical and bacteriological analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services Environmental Laboratory Accreditation Program (ELAP) or approved by the Executive Officer. A copy of the laboratory certification shall be submitted with the annual summary report.
2. All sampling and sample preservation shall be in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association).
3. All analytical data shall be reported with method detection limits (MDLs)¹, and with identification of either minimum level (ML)² practical quantitation levels (PQLs)³ or limits of quantitation (LOQs).
4. Laboratory data must quantify each constituent down to the Practical Quantitation Levels specified in Attachment "A" or to "Detection Limits for purposes of Reporting (DLRs)" by the California Department of Health Services. Any internal quality control data associated with the sample must be reported when requested by the Executive Officer. The Regional Board will reject the quantified laboratory data if quality control data is unavailable or unacceptable. All QA/QC analyses must be run on the same dates when samples were actually analyzed. The Discharger shall make available for inspection and/or submit the QA/QC documentation upon request by Regional Board staff. Proper chain of custody procedures must be followed and a copy of that documentation shall be furnished upon request by Regional Board staff.

¹ MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 CFR 136, Appendix B, revised as of May 14, 1999

² Minimum level is the concentration at which the entire analytical system must give a recognizable signal and acceptable point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed

³ PQL is the lowest concentration of a substance that can be determined within ± 20 percent of the true concentration by 75 percent of the analytical laboratories tested in a performance evaluation study. Alternatively, if performance data are not available, the PQL is the method detection limit (MDL) x 5 for carcinogens and MDL x 10 for noncarcinogens

5. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.
6. The flow measurement system shall be calibrated at least once per year or more frequently, to ensure continued accuracy.
7. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Influent samples shall be taken at each point of inflow to the treatment system and shall be representative of the influent to the treatment system. Effluent samples shall be taken downstream of the last addition of waste to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters.
8. Whenever the discharger monitors any pollutant more frequently than is required by this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the discharge monitoring report specified by the Executive Officer.
9. The discharger may request a reduction in the constituents to be monitored and/or a reduction in monitoring frequency for a specific constituent(s) subject to the approval of the Executive Officer.
10. The discharger shall assure that records of all monitoring information are maintained and accessible for a period of at least five years from the date of the sample, report, or application. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or by the request of the Board at any time. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling, and/or measurements;
 - c. The date(s) analyses were performed;
 - d. The individual(s) who performed the analyses;
 - e. The analytical techniques or methods used;
 - f. All sampling and analytical results;
 - g. All monitoring equipment calibration and maintenance records;
 - h. All original strip charts from continuous monitoring devices;
 - i. All data used to complete the application for this Order; and,
 - j. Copies of all reports required by this Order.
11. Unless otherwise specified, discharge flows shall be reported in terms of daily average discharge flows. The results of all monitoring required by this Order shall be reported to the Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order.

12. The discharger shall deliver a copy of each monitoring report in the appropriate format to:

California Regional Water Quality Control Board
 Santa Ana Region
 3737 Main Street, Suite 500
 Riverside, CA 92501-3348

13. A “grab” sample is defined as any individual sample collected in less than 15 minutes.
 14. Daily samples shall be collected on each day of the week.
 15. Weekly samples shall be collected on a representative day of each week.
 16. Monthly samples shall be collected on a representative day of the month.
 17. Annual samples shall be collected by the 10th working day of the following months:

Year	Annual Sampling Month
2006-2010	June, September, December, March, respectively
2011-2014	February, May, August, November, respectively
2015-2018	April, July, October, January, respectively

B. MONITORING OF STATE PROJECT WATER/COLORADO RIVER WATER/OTHER IMPORTED WATER FOR RECHARGE

1. A sampling station shall be established for each point of recharge and shall be located where representative samples of the water for recharge can be obtained. The following shall constitute the recharge water monitoring program:

<u>Chemical</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Sampling and Analysis</u>
Total Water Flow	Mgd	Flow meter/totalizer	Continuous
Total Nitrogen ⁴	mg/L	Grab ⁵	Quarterly

⁴ Total Nitrogen is defined as the sum of nitrate, nitrite, ammonia, and organic nitrogen concentrations, expressed as nitrogen

⁵ Grab sample is an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples shall be collected during normal peak loading conditions for the parameter of interest, which may or may not be during hydraulic peaks.

Table I			
<u>Chemical</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Sampling and Analysis</u>
Nitrate Nitrogen	mg/L	Grab ⁶	Quarterly
Total Inorganic Nitrogen	"	"	"
Total Organic Carbon	"	"	"
Total Dissolved Solids	"	"	"
1-4 Dioxane	µg/L	"	"
Total Trihalomethanes (TTHM) ⁷	"	"	"
N-Nitrosodimethylamine (NDMA)	"	"	"
Methyl-tert-butyl ether (MTBE)	"	"	"
Perchlorate	"	"	"
<u>Inorganic Chemical</u>			
Aluminum	µg/L	Grab	Annually
Antimony	"	"	"
Arsenic	"	"	"
Asbestos	MFL	"	"
Barium	µg/L	Grab	"
Beryllium	"	"	"
Cadmium	"	"	"
Chromium	"	"	"
Cyanide	"	"	"
Fluoride	"	"	"
Mercury	"	"	"
Nickel	"	"	"
Selenium	"	"	"
Thallium	µg/L	Grab	"
<u>Volatile Organic Chemicals (VOC)</u>			
Benzene	µg/L	Grab	Annually
Carbon Tetrachloride	"	"	"
1,2-Dichlorobenzene	"	"	"
1,4-Dichlorobenzene	"	"	"
1,1-Dichloroethane	"	"	"
1,2-Dichloroethane	"	"	"
1,1-Dichloroethylene	µg/L	Grab	Annually
Cis-1,2-Dichloroethylene	"	"	"
trans-1,2-Dichloroethylene	"	"	"
Dichloromethane	"	"	"
1,2-Dichloropropane	"	"	"
1,3-Dichloropropene	"	"	"

⁶ Grab sample is an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples shall be collected during normal peak loading conditions for the parameter of interest, which may or may not be during hydraulic peaks.

⁷ Sum of bromodichloromethane, dibromochloromethane, bromoform, and chloroform.

Table 1			
<u>Chemical</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Sampling and Analysis</u>
Ethylbenzene	"	"	"
Monochlorobenzene	"	"	"
Styrene	"	"	"
1,1,2,2-Tetrachloroethane	"	"	"
Tetrachloroethylene	"	"	"
Toluene	"	"	"
1,2,4-Trichlorobenzene	"	"	"
1,1,1Trichloroethane	"	"	"
1,1,2-Trichloroethane	"	"	"
Trichloroethylene	"	"	"
Trichlorofluoromethane	"	"	"
1,1,2-Trichloro-1,2,2-Trifluoroethane	"	"	"
Vinyl Chloride	"	"	"
Xylenes ⁸	"	Grab	Annually
<u>Non-Volatile Synthetic Organic Chemicals (SOCs)</u>			
Alachlor	µg/L	Grab	Annually
Atrazine	"	"	"
Bentazon	"	"	"
Benzo(a)pyrene	"	"	"
Carbofuran	"	"	"
Chlordane	"	"	"
2,4-D	"	"	"
Dalapon	"	"	"
Dibromochloropropane (DBCP)	"	"	"
Di(2-ethylhexyl)adipate	"	"	"
Di(2-ethylhexyl)phthalate	"	"	"
Dinoseb	"	"	"
Diquat	"	"	"
Endothall	"	"	"
Endrin	"	"	"
Ethylene Dibromide (EDB)	"	"	"
Glyphosate	"	"	"
Heptachlor	"	"	"
Heptachlor Epoxide	"	"	"
Hexachlorobenzene	µg/L	Grab	Annually
Hexachlorocyclopentadiene	"	"	"
Lindane	"	"	"
Methoxychlor	"	"	"
Molinate	"	"	"
Oxamyl	"	"	"

⁸ Limit is for either a single isomer or the sum of the isomers

Table I			
<u>Chemical</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Sampling and Analysis</u>
Pentachlorophenol	"	"	"
Picloram	"	"	"
Polychlorinated Biphenyls	"	"	"
Simazine	"	"	"
Thiobencarb	"	"	"
Toxaphene	"	"	"
2,3,7,8-TCDD (Dioxin)	"	"	"
2,4,5-TP (Silvex)	"	"	"
<u>Disinfection By-products</u>			
	$\mu\text{g/L}$	Grab	Annually
Total Haloacetic acids (five) (HAA5) ⁹	"	"	"
Bromate	"	"	"
Chlorite	"	"	"
<u>Notification Levels</u>			
Copper	$\mu\text{g/L}$	Grab	Annually
Lead	"	"	"
<u>Radionuclides</u>			
Combined Radium-226 and Radium-228	pCi/l	Grab	Annually
Gross Alpha particle activity (including Radium-226 but excluding Radon and Uranium)	pCi/l	Grab	"
Tritium	"	"	"
Strontium-90	"	"	"
Gross Beta particle activity	"	"	"
Uranium	pCi/l	Grab	"

⁹ Sum of monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid),

2. The monitoring frequency for those pollutants that are detected during the required quarterly monitoring at a concentration greater than those concentrations shown in the Table below, shall be accelerated to monthly. To return to the monitoring frequency specified, the discharger shall request and receive approval from the Regional Water Board's Executive Officer or designee. If the detected concentrations are persistent and considerable, the Discharger shall implement measures to reduce discharges of such constituent(s) into the ground. The Discharger shall submit for approval by the Regional Board Executive Officer of the measures that will be implemented to reduce discharges of such constituents.

Parameter	Concentration (ug/L)
1-4 Dioxane	3 ¹⁰
Total Trihalomethanes (THM)	100 ³
N-Nitrosodimethylamine (NDMA)	0.01 ¹¹
Methyl-tert-butyl ether (MTBE)	13 ⁴
Perchlorate	6 ⁴

C. MONITORING OF DIVERTED STORMWATER FOR RECHARGE:

1. A sampling station shall be established for each point of recharge and shall be located where representative samples of the water for recharge can be obtained. The following shall constitute the recharge water monitoring program:

<u>Chemical</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Sampling and Analysis</u>
Total Water Flow	mgd	Flow meter/totalizer	Continuous
Total Nitrogen ¹²	mg/L	Grab ¹³	Quarterly
Nitrate Nitrogen	"	"	"
Total Inorganic Nitrogen	"	"	"
Total Organic Carbon	"	"	"
Total Dissolved Solids	"	"	"
1-4 Dioxane	µg/L	"	"
Total Trihalomethanes (TTHM) ¹⁴	"	"	"
N-Nitrosodimethylamine (NDMA)	"	"	"

¹⁰ Based on CDHS' notification Level

¹¹ Based on CDHS' MCL

¹² Total Nitrogen is defined as the sum of nitrate, nitrite, ammonia, and organic nitrogen concentrations, expressed as nitrogen

¹³ Grab sample is an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples shall be collected during normal peak loading conditions for the parameter of interest, which may or may not be during hydraulic peaks

¹⁴ Sum of bromodichloromethane, dibromochloromethane, bromoform, and chloroform

Table II			
<u>Chemical</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Sampling and Analysis</u>
Methyl-tert-butyl ether (MTBE)	$\mu\text{g/L}$	Grab ¹³	Quarterly
Perchlorate	“	“	“

D. REPORTING:

1. The results of the above analyses shall be reported to the Regional Board within 24 hours of finding any discharge that is in violation of the discharge specifications.
2. Monitoring reports shall be submitted by the 30th day of each month and shall include:
 - a. The total daily volume of recharged/percolated or re-injected water (State Project water, Colorado River Water, imported well water, and diverted stormwater), and
 - b. The results of all chemical analyses for the previous month, and annual samples whenever applicable,
 - c. A summary of the month's activities.
3. If no discharge occurs during the previous monitoring period, a letter to that effect shall be submitted in lieu of a monitoring report.
4. All reports shall be arranged in a tabular format to clearly show compliance or noncompliance with each discharge specification.
5. For every item where the requirements are not met, the discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time and submit a timetable for correction.
6. Upon completion of the project, the discharger shall notify the Executive Officer of the Regional Board in writing about cessation of the discharge and request for a rescission of this Order.

All reports shall be signed by a responsible officer or duly authorized representative of the discharger and shall be submitted under penalty of perjury.

Ordered by _____

Gerard J. Thibeault
 Executive Officer

May 19, 2006

PRACTICAL QUANTITATION LEVELS FOR COMPLIANCE DETERMINATION		
Constituent	PQL µg/l	Analysis Method
1 Arsenic	7.5	GF/AA
2 Barium	20.0	ICP/GFAA
3 Cadmium	15.0	ICP
4 Chromium (VI)	15.0	ICP
5 Cobalt	10.0	GF/AA
6 Copper	19.0	GF/ICP
7 Cyanide	50.0	335.2/335.3
8 Iron	100.0	ICP
9 Lead	26.0	GF/AA
10 Manganese	20.0	ICP
11 Mercury	0.50	CV/AA
12 Nickel	50.0	ICP
13 Selenium	2.0	EPA Method 1638, 1640 or 7742
14 Silver	16.0	ICP
15 Zinc	20.0	ICP
16 1,2 - Dichlorobenzene	5.0	601/602/624
17 1,3 - Dichlorobenzene	5.0	601
18 1,4 - Dichlorobenzene	5.0	601
18 2,4 - Dichlorophenol	10.0	604/625
20 4 - Chloro -3- methylphenol	10.0	604/625
21 Aldrin	0.04	608
22 Benzene	1.0	602/624
23 Chlordane	0.30	608
24 Chloroform	5.0	601/624
25 DDT	0.10	608
26 Dichloromethane	5.0	601/624
27 Dieldrin	0.10	608
28 Fluorantene	10.0	610/625
29 Endosulfan	0.50	608
30 Endrin	0.10	608
31 Halomethanes	5.0	601/624
32 Heptachlor	0.03	608
33 Heptachlor Epoxide	0.05	608
34 Hexachlorobenzene	10.0	625
35 Hexachlorocyclohexane		
Alpha	0.03	608
Beta	0.03	608
Gamma	0.03	608
36 PAH's	10.0	610/625
37 PCB	1.0	608
38 Pentachlorophenol	10.0	604/625
39 Phenol	10.0	604/625
40 TCDD Equivalent	0.05	8280
41 Toluene	1.0	602/625
42 Toxaphene	2.0	608
43 Tributyltin	0.02	GC
44 2,4,6-Trichlorophenol	10.0	604/625

EPA PRIORITY POLLUTANT LIST		
Metals	Acid Extractibles	Base/Neutral Extractibles (continuation)
1. Antimony	45. 2-Chlorophenol	91. Hexachloroethane
2. Arsenic	46. 2,4-Dichlorophenol	92. Indeno (1,2,3-cd) Pyrene
3. Beryllium	47. 2,4-Dimethylphenol	93. Isophorone
4. Cadmium	48. 2-Methyl-4,6-Dinitrophenol	94. Naphthalene
5a. Chromium (III)	49. 2,4-Dinitrophenol	95. Nitrobenzene
5b. Chromium (VI)	50. 2-Nitrophenol	96. N-Nitrosodimethylamine
6. Copper	51. 4-Nitrophenol	97. N-Nitrosodi-N-Propylamine
7. Lead	52. 3-Methyl-4-Chlorophenol	98. N-Nitrosodiphenylamine
8. Mercury	53. Pentachlorophenol	99. Phenanthrene
9. Nickel	54. Phenol	100. Pyrene
10. Selenium	55. 2, 4, 6 - Trichlorophenol	101. 1,2,4-Trichlorobenzene
11. Silver	Base/Neutral Extractibles	Pesticides
12. Thallium	56. Acenaphthene	102. Aldrin
13. Zinc	57. Acenaphthylene	103. Alpha BHC
Miscellaneous	58. Anthracene	104. Beta BHC
14. Cyanide	59. Benzidine	105. Delta BHC
15. Asbestos (not required unless requested)	60. Benzo (a) Anthracene	106. Gamma BHC
16. 2,3,7,8-Tetrachlorodibenzo-P-Dioxin (TCDD)	61. Benzo (a) Pyrene	107. Chlordane
Volatile Organics	62. Benzo (b) Fluoranthene	108. 4, 4' - DDT
17. Acrolein	63. Benzo (g,h,i) Perylene	109. 4, 4' - DDE
18. Acrylonitrile	64. Benzo (k) Fluoranthene	110. 4, 4' - DDD
19. Benzene	65. Bis (2-Chloroethoxy) Methane	111. Dieldrin
20. Bromoform	66. Bis (2-Chloroethyl) Ether	112. Alpha Endosulfan
21. Carbon Tetrachloride	67. Bis (2-Chloroisopropyl) Ether	113. Beta Endosulfan
22. Chlorobenzene	68. Bis (2-Ethylhexyl) Phthalate	114. Endosulfan Sulfate
23. Chlorodibromomethane	69. 4-Bromophenyl Phenyl Ether	115. Endrin
24. Chloroethane	70. Butylbenzyl Phthalate	116. Endrin Aldehyde
25. 2-Chloroethyl Vinyl Ether	71. 2-Chloronaphthalene	117. Heptachlor
26. Chloroform	72. 4-Chlorophenyl Phenyl Ether	118. Heptachlor Epoxide
27. Dichlorobromomethane	73. Chrysene	119. PCB 1016
28. 1,1-Dichloroethane	74. Dibenzo (a,h) Anthracene	120. PCB 1221
29. 1,2-Dichloroethane	75. 1,2-Dichlorobenzene	121. PCB 1232
30. 1,1-Dichloroethylene	76. 1,3-Dichlorobenzene	122. PCB 1242
31. 1,2-Dichloropropane	77. 1,4-Dichlorobenzene	123. PCB 1248
32. 1,3-Dichloropropylene	78. 3,3'-Dichlorobenzidine	124. PCB 1254
33. Ethylbenzene	79. Diethyl Phthalate	125. PCB 1260
34. Methyl Bromide	80. Dimethyl Phthalate	126. Toxaphene
35. Methyl Chloride	81. Di-n-Butyl Phthalate	
36. Methylene Chloride	82. 2,4-Dinitrotoluene	
37. 1,1,2,2-Tetrachloroethane	83. 2-6-Dinitrotoluene	
38. Tetrachloroethylene	84. Di-n-Octyl Phthalate	
39. Toluene	85. 1,2-Diperylhidrazine	
40. 1,2-Trans-Dichloroethylene	86. Fluoranthene	
41. 1,1,1-Trichloroethane	87. Fluorene	
42. 1,1,2-Trichloroethane	88. Hexachlorobenzene	
43. Trichloroethylene	89. Hexachlorobutadiene	
44. Vinyl Chloride	90. Hexachlorocyclopentadiene	

California Regional Water Quality Control Board
Santa Ana Region

NOTICE OF INTENT

TO COMPLY WITH THE TERMS AND CONDITIONS OF THE GENERAL PERMIT TO REINJECT/PERCOLATE IMPORTED STATE PROJECT WATER, COLORADO RIVER WATER OR IMPORTED WELL WATER TO RECHARGE GROUNDWATER MANAGEMENT ZONES WITHIN THE SANTA ANA REGION
(Order No. R8-2006-0005)

I. PERMITTEE (Person/Agency Responsible for the Discharge)

Agency/Company Name: _____

Address: _____
Street City State ZIP

Contact Person: _____ Phone: (____) _____

II. PROJECT DESCRIPTION

Section E. Application Requirements of Order No. 2006-0005 requires that the following information be submitted with the NOI:

- 1) Characterization of the proposed wastewater discharge. A representative water sample shall be analyzed for all 126-priority pollutants¹ listed in Attachment B of the M&RP, TDS and nitrate-nitrogen
- 2) The name and location where groundwater recharge is planned;
- 3) The groundwater management zone(s) that would be affected by the discharge;
- 4) The estimated average and maximum daily flow rates;
- 5) The frequency and duration of the discharge;
- 6) A description of the proposed treatment system (if appropriate); and
- 7) A map showing locations and sizes of recharge basins or aquifer storage/recovery wells.
- 8) For discharges that would affect groundwater management zones with both maximum benefit and antidegradation TDS and nitrate-nitrogen objectives, confirmation from the agency/-ies responsible for maximum benefit commitments (see Provisions C.2.) that the discharge is consistent with the maximum benefit program.

Has a report that contains this required information been submitted as part of this NOI (check the answer that applies):

Yes _____; No _____.

III. BILLING INFORMATION (Where annual fee invoices should be sent)

Agency/Company Name: _____

Address: _____
Street City State ZIP

Contact Person: _____ Phone: (____) _____

IV. INDICATE EXISTING PERMIT NUMBER: (if applicable)

a. Individual permit Order No. _____

V. CERTIFICATION:

I certify under penalty of law that I am an authorized representative of the permittee and that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the permittee will comply with the terms and conditions stipulated in Order No. R8-2006-0005 including the monitoring and reporting program issued by the Executive Officer of the Regional Board.

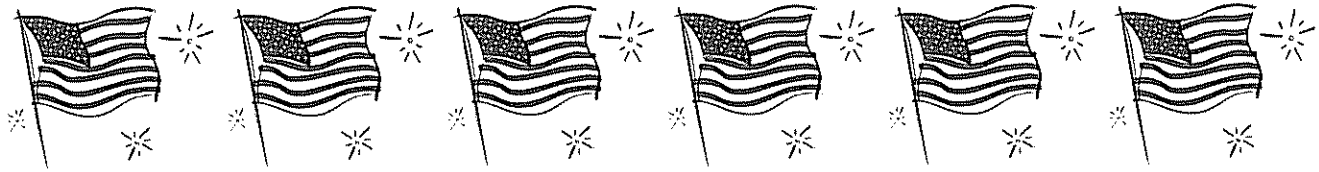
Name and Official Title: _____
(type or print)

Signature: _____ Date: _____

Remarks: *If changes to facility ownership and/or treatment processes were made after the issuance of the existing permit, please provide a description of such changes on another sheet and submit it with this Notice of Intent*

¹ Test methods shall be in accordance with 40 CFR 136. For testing organic volatile compounds use EPA Method 8260 and report entire suite of detected constituents. The method detection limit and detection level attained shall also be reported with the test results

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION



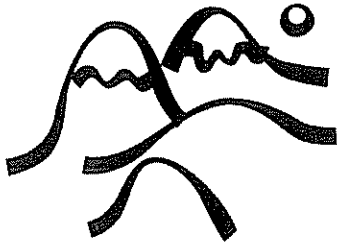
CHINO BASIN WATERMASTER

III. REPORTS/UPDATES

C. CEO/STAFF REPORT

6. Inland Empire Public Affairs Network





Inland Empire Public Affairs Network

May , 2006

Dear Friends:

The Inland Empire has become an area exploding with growth and development. To help keep professionals and elected officials apprised of the many public policy issues regionally and throughout the state, we are creating a Public Affairs network. We have joined forces with the San Gabriel Valley Public Affairs Network in forming our own Inland Empire chapter.

Our goal will be to meet quarterly and bring speakers to address some of the key concerns of this region and to discuss issues important to all of us. The inaugural lunch will be held on **Friday, June 2, 2006 at 11:45 a.m. at the Double Tree Hotel in Ontario. Fred Aguiar, Cabinet Secretary to Governor Arnold Schwarzenegger will be our keynote speaker.**

In order for this event to be successful, we are seeking sponsorship support. Support levels are as follows:

PLATINUM LEVEL - \$500 Sponsorship

- *Lunch for 8. Includes recognition in program and recognition at event.*
- *4 PAN Memberships*
- *two VIP tickets to private reception later in the year*

GOLD LEVEL - \$250 Sponsorship

- *Lunch for 4. Includes recognition in program.*
- *2 PAN Memberships*
- *one VIP ticket to private reception later in the year*

In addition, our other goal for this event is to raise funds for youth education. We have partnered with Future America, an organization that works with students. We also hope to partner with local school districts in attending these luncheons as part of an ongoing education program in public policy. This opportunity will allow students to learn more about the legislative and public policy process and gives them a first-hand opportunity to meet with local elected officials and community leaders.

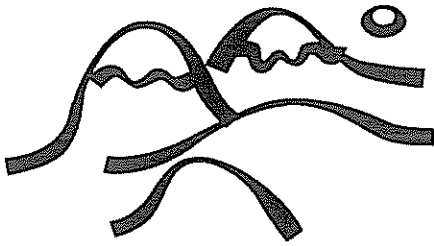
Please feel free to contact Sondra Elrod should you have any questions or need additional information. She can be reached at 909-993-1747.

Sincerely yours,

Co-Chairman

Co-Chairman

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION



Inland Empire Public Affairs Network

Platinum Level Sponsor \$500

- Lunch for 8
- Recognition in program
- Recognition at event
- 4 PAN memberships
- 2 VIP tickets to private reception to be held later in the year

Gold Level Sponsor \$250

- Lunch for 4
- Recognition in program
- 2 PAN memberships
- 1 VIP ticket to private reception to be held later in the year

Please join the Inland Empire Public Affairs Network (PAN)

for their Inaugural Luncheon

Presentation by

Fred Aguiar

Cabinet Secretary to Governor Arnold Schwarzenegger

Governor Schwarzenegger appointed Fred Aguiar as his Cabinet Secretary in early 2006. As Cabinet Secretary, Aguiar is the direct liaison between the Governor and his Cabinet members and all Executive Branch agency and department directors. The Cabinet Office is responsible for developing, coordinating and implementing public policy strategy for the Administration. Additionally, the Cabinet Secretary directs the Governor's Washington D.C. Office coordinating California's interests at the national level.

Friday, June 2, 2006

11:30 a.m. Registration

Noon Lunch

DoubleTree Hotel Ontario Airport

Lake Gregory Room

222 North Vineyard

Ontario, California 91764

Please RSVP by May 24th to

Sherri Lynne Molino

909-484-3888 x 228

Email: smolino@cbwm.org

Please make checks payable to:

Future America c/o IEPAN

8816 Foothill Blvd., Suite 103

P.O. Box 156

Rancho Cucamonga, CA 91730

Name _____

Address _____

Phone _____

Registration:

Price

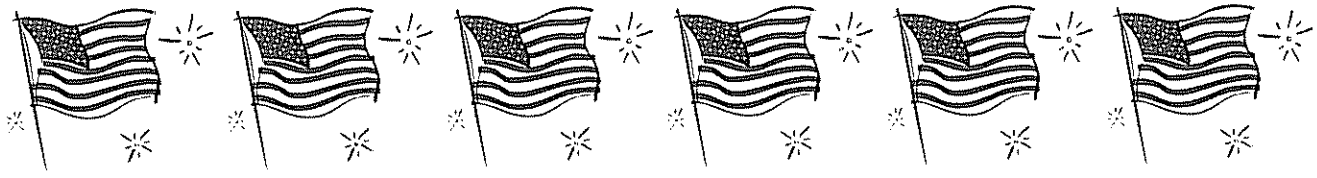
- | | |
|---|----------|
| <input type="checkbox"/> Platinum Level Sponsorship | \$500.00 |
| <input type="checkbox"/> Gold Level Sponsorship | \$250.00 |
| <input type="checkbox"/> PAN member rate* | \$40.00 |

Subtotal: _____

Total: _____

*For this inaugural event, all attendees will receive the member rate!!

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION

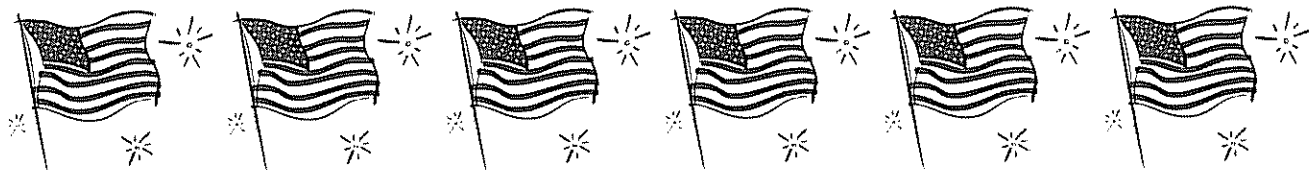


CHINO BASIN WATERMASTER

IV. REPORTS/UPDATES

D. INLAND EMPIRE UTILITIES AGENCY

1. Monthly Water Conservation Programs Report
2. Groundwater Operations Recharge Summary
3. Monthly Imported Water Deliveries Report
4. State and Federal Legislative Reports
5. Public Relations Report



CHINO BASIN WATERMASTER

ADVISORY COMMITTEE

May 18, 2006

AGENDA

INTERAGENCY WATER MANAGERS' REPORT

Chino Basin Watermaster

9641 San Bernardino Road

Rancho Cucamonga, CA 91730

15-20 Minutes

Discussion Items:

None

Written Updates:

- Monthly Water Conservation Programs Report
- Groundwater Operations Recharge Summary
- Monthly Imported Water Deliveries Report
- State and Federal Legislative Reports
- Community Outreach/Public Relations Report

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION

Regional Conservation Programs

Monthly Report-April

MWD Activities

- **California Friendly Marketing Campaign**- The “California Friendly” campaign is an effort by MWD and its member agencies to get people to conserve resources by using water and energy efficient products along with changing to water efficient landscapes. Marketing materials have been developed and the new California Friendly campaign was kicked off on April 10, 2006, with TV advertisements, public service announcements, magazine advertisements, and other materials. The different types of advertisements will continue through July.
- **Regional Water Supplies**- Based on snow pack levels in the Sierras and the upper Colorado River watershed, MWD has indicated that “surplus” supplies of imported water will be available this year.

Landscape Programs

- **“SmarTimer of Inland Empire” Program**- SmarTimer controllers were exchanged at three local PDA classes in March and April held by Monte Vista Water District, the City of Upland and Cucamonga Valley Water District. At each event approximately 15-20 controllers were successfully exchanged. In addition, the Conservation Partnership is holding a regional SmarTimer exchange event on July 22nd at the Chino Basin Water Conservation District.
- **Phase II Landscape Audit Program (05/06)** - The RFP for the 05/06 Landscape Audit Program was released April 18, 2006, with proposals due May 4th. The program will commence in early summer.
- **Ontario Cares**- City of Ontario will implement a pilot project to integrate “California Friendly” into the city’s program to improve existing neighborhoods. MWD consultant presented “California Friendly” templates to Ontario Cares inspection staff and landscape contractors. MWD will test templates and marketing materials on 4-5 houses and report back with results. The group will finalize materials at the next meeting. Implementation of the “California Friendly” landscape will begin in spring 2006.
- **Residential Landscape Classes**- Cucamonga Valley Water District held a local PDA class on April 8th. No other classes are scheduled at this time.
- **Landscape Collaborative**- IEUA staff met with city officials to consider the formation of a landscape task force to coordinate water efficient landscaping throughout the regions programs and policy recommendations.

Commercial/Industrial/Institutional Program

- **(CII SAVE-A-BUCK)**- At the April Conservation Partnership meeting, Honeywell presented an overview of their marketing strategies for the MWD service area, and more specifically IEUA’s service area. Strategies for the IEUA service area include tailoring existing materials to target our area, new bill inserts, and to have representatives present at local chamber meetings, agency events and other significant events. Honeywell will implement their three month push strategy where they will send three mailers to customers and then call to entice participation. The following is a list of rebate activity for FY05/06 within the IEUA service area:
 - **High Efficiency Clothes Washers** – There were 12 clothes washer rebates for the month of March. To date 327 commercial high efficiency clothes washers have been installed in our service area since FY 00/01.
 - **Conductivity Controller Cooling Tower** – 1 controller was installed in FY 05/06 bringing the total to 15 conductivity controllers installed through the Save-a-Buck program since FY 00/01.
 - **ULF Toilets** – 611 ULFTs were rebated in March bringing the total to 1,056 ULFs in our service area since FY 00/01.
 - **Water Broom** – 114 water brooms were rebated in October bringing the total to 693 since FY 00/01.
- **Restaurant Spray Heads**- This program is being implemented by the CUWCC. Phase II was completed in December, 2005 with approximately 861 spray nozzles installed in our service area. To date approximately 1,192 spray heads have been installed. Phase III began in March and end in December 2006.

Residential Programs

- **Single-Family ULF Toilet Exchange Programs**- The final toilet distribution took place in Upland on April 1st where approximately 275 toilets were distributed. The return event took place on April 22nd. The Conservation Partnership is considering a pilot program for a single family direct install to begin late summer.

- **Multi-Family ULF Toilet Program**– Currently, through the direct install program approximately 4,760 toilets have been installed and 997 have been confirmed for installation. The remaining toilets are expected to be installed within the next two months. In the next round of the program 22,000 toilets will be retrofitted. On April 19th IEUA board of directors approved the contract with Bottom Line Utilities Solutions to implement this program, to begin late spring.
- **High Efficiency Clothes Washer Rebate**- Approximately 91 rebates were issued during April, bringing the total for the current fiscal year to 1,124 rebates. This brings the total number of rebates to approximately 6,183 since the rebate program began in 2002.

School Education Programs

- **Garden in Every School**- Irrigation is being completed at the schools. Plantings have taken place at Coyote Canyon in Rancho Cucamonga, Ranch View in Ontario, Foothill Knolls in Upland, Hidden Trails in Chino Hills and North Tamarind in Fontana. Plantings will take place through April and gardens will be completed in May. Dedications will take place in May and June.
- **National Theatre for Children**- The spring schedule has been completed and is underway. Performances began late March.
- **Groundwater Model**- Chino Hills’ and IEUA’s staffs are now in the process of learning how to operate the Model. Once this is done meetings to see the model demonstrated will be set up with interested agencies.
- **Solar Cup (2006)** - MWD announced the schedule for the Solar Cup 2006 event. The event will occur May 19th through May 21st, 2006. IEUA (as the member agency) will be represented by three schools: Chino Hills High School and Ayala High School in Chino Hills, and Upland High School.

Outreach

- **Water Fair**- The Water Fair committee has been meeting every month to plan fair that will provide information on rebates and promote other ways to conserve water. The event is tentatively set for October 14, 2006.
- **Conservation Ads (monthly and special)** - Conservation tips are printed in the Daily Bulletin monthly (on Sundays at the end of each month).
- **Water Education Water Awareness Committee (WEWAC)** - In April, the members of WEWAC discussed initiatives for the next year. The awards ceremony for the Annual Video Contest is May 4th where the winner will be announced and recognized.
- **BMP Support Grants**- No new action.

Upcoming Events

CALENDAR

May 3, 2006	CUWCC Steering Committee Meeting, (San Francisco)
May 9 th -12 th , 2006	ACWA Conference (Monterey)
May 13, 2006	Water Awareness Day (Cucamonga Valley Water District)
May 19 th -21 st , 2006	Solar Cup
June 7, 2006	CUWCC Plenary Session (San Diego)
June 11 th -16 th , 2006	AWWA Annual Conference (San Antonio, TX)

Regional Conservation Programs

Monthly Report-May

MWD Activities

- **California Friendly Marketing Campaign**- The “California Friendly” campaign is an effort by MWD and its member agencies to get people to conserve resources by using water and energy efficient products along with changing to water efficient landscapes. Marketing materials have been developed and the new California Friendly campaign was kicked off on April 10, 2006, with TV advertisements, public service announcements, magazine advertisements, and other materials. The various types of advertisements will continue through July.

Landscape Programs

- **“SmarTimer of Inland Empire” Program**- SmarTimer controllers were exchanged for residents’ existing controllers at three local PDA classes in March and April held by Monte Vista Water District, the City of Upland and Cucamonga Valley Water District. At each event approximately 15-20 controllers were successfully exchanged. In addition, the Conservation Partnership is holding a regional SmarTimer exchange event on July 22nd at the Chino Basin Water Conservation District, where they anticipate exchanging 200 controllers. Residents also have the opportunity to apply for a rebate if they personally purchase a qualifying SmarTimer controller.
- **Phase II Landscape Audit Program (05/06)** - The RFP for the 05/06 Landscape Audit Program was released April 18, 2006, and proposals were due May 4th. The program will commence in early summer.
- **Ontario Cares**- City of Ontario will implement a pilot project to integrate “California Friendly” into the city’s program to improve existing neighborhoods. A MWD consultant presented “California Friendly” templates to Ontario Cares inspection staff and landscape contractors. MWD will test templates and marketing materials on 4-5 houses and report back with results. The group will finalize materials and then implement the “California Friendly” landscape designs.
- **Landscape Collaborative**- IEUA staff met with city officials to consider the formation of a landscape task force to coordinate water efficient landscaping throughout the regions programs and policy recommendations.

Commercial/Industrial/Institutional Program

- **(CII SAVE-A-BUCK)**- At the April Conservation Partnership meeting, Honeywell presented an overview of their marketing strategies for the MWD service area, and more specifically IEUA’s service area. Strategies for the IEUA service area include tailoring existing materials to target our area, new bill inserts, and to have representatives present at local chamber meetings, agency events and other significant events. Honeywell will implement their three month push strategy where they will send three mailers to customers and then call to entice participation. The following is a list of rebate activity for FY05/06 within the IEUA service area:
 - **High Efficiency Clothes Washers** – There were 12 clothes washer rebates for the month of March. To date 327 commercial high efficiency clothes washers have been installed in our service area since FY 00/01.
 - **Conductivity Controller Cooling Tower** – 1 controller was installed in FY 05/06 bringing the total to 15 conductivity controllers installed through the Save-a-Buck program since FY 00/01.
 - **ULF Toilets** – 264 ULFTs were rebated in April bringing the total to 1,320 ULFs in our service area since FY 00/01.
 - **Waterless Urinals** – 4 waterless urinals were installed in the month of April. This was the first installation of waterless urinals rebated for in the IEUA service area.
 - **Water Broom** – 114 water brooms were rebated in October bringing the total to 693 since FY 00/01.
- **Restaurant Spray Heads**- This program is being implemented by the CUWCC. Phase II was completed in December, 2005 with approximately 861 spray nozzles installed in our service area. To date approximately 1,192 spray heads have been installed. Phase III began in March and will end in December 2006.

Residential Programs

- **Single-Family ULF Toilet Exchange Programs**- The final toilet distribution took place in Upland on April 1st where approximately 245 toilets were distributed. The return event took place on April 22nd. The Conservation Partnership is considering a pilot program for a single family direct install to begin late summer
- **Multi-Family ULF Toilet Program**- Currently, through the direct install program approximately 5,047 toilets have been installed and 953 toilets remain. The remaining toilets are expected to be installed by June 30th. In the next

round of the program 22,000 toilets will be retrofitted. On April 19th IEUA board of directors approved the contract with Bottom Line Utilities Solutions to implement this program, to begin in the summer.

- **High Efficiency Clothes Washer Rebate**- Approximately 91 rebates were issued during April, bringing the total for the current fiscal year to 1,124 rebates. This brings the total number of rebates to approximately 6,183 since the rebate program began in 2002.

School Education Programs

- **Garden in Every School**- Irrigation is being completed at the schools. Gardens are completed at Coyote Canyon in Rancho Cucamonga, Ranch View in Ontario and Foothill Knolls in Upland. Plantings will continue through May. Dedications will take place in May and June.
- **National Theatre for Children**- The spring schedule is underway. Performances began late March and will continue through May.
- **Groundwater Model**- Chino Hills' and IEUA's staffs are now in the process of learning how to operate the Model. Once this is done meetings to see the model demonstrated will be set up with interested agencies.
- **Solar Cup (2006)** - MWD announced the schedule for the Solar Cup 2006 event. The event will occur May 19th through May 21st, 2006. IEUA (as the member agency) will be represented by three schools: Chino Hills High School and Ayala High School in Chino Hills, and Upland High School.

Outreach

- **Water Fair**- The Water Fair committee has been meeting every month to plan a fair that will provide information on rebates and promote other ways to conserve water in our region. The event is tentatively set for October 14, 2006 and will take place at Montclair Plaza.
- **Conservation Ads (monthly and special)** - Conservation tips are printed in the Daily Bulletin monthly (on Sundays at the end of each month).
- **Water Education Water Awareness Committee (WEWAC)** - In April, the members of WEWAC discussed initiatives for the next year. The awards ceremony for the Annual Video Contest took place May 4th where Bonita High School was announced and recognized as the 1st place winner.
- **BMP Support Grants**- No new action.

Water Conservation Budget/Actual (As of 5/01/06)

<u>Revenues (est.)</u>	<u>Annual Budget</u>	<u>Est. Actual to date (FY05/06)</u>
Imported \$4/AF Surcharge	\$380,000	\$229,479
Retail Meter Revenue	\$54,863	\$45,719
Property Tax	\$75,000	\$62,500
Regional Sewage Fund Transfer	\$50,000	\$41,666
Interest	\$25,800	\$21,500
Subtotal	\$583,663	\$400,864
<u>Other Agency Funding</u>		
MWD (est. CCP Credits & Rebates)	\$668,000	\$325,210
Subtotal	\$668,000	\$325,210
Total Budget	\$1,251,663	\$355,448
<u>Expenditures</u>	<u>Budget</u>	<u>Actual</u>
HECWs	\$110,000	\$127,177
ULFTs	\$830,700	\$618,632
Landscape Programs	\$148,000	\$11,054
CUWCC Dues	\$11,000	\$0
Education Programs	\$95,000	\$53,940
Agency Support	\$2,500	\$0
CII Marketing	\$27,000	\$0
BMP Partnership Funding	\$2,000	\$2,000
Public Information	\$56,000	\$9,000
Totals	\$1,282,200	\$821,803

Upcoming Events

CALENDAR

May 19 th -21 st , 2006	Solar Cup
June 7, 2006	CUWCC Plenary Session (San Diego)
June 11 th -16 th , 2006	AWWA Annual Conference (San Antonio, TX)

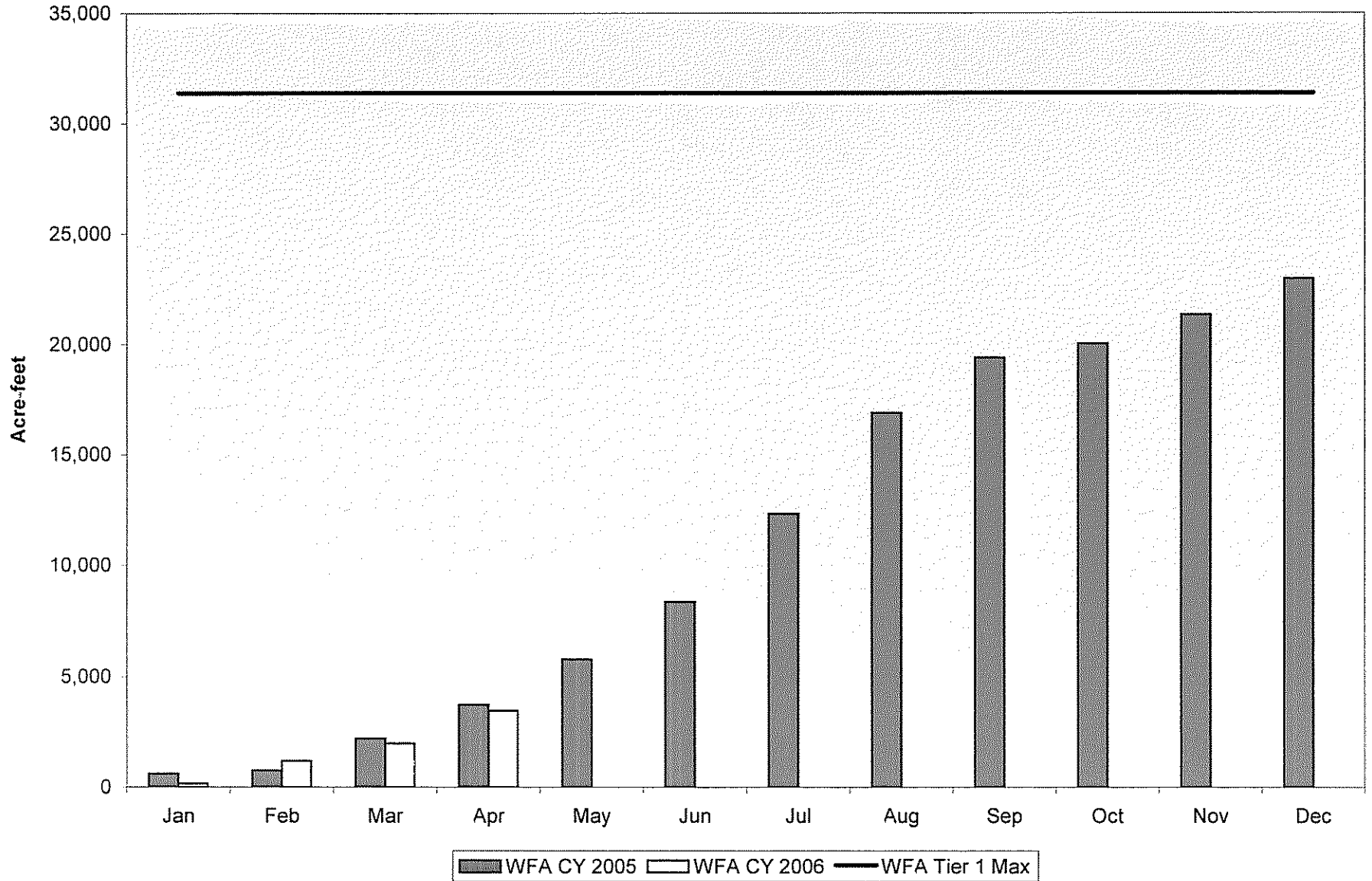
THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION

SUMMARY OF GROUNDWATER RECHARGE OPERATIONS										
Drainage System	Recharge Volume (AF)									
	Basin	Jul 2005	Aug 2005	Sep 2005	Oct 2005	Nov 2005	Dec 2005	Jan 2006	Feb 2006	Mar 2006
San Antonio Channel Drainage System										
College Heights East	-	-	-	228	141	205	182	207	233	1,484
College Heights West	92	122	383	437	313	256	397	395	290	3,219
Upland	-	-	454	607	630	390	555	704	566	4,490
Montclair 1, 2, 3 & 4	848	-	-	78	489	856	624	818	590	5,049
Brooks	33	175	684	127	390	363	257	393	215	2,759
Non-replenishment* (MVWD)	(33)	-	-	-	(60)	(20)	-	(44)	-	(156)
West Cucamonga Channel Drainage System										
8 th Street	-	-	60	73	60	60	66	187	216	737
7 th Street	-	-	-	60	-	-	50	56	110	276
Ely	-	-	-	336	146	249	218	422	338	2,072
Non-replenishment* (GE)	-	-	-	(106)	(131)	(107)	(8)	(80)	-	(432)
Cucamonga and Deer Creek Channel Drainage Systems										
Turner 1 & 2	-	-	89	95	179	359	262	152	427	1,562
Turner 3 & 4	-	-	-	-	-	124	75	71	171	461
Day Creek Channel Drainage System										
Lower Day	159	511	545	310	277	265	357	306	205	3,181
Etiwanda Channel Drainage System										
Etiwanda Debris	102	127	102	108	248	208	214	221	276	1,903
Victoria	-	-	-	49	-	9	26	43	110	245
San Sevaine Channel Drainage System										
San Sevaine	469	213	558	575	1,142	986	968	1,124	964	7,899
Banana	212	254	129	54	8	29	56	77	55	875
Hickory	265	487	269	115	92	39	95	114	27	1,504
Declez Channel Drainage System										
RP3	31	31	60	78	60	60	33	64	161	578
Declez	11	11	30	114	30	30	35	110	191	561
Minor Drainage										
Grove	-	-	-	-	-	-	-	-	75	116
Subtotals	2,189	1,930	3,363	3,340	4,013	4,362	4,463	5,337	5,176	38,307
Recharge Water by Type										
Storm Water (SW) w/ Local Runoff (LR)	647	137	299	876	344	669	762	1,661	3,133	10,093
MWD Water (MW)	1,522	1,540	2,796	2,313	3,570	3,617	3,548	3,467	2,043	26,983
Recycled Water (RW)	20	254	268	150	100	77	154	209	-	1,231
Subtotals (Month)	2,189	1,930	3,363	3,340	4,013	4,362	4,463	5,337	5,176	38,307
Subtotals (FY to Date)	2,189	4,120	7,483	10,823	14,836	19,198	23,661	28,999	34,174	FY To Date
Notes										
SW : Storm Water. LR : Local Runoff. MW: MWD Water. RW : Recycled Water										
- : No stormwater/local runoff, or basin not in use due to maintenance or testing										
X : Turnouts not available - to be installed within future projects										
N : Not Applicable or No turnout planned for installation										
*Non-Replenishment (deduct) is groundwater pumped from Chino Basin and recharged back into the basin										
Data are preliminary based on the data available at the time of this report preparation										

Printed: May 15, 06

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION

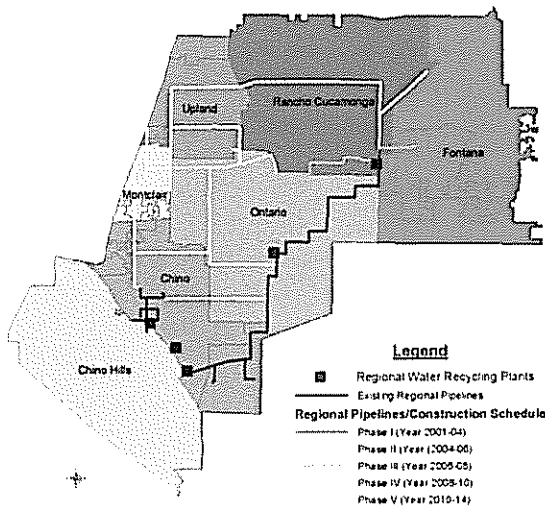
WATER FACILITIES AUTHORITY
Cumulative Monthly Full Service Imported Water Deliveries
Calendar Year 2006



THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION

3RD QUARTER FY2005/06 RECYCLED WATER SUMMARY

Capital Projects Summary



PROJECTS COMPLETED

- RP-1/RP-4 Pump Station (Budget \$7,718,000)
- RP-1 Chlorination Tank (Budget \$4,817,200)
- Pine Avenue Intertie (Budget—Phase I & II \$1,066,000)
- Wineville Pipeline (Budget \$2,307,200)
- Reliant Pipeline (Budget \$1,115,476)
- Philadelphia Pipeline (Budget \$3,591,400)
- Whittram Pipeline (Budget \$3,621,000)
- RP-4 West Branch Phase I & II (Budget \$9,688,096)

Total Budget — \$33,954,371

PROJECTS IN DESIGN AND CONSTRUCTION

- RP-4 Area 3 MG Regional Recycled Water Reservoir, Pipeline and Pump Station
On-hold awaiting acquisition of property
- North Etiwanda Regional Water Pipeline and Pump Station
On-hold awaiting acquisition of property
- RP-1 South Recycled Water Pump Station
100% design complete.
- San Antonio Channel Recycled Water Pipeline
There are two design segments; Segment A & B. Segment A—Design complete. Segment B—90% design complete. Segment B will extend through the City of Montclair providing recycled water to Bellevue Cemetery and parks and schools in Montclair.
- Wineville Recycled Water Pipeline Extension
In design. This pipeline will serve major laundry facilities in Ontario as well as serving the City of Fontana.
- 7th & 8th St. Basin Pipeline
100% design complete and a value engineering has been completed as well. This pipeline will bring recycled water to 7th and 8th Street Basins and also will serve a few schools and parks along the way.
- Edison Avenue Pipeline
Construction of Edison-Eucalyptus Regional Recycled Water Transmission Pipeline is underway. This pipeline will interconnect the existing CCWRF and TP-1 Outfall system supplementing additional recycled water supply to meet the growing demand in southern service area serving major agricultural users in Ontario, College Parks in Chino and ultimately many parks and other landscaping customers



Edison Avenue Pipeline

Projected Budget — \$70,300,000

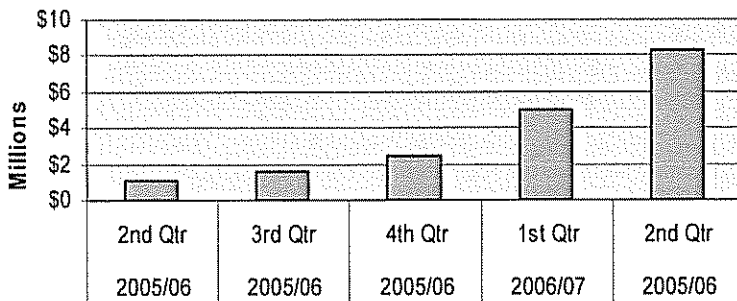
Total Implementation Plan

ID	Task Name	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1	Phase I	\$34,000,000.00											
		Complete											
2	Phase II				\$70,300,000.00								
3	Phase III						\$26,000,000.00						
4	Phase IV							\$23,000,000.00					
5	Phase V									\$22,000,000.00			

Phase II & III Implementation Plan

ID	Task Name	2006												2007											
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	RP-1 Recycled Water South Pump Station	[Bar chart showing implementation from Apr to Dec 2006]																							
2	San Antonio Channel Recycled Water Pipeline	[Bar chart showing implementation from Apr to Mar 2007]																							
3	Wineville Avenue Pipeline Extension	[Bar chart showing implementation from Apr to Mar 2007]																							
4	7th & 8th Street Basin Pipeline	[Bar chart showing implementation from Apr to Sep 2006]																							
5	Edison Avenue Pipeline	[Bar chart showing implementation from Apr to Sep 2006]																							
6	RP-4 Recycled Water Pipeline, Reservoir & Pump Station	[Bar chart showing implementation from Apr to Dec 2006]												On-Hold											
7	North Etiwanda Recycled Water Pipeline, Reservoir & Pump Station	[Bar chart showing implementation from Apr to Dec 2006]												On-Hold											

Regional Recycled Water Phase II—Projected Cash Flow



Vellano Golf Course Development

TYCIP Projects

- Twelve Significant Projects
- Serves 45,000 AFY
- Capital Cost \$117 million
- Grant Funding \$42.5 million
- State Loan Funds \$66.5 million
- Local Funding \$8 million

Project No.	Project Description	Budgeted Cost	State Grant Funding	Federal Grant Funding	SRF Loan	Total Grant/Loan Funding
1	San Antonio Channel Pipeline	13	3		10	13
2	TP-1 South Zone Pump Station	5	1		4	5
3	RP-4 Reservoir and Pump Station	12		5	7	12
4	Edison Avenue Pipeline	9	7			7
5	Wineville Avenue Pipeline Extension	7	1.5		5.5	7
6	7th and 8th St. Basin Pipeline	3	2			2
7	Etiwanda Ave. Pipeline, Reservoir, Pump Station	21		10	11	21
8	RP-1 Outfall Parallel	10		5	5	10
9	San Sevaine, Etiwanda Basin Pipelines	22	4		18	22
10	Etiwanda Pipeline South	4	2		2	4
11	Chino/Chino Hills Zone 800	11	3		8	11
12	RP-5/2 Recycled Water Pipelines	3.8				
	Land	5				
	Total (\$ Millions)	126	23.5	20	70.5	114

Customer Development

■ Agricultural customers along the TP-1 Outfall line

There are six farm connections that staff is working closely with the Cities of Ontario and Chino to use recycled water. IEUA is providing service laterals to these farmers in order to expedite the conversion. By mid April, these farmers are expected to use recycled water. In addition, farming operation in Chino Airport, additional irrigation in CIM and three other farms in Ontario will be converted to use recycled water within a year. The combined total recycled water usage from these farms could exceed 5,000 AFY.

■ NRW (Non-Reclaimable Water) Customers

IEUA staff working closely with the retail agencies are targeting NRW customers. With passing of new pass through rate, these customers potentially save as much as 40% discount on the wastewater discharge in addition to the water bill by converting to use recycled water for their process and irrigation. Aramark, a commercial laundry, will be using 100% recycled water for their process once the operation begins. Staff is very optimistic that Aramark's use of recycled water would bring other commercial laundries such as Mission Linen, Crothall, and Cintas to use recycled water.

■ Targeted Major Customers in 2006

1. Empire Lakes Golf Course (CVWD)
2. Temple Inland (Ontario)
3. Guasti Park (Ontario)
4. Additional Farms on Outfall (Ontario & Chino)
5. Ontario Center Owners Association (Ontario)
6. California Co-generation (Chino)
7. Vellano Golf Course (Chino Hills)
8. Mission Linen (Chino)
9. Cintas I & II (Ontario)

■ Consulting services for recycled water program management services

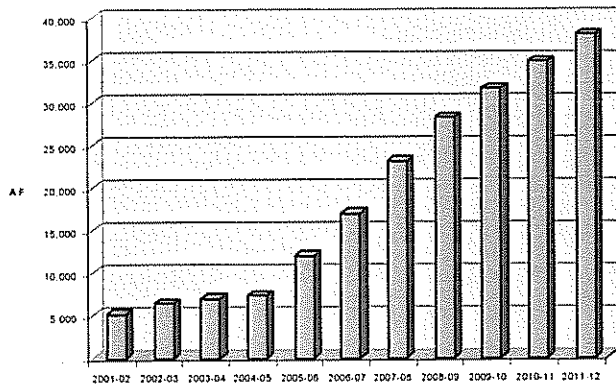
In order to expedite the approval process by DHS, IEUA staff and consultant are assisting the Cities with the Engineer's report as well as drafting a master engineer's report for each of the Cities.



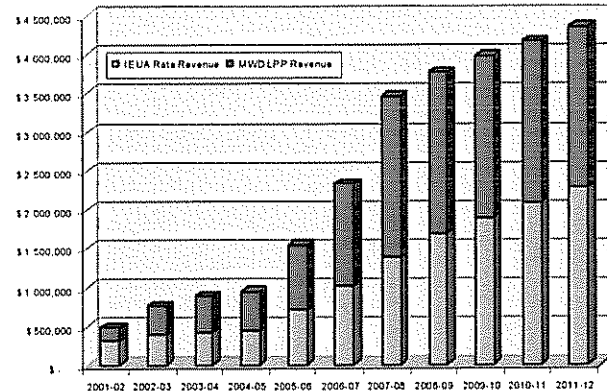
Chaparral Elementary School

Projected Sales & Revenue

Projected Recycled Water Sales



Projected Recycled Water Revenue



Regulatory/Permits

- CEQA—PEIR Certified June, 2002
- CBWM Article X Permit — *Approved* May, 2002
- SARWQCB Basin Plan "Maximum Benefit" — *Approved* January, 2004
- DHS Title 22 Report (Recharge) - *Approved* April, 2005
- SARWQCB Discharge Permit January 2005



CalPoly Pomona Farming in CIM

Activity Summary

New Customers in 2005

- 8 new recycled water customers were connected:

	Estimated Usage (AFY)
Lewis Homes Phase II (4 connections)	100
Redwood Business Center	10
CalPoly Pomona in CIM	1,000
Chaparral Elementary School	20
Bubalo Construction	20
Campus Owners Corporation	5
Panattoni Construction	5
Ethan Ellen Inc.	10
Total	1,170

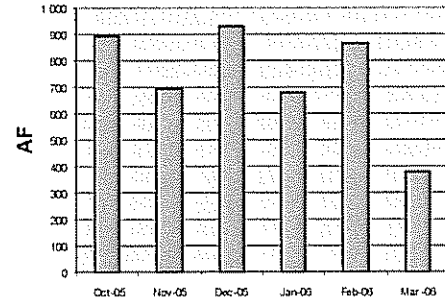
New Customers in 2006

	Expected Connection Date	Expected Usage (AFY)
Chino Hills High School and Wickman elementary school	August	30
Temple Inland	July	1,100
Kaiser Hospital	May	100
Lewis Homes Phase I (6 connections)	On-line	20
Empire Lakes Golf Course	April	800
Irrigation Customer along 6th Street	April-June	25
City Parks in Chino Hills	August	25
Bakken Property	May	2
El Prado Business Park	May	2
Fruit Growers Supply	May	20
Farmers in Ontario (6 connections)	April	2,000
Chad's Farm in Chino	April	150
Monte Vista Farm	April	200
Total		4,474

Potential Customers in 2006

- City of Chino
Mission Linen, OLS Energy and College Park (2,500 homes, 2 schools, extension of Ayala Park over 435 acre)
- City of Chino Hills
Vellano Golf Course and Western Hills Golf Course
- City of Ontario
California Commerce North & South, Blue Beacon, Guasti Park, Bakken Property, Fruit Growers Supply, Longs Drug, Ontario Mills, Carlisle Tire & Wheel, Cintas I & II, Crothall Laundry, Danco Metal Surfacing, Unifirst, and Agricultural customers
- City of Rancho Cucamonga
Metal Coaters of California, Steelscape, Tamco
- City of Fontana
California Steel, California Speedway, Sierra Aluminum, and Pacific Forge

Recycled Water Sales



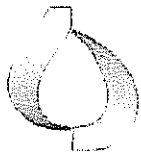
Delivery Period	2004/05	2005/06
3rd Quarter	736	1,917
Year to Date	736	1,917
FY Total	4,006	7,267
Budget		8,290

Operation & Planning

- On March 13, there was a line break on TP-1 Outfall line at the intersection of Kimball Avenue and Flight Road. The repair was made and the line was back in service on the same day.



Cal Poly Pomona Farming in CIM



Inland Empire
UTILITIES AGENCY

Date: May 17, 2006
To: The Honorable Board of Directors
Through: Public, Legislative Affairs and Water Resources Committee (5/10/06)
From: Richard W. Atwater
Chief Executive Officer/General Manager
Submitted by: Martha Davis
Executive Manager of Policy Development
Subject: April Legislative Report from Copeland and Associates

RECOMMENDATION

This is an informational item for the Board of Directors to receive and file

BACKGROUND

Letitia White provides a monthly report on their federal activities on behalf of IEUA.

PRIOR BOARD ACTION

None.

IMPACT ON BUDGET

None.

RWA:MD:mef

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION

Copeland Lowery Jacquez Denton & White LLC
Specializing in Government Relations

MEMORANDUM

TO: Rich Atwater and Martha Davis, IEUA
FROM: Letitia White and Heather McNatt
DATE: April 11, 2006
RE: Monthly Legislative Report

CLJ has continued to work with Hill staff on IEUA's legislative agenda. We have been in touch with Dave Weiman about strategy now that the Bureau of Reclamation has issued criteria for Title 16 projects and have talked to Congressman Dreier's office about both the authorization bill and IEUA's appropriations requests.

The FY '07 appropriations bills have not yet begun to move through the process while the House and Senate wait to see if a Budget Resolution is going to pass. Appropriators will not wait for the Budget much longer, and we expect to see action in the House Subcommittees begin in May. Both the House and Senate have begun a two-week Easter recess and will not reconvene until the week of April 24. The past two weeks have been very busy on Capitol Hill. During that time the Senate tried to pass an immigration reform bill and the House focused on its FY07 budget resolution.

California Water Issues in the Spotlight on Capitol Hill

Several committees took action this month on California water issues. First, the Senate Appropriations Committee attached an amendment to its version of the emergency supplemental appropriations bill on April 5th which allocates \$22.3 million to California for reinforcing levees and maintaining flood controls. Offered by Senator Feinstein and co-sponsored by Senator Boxer, the amendment is not contained in the House version of the bill. It will be addressed when the bills go to Conference in May. The next day, the House Resources Committee's Water Resources and Environment Subcommittee held a hearing on HR 4650, the "National Levee Safety Program Act" to learn about the status of existing levees and challenges facing levees located in populous areas. The panel included Peter Rabbon, Principal Engineer for the California Department of Water Resources and President of the National Association of Flood and Stormwater Management Agencies (NAFSMA). Finally, the House Resources Committee passed H.R. 122 sponsored by Congressman Issa. An authorization measure, the bill permits the Bureau of Reclamation to participate in the designing, planning, and construction of permanent facilities of the Eastern Municipal Water District Recycled System Pressurization and Expansion Project.

FY07 Budget Resolution

As reported earlier, the Senate approved its version of a Fiscal Year 2007 budget resolution by a narrow vote of 51-49 on Thursday, March 16. The measure adds roughly \$16 billion to the domestic discretionary spending level recommended by the President. Although the President's budget request called for \$65 billion in mandatory spending program cuts over five years, the Senate rejected even a modest attempt to slow those programs. Overall, the Senate-passed Budget Resolution calls for \$2.8 trillion in total spending for FY 2007.

The House Budget Committee marked up its budget resolution on March 29. The resolution includes an \$873 billion cap on discretionary spending and would cut \$6.8 billion from mandatory spending programs, which conservatives view as far too low a number. They want to aggressively continue the Budget Reconciliation process with more cuts to mandatory spending.

The Republican leadership was forced to pull the FY07 Budget Resolution off the floor last Thursday after it was clear they did not have the votes to pass the legislation. A struggle ensued between conservatives, moderates and appropriators within the Republican Party. The Republican leadership reached an agreement with conservatives that would have required any non-defense emergency spending over \$4.3 billion be approved by the Budget Committee. Conservatives also wanted to adopt budget process reforms that would have included changes to earmarks. Appropriations Chairman Jerry Lewis opposed both of these provisions because they would weaken his Committee's authority. He urged all Republicans on the Appropriations Committee to vote against the resolution unless those provisions were removed. In addition, moderates wanted an increase of \$7.2 billion for domestic programs which conservatives opposed. All Democrats were planning to oppose the legislation.

Majority Leader Boehner has stated the he will continue negotiations while Congress is in recess and the House will return to the Budget Resolution at the end of April. However, even if the House is able to pass a budget, it may be difficult to reach a deal with the Senate. If the House is able to pass a budget, it will almost certainly adhere to Bush's proposed \$873 billion spending cap since GOP conservatives are unwilling to consider anything higher. The Senate, meanwhile, is on record as favoring more discretionary spending, having adopted amendments that added \$9 billion in discretionary spending over Bush's level and another \$7 billion in advance appropriations to make room for even more discretionary spending.

A budget resolution sets the overall cap for discretionary spending; however, it is not necessary for passage of annual appropriations bills. While the Appropriations Committees are bound by the spending cap set in a budget resolution, Appropriations ultimately determines how that funding will be allocated. A discretionary spending cap can also be set by each chamber through a "deeming" resolution. This was done in 1998, 2003, and 2004 when Congress was unable to pass a budget.

FY06 Supplemental Appropriations

As reported earlier, the House passed its \$91.9 billion FY06 supplemental appropriations package on Thursday, March 16. \$67.6 billion would go to military operations in Iraq and Afghanistan, \$19.8 billion would go to hurricane relief, and \$4.3 billion would go to foreign aid.

The Senate Appropriations Committee approved \$106.5 billion in emergency spending on Tuesday, April 4. This is \$14 billion more than the White House requested and what the House approved. The supplemental spending bill would provide \$72.4 billion in fiscal 2006 funds for the wars in Iraq and Afghanistan and foreign aid, and \$27.1 billion for hurricane relief.

In addition, the committee approved an amendment offered by Senator Dianne Feinstein that provides \$22.3 million to California for levee repairs and flood control:

- \$6.25 million to South Sacramento Streams
- \$11.3 million to Sacramento Riverbank Protection
- \$3.255 million to American River Common Features
- \$1.25 million to Delta Islands and Levees Feasibility Study
- \$250,000 to Short-term Delta levee assessment (CALFED 180-day study)

The full Senate plans to take up the bill the week of April 24. The House and Senate bills will go to conference in May and a final bill will likely be sent to the President by Memorial Day.

FY07 Appropriations and Lobbying Reform Proposals

On Thursday, March 16, House leaders unveiled legislation (H.R. 4975) for overhauling the way members interact with the lobbying community. The proposal would require more transparency in the earmark process but wouldn't provide a mechanism for stripping earmarks from a bill. The proposal would require earmark sponsors to be identified in committee reports and any earmarks added in conference would have to be identified in those reports. In addition, the House bill would ban privately funded travel for the remainder of 2006. The Judiciary, Government Reform, Rules and House Administration committees held mark ups on certain sections of the bill last week. The measure differs from the Senate lobbying bill, which applies earmark restrictions not only to appropriations bills but also to authorization and tax bills. The draft House bill applies earmark restrictions only to appropriations bills.

The Senate voted 90-8 to change the way law makers and lobbyists conduct business. The legislation bans meals and gifts from lobbyists and requires a review and full disclosure on privately funded travel by Members. In addition, earmarks added in conference to appropriations or authorization bills would be subject to points of order on the floor. Sixty votes would be needed to waive any objections. Conference reports would be posted on the Internet at least 48 hours before a Senate vote. Bills, amendments and conference reports would identify the Senator responsible for each earmark.

Immigration

Although Senate Majority Leader Bill Frist (R-TN) announced Thursday, April 6, that a tentative deal had been reached on the legislation, the Senate adjourned for the Easter recess without passing immigration reform legislation. Republicans and Democrats were unable to reach agreement on how many and which amendments would be offered to the bill. It is now unclear when the Senate will return to the legislation. However, Majority Leader Frist and Judiciary Chairman Specter say they remain committed to pass legislation this year that would tighten border security, establish a guest worker program and set up procedures dealing with the estimated 11 to 12 million immigrants currently in the United States.

The compromise language, crafted by Senators Chuck Hagel (R-NE) and Mel Martinez (R-FL), would break up illegal immigrants into three groups:

- Those who have been in the country for more than five years would be allowed to adjust their legal status without having to leave the country. They would be able to obtain green cards after working an additional six years provided they pass background checks, worked at least three of the past five years in the United States, paid all taxes, registered for military Selective Service, learned English and American civics, and paid \$2,000 in fines and application fees.
- Those in the country for two to five years would be eligible for temporary work visas, which they would be required to obtain at one of 20 ports of entry. Applicants would have to leave the United States, though the process could be completed in one day. They would be eligible to receive a green card, as long as green cards are available under annual caps. (The number of green cards available would be increased to 450,000 from 290,000 for 10 years, and then return to 290,000.
- Those who arrived in the United States in the last two years would be required to return home and from there could apply to enter the United States as temporary workers. There would be no guarantee that they could obtain temporary work visas.

The Judiciary Committee plans to hold more hearings beginning April 27 and plans to report out a revised bill by May 4. However, even if the Committee is able to craft a compromise that can ultimately pass the full Senate, the bill will still have to be reconciled with the House version that does not contain a guest worker provision.

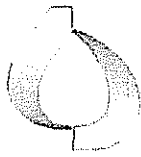
Telecommunications

On Thursday, the House Energy and Commerce Committee's Subcommittee on Telecommunications and the Internet voted 27-4 to favorably report video franchising reform legislation to the full House Energy and Commerce Committee. The legislation would make it easier for companies such as Verizon and AT&T to obtain national franchises to offer video programming. Chairman Joe Barton (R-TX) has indicated the full Committee will take up the bill when the House returns following the Easter Recess.

Suite 800 • 525 Ninth Street, NW • Washington, DC 20004 • 202-347-5990 • Fax 202-347-5941

During debate, the Subcommittee defeated amendments by Reps. John Dingell and Ed Markey that would: 1) establish a build-out requirement for new entrants to a local franchise area (Dingell/Markey), and 2) reaffirm the power of local governments to manage the use of public rights of way and create a process for adjudicating disputes between local franchise authorities and service providers (Dingell). Members who objected to the amendments viewed the build-out requirement as a too-burdensome barrier to entry for new service providers, and argued that the existing language in the bill was sufficient to protect the jurisdiction of local governments to manage public rights of way. A third amendment that would have maintained current local government consumer protection mechanisms was withdrawn when the Republican committee leadership committed to work on similar language when the bill moves to full committee markup.

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION



Inland Empire
UTILITIES AGENCY

Date: May 17, 2006
To: The Honorable Board of Directors
Through: Public, Legislative Affairs and Water Resources Committee (5/10/06)
From: Richard W. Atwater
Chief Executive Officer/General Manager
Submitted by: Martha Davis
Executive Manager of Policy Development
Subject: April Legislative Report from Agricultural Resources

RECOMMENDATION

This is an informational item for the Board of Directors to receive and file.

BACKGROUND

Dave Weiman provides a monthly report on his federal activities on behalf of IEUA.

PRIOR BOARD ACTION

None.

IMPACT ON BUDGET

None.

RWA:MD:mef

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION


Agricultural Resources

635 Maryland Avenue, N.E.
Washington, D.C. 20002-5811
(202) 546-5115
(202) 546-4472-fax
agresources@erols.com

April 30, 2006

Legislative Report

TO: Richard W. Atwater
General Manager, Inland Empire Utility Agency

FR: David M. Weiman
Agricultural Resources 
LEGISLATIVE REPRESENTATIVE, IEUA

SU: Legislative Report, April 2006

Highlights:

- Interior Advises Congress, IEUA Recycling Project "Not Feasible."
- House Water Subcommittee Holds Hearing, Future of Bureau
- Title XVI Changes Being Negotiated, Senate
- News and Notes
- IEUA Working Partners

Interior/BuRec Inform House Appropriators, IEUA Recycling Project "Not Feasible" – Then Reverse Themselves. The CALFED authorization bill, enacted in October 2004, directed the Secretary of the Interior to review each of the 34 regional and individual projects in the Southern California Comprehensive Reclamation and Reuse Feasibility Study and make a determination on each within 180 days after enactment. Same for a similar study involving approximately 15 projects in Northern California. The 180-day statutory deadline ended just over a year ago. Interior, to date, failed to finalize the report and submit it to Congress as required. The IEUA water recycling program is one of the 34 projects. However, in late April, Interior informed the House Appropriations Committee (we later learned, based on findings in that report) that the IEUA water recycling project was not feasible.

House Appropriations sought additional information – and perspective – from the Water and Power Subcommittee and they contacted us. This set off a flurry of activity, meetings, calls, and other actions. The CALFED statute also directed the Interior Department to undertake this review with the full consultation of the water districts and agencies involved. Suffice to say, this did not occur in meaningful way.

Chairman Radanovich and Ranking Member Napolitano were sufficiently troubled that they used an April 26 hearing on three water bills to question Larry Todd, the Bureau of Reclamation witness, about the Interior failure to meet deadlines, and substantively, how they concluded that only two of the 34 projects were considered “feasible.” They sent Todd back to the Department with a set of comprehensive questions and demanded answers within five days.

In the end, the only reason IEUA wasn’t “feasible” had to do with paperwork that the Bureau of Reclamation was obligated to prepare but had not done so.

The Bureau is now facing charges of “bad faith” from more than one subcommittee.

Rich Atwater will be in DC for meetings at Interior on the Feasibility Study and with joint House and Senate committee staff to review legislative proposals.

Future of the Bureau, National Academy Weighs In. Ironically, early in April, Radanovich’s Subcommittee held a hearing on a recently completed study looking at the structure of the Bureau and the future of the Agency. Commissioner Keys made his concluding appearance before the Subcommittee and outlined a series of actions being undertaken. It was a low-key affair.

Title XVI – Talks Actively Underway. House and Senate talks are underway. Early in April, the Bureau of Reclamation met with Senator Feinstein’s office, plus Senate Energy Committee staff (Domenici and Bingaman). The Bureau infuriated everyone with the suggestion that Title XVI be amended to give the Bureau three years to review the “feasibility” of any particular project. And, having made a big deal over the inadequacy of “criteria,” it was recognizes that the Bureau sent up its Water 2025 bill, with “no criteria.” This was not credible, and as a result the Bureau is increasingly making itself largely irrelevant in these talks. House and Senate bi-partisan meetings are slated to continue in early May.

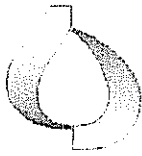
News and Notes. **DOI Secretary Dirk Kempthorne.** On May 4, Senate Energy Committee is holding confirmation hearings. He is expected to be confirmed with bi-partisan support. Kempthorne is a former senator and well-liked by colleagues. **Commissioner Keys** Retired April 14. Bill Rinne was named “Acting Commissioner.” Several candidates names are surfacing, and we keep hearing California’s Jason Peltier, formerly the head of the CVP Water Users Association and currently at the Interior Department as Deputy Assistant Secretary, Water and Science. **Congressional Earmarks.** The first step toward earmark reform has been taken in the House, with the support of Chairman Jerry Lewis. **Budget.** The House leadership was

unable to move the Budget Resolution prior to the April Recess. When they returned at the end of the month, it appears that internal problems remain. When and "if" a budget resolution will be considered is not known. **Appropriations.** Budget or not, the first appropriations markups are slated to begin in early May. **Energy.** Spiking gas prices are becoming political issue. Look for a new energy bill. **Climate Change.** Climate change – including impacts on water systems – is getting more and more attention. Three films are being released on the subject in less than a month.

IEUA Continues to Work With Various Partners. On an on-going basis in Washington, IEUA continues to work with:

1. Metropolitan Water District of Southern California (MWD)
2. Milk Producer's Council (MPC)
3. Santa Ana Watershed Project Authority (SAWPA)
4. Water Environment Federation (WEF)
5. Association of California Water Agencies (ACWA)
6. WateReuse Association
7. CALStart
8. Orange County Water District (OCWD)
9. Cucamonga Valley Water District (CVWD)
10. Western Municipal Water District
11. Chino Basin Watermaster

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION



Date: May 17, 2006

To: The Honorable Board of Directors

Through: Public, Legislative Affairs and Water Resources Committee (5/10/06)

From: Richard W. Atwater
Chief Executive Officer/General Manager

Submitted by: Martha Davis
Executive Manager of Policy Development

Subject: April Legislative Report from Geyer and Associates

RECOMMENDATION

This is an informational item for the Board of Directors to receive and file.

BACKGROUND

Bill Geyer and Jennifer West provide a monthly report on their state activities on behalf of IEUA.

PRIOR BOARD ACTION

None.

IMPACT ON BUDGET

None.

RWA:MD:mef

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION



MEMORANDUM

TO: Rich Atwater and Martha Davis
FROM: Jennifer West
DATE: April 27, 2006
RE: April Legislative Report

Parks/Water Bond Measure Signatures Submitted for November Ballot

Last Friday a coalition of environmental groups submitted more than double the needed signatures for placing a park/water bond on the November ballot. This signals what is likely the end of any real effort by the Legislature to place a water bond on the November 2006 ballot -- although some still hold out hope that water supply could be included in the Governor's infrastructure bond package.

The measure, entitled the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Act of 2006, is sponsored by the same groups that wrote Proposition 50. This new initiative contains funding that includes the following programs:

- Integrated Regional Water Management (IRWMP) -- \$1 Billion (\$114 million for the Santa Ana Region)
- Santa Ana River Parkway -- \$45 million
- Flood Corridors Grant Program -- \$40 million
- Emergency Safe Drinking Water projects -- \$10 million
- Small Community Drinking Water Systems Grants -- \$180 million
- Safe Drinking Water Revolving Fund -- \$50 million
- State Water Pollution Revolving Fund -- \$80 million
- Groundwater Pollution Prevention Revolving Fund -- \$60 million
- Delta Water Quality -- \$130 million
- Agricultural Wastewater Clean-up grants -- \$15 million

It is now likely that if the Legislature does place an infrastructure bond package on the November ballot, the only water-related funding it will contain is levee funding. Funding for the Delta and Central Valley's aging levee system has become a priority for both parties.

Since January, IEUA has been very active in trying to develop a legislative water bond that includes funding for the IRWMP, recycled water and water conservation. Now that this initiative will probably move forward, the agency should consider what legislative changes may be needed to ensure that recycled water and water conservation projects remain funded and consider what changes in the IRWMP may be necessary.

Inland Empire Utilities Agency

Positions List

April 27, 2006

	Summary	Status	Position
AB 371 (Goldberg) Recycled Water	Sponsored by WaterReuse. Makes a number of changes recommended by the Water Recycling Task Force. Some water agencies had concerns with the bill and it was stripped of numerous controversial provisions. WaterReuse continues to try to work out the remaining problems with the bill.	Senate Floor	Support
AB 1421 (Laird) Contamination	Sponsor said that they do not intend to pursue the bill in 2006. Would have given a RWQCB the authority to issue a cease and desist order for any degradation of water quality – even if it involved recycled water.	Senate E.Q.	Oppose unless amended
AB 1969 (Yee) Energy	IEUA sponsored. Helps offset demand while increasing environmentally friendly renewable energy production to meet the state's goals.	Assembly Natural Resources	Support
AB 1881 (Laird) Water Conservation	Will codify all the AB 2717 taskforce recommendations. Currently it does the following: Requires DWR to update the model local water landscape ordinance, including restriction on overspray and runoff, by Jan 2009 Requires local agencies to adopt either the model ordinance or one that is at least as effective by Jan 2010. Requires public water systems to install, or require installation of water meters for landscaped areas exceeding 5,000 feet for non-single family residence.	Assembly Approps	Recommend Support
AB 2396 (Calderon) Metropolitan Water Districts	States the intent of the Legislature to enact legislation to change the composition of MWD's board of directors and to provide for the direct election of members of the board of directors by voters residing in the service area of a metropolitan water district. Sponsored by AFSCME.	Not set (probably misses deadline)	Oppose
AB 2397 (Calderon)	This bill, with a certain exception, would prohibit MWD from entering into a contract for permanent or temporary services,	Public Employees Committee	Oppose

	skilled or unskilled, if those services, in the judgment of the district, are of a kind that persons selected through its civil service system could perform adequately and competently Sponsored by AFSCME.	5/3	
AB 2928 (Laird) Green Building Guidelines	Requires the CIWMB to adopt voluntary green building guidelines for residential construction by 2008 which include, but are not limited to: a) Energy efficiency measures; b) Water efficiency measures; c) Materials efficiency measures; d) Indoor environmental quality measures; e) A method for determining the life-cycle costs of green buildings Directs the CIWMB to consult with appropriate state agencies, the building and construction industry, environmental organizations, local government, and other interested parties when developing the guidelines. Directs the CIWMB to consider all relevant guidelines relating to residential green buildings, including, but not limited to: The US Green Building Council's Leadership in Energy and Environmental Design for Homes (LEED for Homes) rating system.	Assembly Approps	Recommend Support
SB 153 (Chesbro) Resources Bond	2006 Park and Water bond measure. Contains \$200 million for the Integrated Regional Water Management Program and other coastal and water quality funding This was one of the bond measures under consideration for inclusion in the Governor's resources bond or in Senator Perata's infrastructure bond.	Bond Conference Committee	Support
SB 1317 (Torlakson) Property Tax	Would alter the manner in which certain property tax revenue is allocated within a county. Sponsored by Southern California Edison. Sponsors of the bill say that it would encourage the development of electric substation and generation facilities by allocating all of the property tax revenue from the property to the county in which the facilities are built. After school entities and county entities receive the amount of property tax they have received in prior years, the remaining tax would be allocated to the city or county (depending upon the location) in which the facility is built. <u>As recently amended, it would only impact enterprise special districts.</u>	Senate Approps	Oppose

SB 1345 (Chesbro) Compost: Caltrans	Requires Caltrans to increase its use of compost on state highways. By 2010 Caltrans would be required to use more than 1 million tons of compost per year.	Senate Approps. Suspense	Recommend Support
SB 1640 (Kuehl) Water	Almost exactly the same as the final version of SB 820 (Kuehl), which IEUA supported last year, but which was vetoed by the Governor because of its groundwater reporting requirements. The bill's groundwater language is still a "work in progress." The Senator has begun working with all interests to try to resolve the outstanding issues regarding groundwater reporting. IEUA is participating in these discussions.	Senate Approps. 5/8	Support
SB 1795 (Machado) Groundwater	Establishes that recharging a groundwater basin by a local agency to repel salt intrusion and recover basin groundwater levels is a beneficial use of water if the agency has determined that the recharge is consistent with a local agency's groundwater management plan. Sets forth new requirements for water appropriation intended for groundwater recharge. The bill needs to be amended to make it clear that adjudicated basins can appropriate water for recharge purposes. Right now the bill appears to be restricted to those basins with AB 3030 plans.	Senate Approps. 5/8	Support if amended

Watch List

Bill #	Summary	Status
Water Conservation		
AB 2496 (Laird) Low flush water closets	Requires all new buildings constructed in the state after 2009 to use urinals and water closets that meet recent performance standards established by the American Society of Mechanical Engineers.	Assembly Approps.
AB 2515 (Ruskin) Water Conservation	Prohibits a water supplier from receiving state bond funds unless it has adopted BMPs in accordance with the MOU regarding urban water conservation or the MOU regarding agriculture water use efficiency. Requires the Energy Commission to establish water efficiency standards for residential and commercial water-using appliances and other products and report to the legislature.	Assembly Approps.

SB 1608 (Simitian) Water Landscape	Requires Cal-Trans and all local transportation agencies that receive state funds to use California native plants and other water-saving plants in consultation with the local native plant society or the Resources Agency.	Senate Approps
Groundwater		
SB 1425 (Kuehl) Groundwater	Makes minor changes to the groundwater Recordation Act that applies to four counties in Southern California.	Senate Floor
Floods and Delta		
AB 2208 (Jones) Delta Levee Fees	Requires DWR to conduct a study to recommend which Delta beneficiaries should pay for Delta levee improvements and the conveyance system. Requires DWR to recommend, in accordance with the "beneficiary pays" principle, who should pay a Delta user fee for Delta levee and conveyance system improvements.	Assembly Approps.
SB 1251 (Alquist) Floods	Requires DWR, not later than 2007, to convene a task force to prepare a comprehensive statewide flood and storm water management plan with prescribed components and a financing strategy for the implementation of the plan.	Senate Approps
SB 1574 (Kuehl) Delta Exports	Current law requires DWR and DFG to determine the principal options for the Delta. This bill would require one of those principal options to be designed to reduce dependence on the delta for water supply through greater investments in local water supplies, water use efficiency, water recycling, demand management programs, and other actions outside the delta. The bill would substantially revise those objectives relating to the delta and Sacramento and San Joaquin river systems. The bill would require DWR and DFG by 2007, to provide a draft joint report to the Independent Science Board of the California Bay-Delta Authority, or its successor. The bill would require that board to provide DWR with an independent peer review of the draft report. The bill would require DWR to revise the draft joint report to reflect the comments of the peer review in the joint report.	Senate Approps. 5/8
Compost		
SB 1778 (Alarcon) Compost	Sponsored by Californians Against Waste (CAW), the bill phases out the use of alternative daily cover and includes incentives for the use of compost. Senator Alarcon may change his bill to try to create markets for compost before banning green waste in the landfills. IEUA will be coordinating with CAW on their "incentive" efforts.	Senate Approps

Integrated Regional Water Management Program		
SB 1242 (Lowenthal) IRWMP	Sponsored by Long Beach Water Department. Significantly revises the governance structure of the IRWMP. Restricts the groups that can develop an IRWMP to water management agencies. Specifies that only water management agencies should have final approval over the contents of the plan. Long Beach has indicated that they are willing to add additional kinds of groups into the IRWMP planning process, but feel that the water management agencies need to retain final approval over what is contained in the plan. They are also interested in "grandfathering" existing plans such as SAWPA's.	Senate Approps.



Date: May 17, 2006
To: The Honorable Board of Directors
Through: Public, Legislative Affairs and Water Resources Committee (5/10/06)
From: Richard W. Atwater
Chief Executive Officer/General Manager
Submitted by: Martha Davis
Executive Manager of Policy Development
Subject: April Legislative Report from Dolphin Group

RECOMMENDATION

This is an informational item for the Board of Directors to receive and file.

BACKGROUND

Michael Boccadoro provides a monthly report on his activities on behalf of the Chino Basin/Optimum Basin Management Program Coalition.

PRIOR BOARD ACTION

None.

IMPACT ON BUDGET

None.

RWA:MD:mef

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION

Chino Basin / OBMP Coalition

Status Report – April 2006

ASSEMBLY BILL 1969

CA AB 1969 **AUTHOR:** Yee [D]
 TITLE: Electrical Corporations: Water Agencies
 INTRODUCED: 02/09/2006
 LAST AMEND: 04/06/2006
 DISPOSITION: Pending
 LOCATION: Assembly Natural Resources Committee
 SUMMARY:
 Requires every electrical corporation to file with the Public Utilities Commission a standard tariff for renewable energy output produced at an electric generation facility that is an eligible renewable energy resource. Requires the corporation to make this tariff available to public water or wastewater agencies that own and operate an electric facility on a first-come-first-served basis, until the combined statewide cumulative rated capacity reaches a specified total amount of megawatts.

This measure passed of the Assembly Utilities & Commerce Committee on a 10-0 vote.

This measure is sponsored by IEUA and SAWPA. The bill seeks to remove barriers and obstacles and encourage the full potential of renewable energy generation by the state's water and wastewater agencies. AB 1969 will help offset demand while increasing environmentally friendly renewable energy production to meet the state's goals.

Specially, AB 1969 will:

- Require electrical corporations to create tariffs (standard contract) for the purchase of renewable energy developed by water and wastewater agencies;
- Limit individual facilities to 1 MW and the cumulative statewide capacity to 250 MW; and
- Help electrical corporations meet the renewables energy procurement standard and resource adequacy requirements

Benefits include:

- Adding renewable energy generation resources;
- Helping the state meet its Renewable Portfolio Standard (RPS) goals;
- Addressing current transmission constraints;
- Improving the environment through a reduction in greenhouse gases; and
- Offsetting rising water treatment and water delivery costs

ENERGY/REGULATORY

Energy Efficiency Funding for Water Conservation Efforts

In response to last month's Water/Energy Symposium at the California Energy Commission, the California Public Utilities Commission has moved rapidly to initiate a proceeding for the consideration of changes to the utilities' energy efficiency portfolios. Specifically, the new rulemaking will consider expanding eligibility to include water conservation efforts.

A prehearing conference has been scheduled for May 9th. Testimony in this case is expected to be scheduled for July 24th. DGI will be in attendance at the prehearing conference and will continue to monitor this proceeding.

This is an important issue for the state's water community, including IEUA, and represents a significant opportunity to secure millions of dollars annually for water and energy conservation efforts.

Critical Peak Pricing

Yet again, the Critical Peak Pricing proceeding has taken another unexpected turn.

Last month, the presiding Administrative Law Judge issued a decision rejecting a settlement from the utilities and most intervening parties. The settlement would have adopted voluntary CPP rates only, with no hedging premium for non-participants and no participation credits for those enrolling in the program.

In rejecting the settlement, the ALJ proposed an alternative approach, requiring mandatory CPP participation in 2007 for all customers with demand greater than 200 kW. At the end of 2007, all customers would have the option to move back to normal time-of-use rates. Oddly, the decision stated that if the settling parties reject this alternative approach, then the entire issue would be pushed off for reconsideration in each utility's next General Rate Case (2009 for Southern California Edison).

In supplying comments on the draft decision, all parties rejected this alternative approach. Based on this action, it is expected that the ALJ will shortly amend the draft decision to remove the alternative mandatory approach and punt the issue to the next GRC.

However, Commissioner Bohn unexpectedly issued an alternative decision which wholly adopts the original settlement. The Commission is expected to decide between these two decisions sometime in May.

Demand Response for Water Agencies

On Thursday, March 30th, DGI participated in a meeting in San Francisco relating to the expansion the utilities' demand response programs. Central to the discussion was expanding the program to allow water agencies and other customers the ability to aggregate their load for the purposes of participating in demand response programs.

Interested parties will continue to meet through the summer, and are required to submit policy recommendations back to the Commission by October 31, 2006.

LEGISLATIVE ACTION

CA AB 2315	AUTHOR:	McCarthy [R]
	TITLE:	Energy: Renewables Portfolio Standard Program
	INTRODUCED:	02/22/2006
	LAST AMEND:	04/03/2006
	DISPOSITION:	Pending
	COMMITTEE:	Assembly Utilities and Commerce Committee
	HEARING:	05/01/2006 3:00 pm
	SUMMARY:	Makes nonsubstantive clarifying changes to the requirements placed upon the Energy Commission under the state Renewables Portfolio Standard Program. States the Intent of the Legislature to enact legislation to establish the Climate Neutral Combustion Power Generation Program to complement the Renewable Energy Resources Program and to supplement the Renewables Portfolio Standard Program.
CA SB 1727	AUTHOR:	Kehoe [D]
	TITLE:	Public Utilities: Electrical Corporations
	INTRODUCED:	02/24/2006
	DISPOSITION:	Pending
	COMMITTEE:	Senate Energy, Utilities and Communications Committee
	HEARING:	05/02/2006 9:30 am
	SUMMARY:	Creates an exception from the definition of an electrical corporation where electricity is generated on private real property and privately distributed across a highway to an immediately adjacent private real property owned or otherwise controlled by the corporation or person, solely for its own use or the use of its tenants and not for sale or transmission to others make conforming changes to specific exceptions for certain persons or corporations using co generation technology.

CA AB 2062 **AUTHOR:** Richman (R)
TITLE: Electricity: Core, Noncore and Core-Elect Market
INTRODUCED: 2/15/2006
LAST AMEND:
DISPOSITION: Pending
LOCATION: Assembly Utilities and Commerce Committee
SUMMARY:

Relates to reformation of electrical restructuring in order to implement a core, noncore and core-elect market structure. Requires adoption of rules under which noncore customers must elect whether to procure the electricity they consume from an electric service provider, elect to receive commodity service from the electrical corporation under a procurement plan for a minimum period of 3 years or receive default commodity service from the corporation.

The measure failed passage in the Assembly Utilities & Commerce Committee.

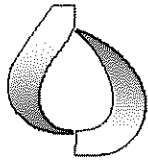
Position: Watch

CA AB 2778 **AUTHOR:** Lieber (D)
TITLE: Electricity: Self-Generation Incentive Program
INTRODUCED: 2/24/2006
LAST AMEND:
DISPOSITION: Pending
LOCATION: Assembly Utilities and Commerce Committee -
 04/24/2006 3:00 pm
SUMMARY:

Requires the Public Utilities Commission, in consultation with the Energy Commission, to administer a self-generation incentive program for distributed generation resources in the same form that exists on 1/1/04.

This measure was passed out of the Assembly Utilities & Commerce Committee on a 8-2 vote.

Position: Watch



Date: May 17, 2006

To: The Honorable Board of Directors

Through: Public, Legislative Affairs and Water Resources Committee
(5-10-06)

From: Richard W. Atwater
Chief Executive Officer/General Manager

Submitted by: Sondra Elrod
Public Information Officer

Subject: Public Outreach and Communications

RECOMMENDATION

This is an informational item for the Board of Directors to receive and file.

Outreach/Tours

None.

Calendar of Upcoming Events

- May 17, 2006, League of California Cities Legislative Dinner, Chops Restaurant, Sacramento, beginning at 7:30pm
- May 19 - 21, 2006, MWD Solar Cup Lake Skinner
- May 20, 2006, GIES dedication at North Tamarind Elementary in Fontana 2pm
- May 31, 2006, IEUA Leadership Breakfast at 7:30am
- May 31, 2006, GIES dedication at Coyote Canyon Elementary School in Rancho Cucamonga 10am
- May 31, 2006, GIES dedication at Newman Elementary in Chino 5:30pm
- June 2, 2006, GIES dedication at Ranch View Elementary in Ontario 5pm
- June 3, 2006, Chino Dairy Festival Jr. Fair Grounds 9am to 4pm
- June 7, 2006, IEUA hosted blood drive, event center

Outreach/Educational Inland Valley Daily Bulletin Newspaper Campaign

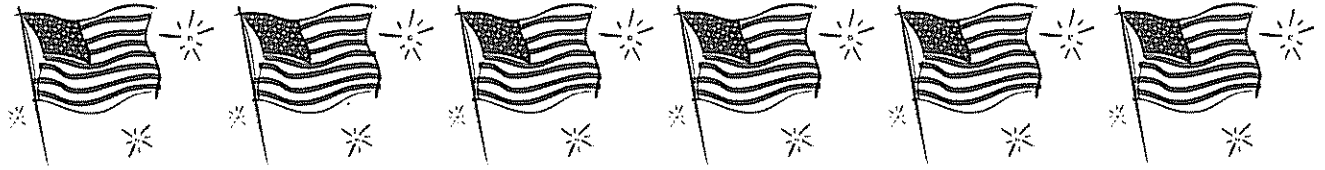
- May 2006, two page Water Awareness Month ad
- May 2006, four page Living Here Magazine ad

PRIOR BOARD ACTION

None.

IMPACT ON BUDGET

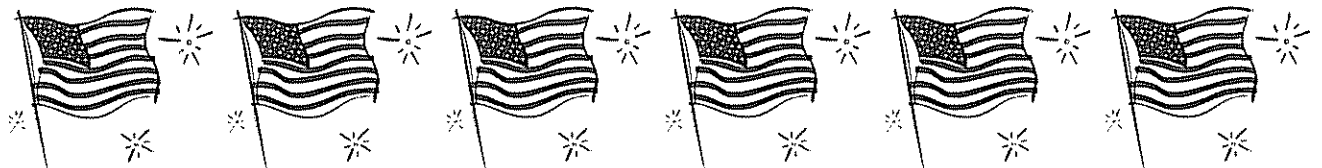
None.



CHINO BASIN WATERMASTER

V. INFORMATION

1. Newspaper Articles





<http://www.latimes.com/news/local/la-me-dam16apr16,0,5404877.story?track=tottext>
From the Los Angeles Times

The Delicate Act of Juggling Water

Dam outflows must be choreographed to avoid overwhelming the levees or overfilling reservoirs.

By Bettina Boxall
Times Staff Writer

April 16, 2006

MILLERTON LAKE, Calif. — In four roaring funnels, water shoots out of the mouth of Friant Dam at 85 mph, tumbling into a churning pool of froth that looks like a giant tub of cappuccino foam.

The scene is part of a complicated choreography of water releases underway in the San Joaquin River Basin as dam managers try to avert serious flooding in this sodden spring of endless rain and monster snowpacks in Northern and Central California.

Here, 20 miles northeast of Fresno, dam operators have to make room for the coming snowmelt in the smallest reservoir in the big federal water project that greens the Central Valley. But they can't let out too much water or it will break through the aging, earthen levee system that guards towns and farms downstream.

It is a season of round-the-clock monitoring, canceled vacations and anxious weather readings. "At times like that my body is running at 100 miles an hour," said Friant operations chief Tony Buelna, who at the beginning of the month, when nature was filling the reservoir to the brim, got a total of four hours of sleep in three days.

With last week's weather drier than expected, Millerton's levels were starting to fall and Buelna was getting some sleep. But the potential for disaster will last well into the summer.

In the High Sierra, where the headwaters of the San Joaquin arise southeast of Yosemite National Park, the snowpack is 170% of the norm — 50 feet deep in some places. When that melts, there will be enough runoff to fill Millerton four times over.

The 319-foot-tall Friant Dam, built at the beginning of World War II and the only one on the main stem of the San Joaquin, is one of nearly a dozen in the drainage basin. There are 10 others on the river's tributaries, which branch out like vines on a trellis as the San Joaquin runs northwest to its delta just east of San Francisco Bay.

Each of those dams is spitting water into the system from swollen reservoirs, complicating the release calculations. The dam operators are like air traffic controllers, constantly juggling what is coming in and out of their reservoirs. But unlike air controllers, they have little say over what comes in — and they have to be aware of what every other dam is doing.

With much of the state on flood alert and an emergency declaration in more than a dozen Northern and Central California counties, dam managers consult with each in daily teleconferences. They

listen to morning weather briefings and pore over computer models that try to predict runoff based on the temperature, precipitation and snowpack.

They look at maps that plot flow times, showing how long it takes dam releases to reach a particular section of the river, where they will be joined by water from other reservoirs. More maps tell them how much flow the river can handle without surging over its levee walls.

In his office near the base of the dam, bounded by the fresh green Sierra foothills, Buelna taps into a computer program that analyzes San Joaquin records going back to 1896.

His desk is papered with computer printouts. One is covered with hourly readings that track flows in and out of Millerton and precisely how full it is. Others show precipitation and temperature data and how much water is in the smaller hydroelectric lakes above Millerton, in the upper reaches of the San Joaquin.

Thursday, a warm, sunny spring day, Friant was releasing 7,700 cubic feet per second into the river channel, plus an additional 3,000 cubic feet per second into the two big irrigation canals that carry water from Millerton up and down the east side of the San Joaquin Valley. A cubic foot of water will roughly fill a basketball, meaning that each second, 7,700 basketballs of water are spewing out of the base of the concrete dam, sending up 60-foot-tall spray. For a couple of days this month, water was also spilling over the top of the dam gates for a thunderous ride down Friant's sloping face.

It is a dramatically different scene than one normally encounters at Friant, which was built to keep water out of the river and send it to some of the richest agricultural land in the country. The dam has done such a good job that in the typical summer dry season, the San Joaquin shrivels to nothing in two sections below.

As a result, historically bountiful salmon runs have been wiped out, sparking a long, bitter environmental battle that is poised for a court settlement that could put enough water back into the river to revive those dead spots.

For now, there is no shortage of water, and dam managers are doing everything they can to keep the San Joaquin from running wild. It is a delicate balancing act. If they hold back too much, they can lose control of their reservoirs. And if they let out too much, they can cause flooding.

That happened in 1997, when New Year's storms swelled reservoirs to the bursting point in Northern and Central California. Buelna opened the dam gates for the first time for a flood release in Friant's history, unleashing a water surge that carved a destructive path downstream. He and some other dam managers were criticized for not releasing more water in advance of the storms to create room for the sudden runoff.

Buelna, who has run Friant operations since 1990, said the 1997 storms were too powerful to avoid a big release. But he acknowledged he has his critics — it goes with the job. Now, in places like the little farm community of Firebaugh, where emergency workers have been stacking sandbags atop old levees, Buelna says people are looking up at the huge Sierra snowpack and wishing he would let out more water to create a bigger hole in his reservoir.

At the same time, the U.S. Army Corps of Engineers wants him to limit outflows to make room for releases from other reservoirs.

Close Window

Send To Printer

Article Display Date:

Recycled water plan moves ahead

By Wendy Leung, Staff Writer
Inland Valley Daily Bulletin

Water hydrants and pipes painted purple may soon be unavoidable in the Inland Valley

Purple represents recycled water, something the Chino Basin will have more of in the coming years

The Recycled Water Groundwater Recharge Program – started two years ago to combine storm water, recycled water and imported water in seven basins – is headed to its second phase. Pending approval from the Department of Health Services, the second phase of the program will add six additional basins that would increase the amount of recycled water recharged in the Chino Basin by 11,400 acre-feet

Using recycled water is crucial to meet the needs of the rapidly growing area the Chino Basin serves, said Kenneth Manning, chief executive officer of the Chino Basin Watermaster

"Recycled water is consistent. We know we're going to get it day in and day out and it reduces our reliance on imported water," Manning said

At 250 square miles, the Chino Basin stretches from Pomona to Rialto and holds enough water for current needs. But water that is pumped out must be replaced for it to meet future demand.

Speaking at a public hearing on Thursday, Glen Durrington, a local farmer, said he was supportive of the program expansion.

"Recycling water has been going on for hundreds of years," Durrington said. "People don't realize it, but it's good water."

Andy Campbell of the Inland Empire Utilities Agency said recycled water will meet drinking standards after going through a treatment plant

Recycled water is also much cheaper, costing between \$60 to \$80 an acre-foot as compared to the \$250 an acre-foot of imported water

Pumped from Northern California, imported water used in the Chino Basin is also becoming limited and may not be enough for this booming region. Water demands served by the Chino Basin are expected to double by 2025.

Utilizing recycled water, Manning said, would not only save money but it would save energy otherwise used to pump imported water.

"It would take demand away from the Colorado River," Manning said. "It's a strategy that's important for the Western part of the United States."

The second phase of the program is expected to be completed by 2008

Wendy Leung can be reached by e-mail at wendy_leung@dailybulletin.com or by phone at (909) 483-9376.

THIS PAGE
HAS
INTENTIONALLY
BEEN LEFT
BLANK
FOR PAGINATION

[Close Window](#)[Send To Printer](#)

Article Display Date:

Area dairy industry continues to sour

By Joe Florkowski, Staff Writer
Inland Valley Daily Bulletin

The dairy decline continues.

Motivated by attractive land prices and a host of other factors, dairy owners continued their exodus from San Bernardino and Riverside counties last year, according to statistics from the state Department of Food and Agriculture.

The number of dairies in the two-county area fell from 209 in 2004 to 181 in 2005, according to the agency's numbers, leaving the region with its fewest number of dairies since the 1950s.

Despite the numbers, not all dairies are ready to say goodbye to the Inland Empire, dairy real estate brokers and executives say.

Some farmers, especially those who have started newer, larger dairies in San Jacinto in Riverside County, will remain, said Bill Van Dam, executive director of Chino-based Milk Producer Council.

"There is more interest in staying and dairying around here than I thought," said Van Dam, who recently started serving as director of the council.

Nevertheless, most of the Chino Valley dairies are leaving, said Syp Vander Dussen, who owns a Chino dairy with about 2,400 cows. If all the dairies in escrow right now were to leave the region, Chino Valley would have about 25 percent of its dairies left, Vander Dussen said.

The Inland Valley's dairy industry was once prominent in the 1960s in the area of Chino and what is now Ontario. More than 400 dairies operated at the peak of the industry's boom in the 1960s and 1970s.

But as the Inland Valley has become more urbanized, more dairy owners have opted to leave the region, for a variety of reasons.

Chino Valley dairies once considered spacious now are too small. Their owners have moved to California's Central Valley, or to other states, where they can buy bigger properties and milk more cows.

Some dairy owners have chosen simply to retire, while others have left the business.

In their place, developers have built homes. On what was once dairy land in Chino, families already live in the master-planned development called the Preserve.

In Ontario, homes will be built later this year below Riverside Drive in the New Model Colony development. And in western Riverside County, the burgeoning unincorporated community of Eastvale has sprung up on what was formerly farmland.

David Beno, an Ontario-based real estate broker who specializes in dairies, said the rate at which dairies leave or close will slow over the next few years. Many dairies will close or move from the region in 2006, but fewer will leave in 2007-08, Beno predicted.

High interest rates combined with a correcting housing market will cause developers to be cautious when they buy dairy properties, he said.

Despite the dairy migration from the Inland Valley in recent years, milk is still king in San Bernardino County.

In preliminary estimates, the value of the milk produced in 2005 was nearly \$342 million. The next-closest agricultural product or crop was eggs, valued at \$31 million, according to San Bernardino County's Department of Agriculture Weights and Measures.

Milk is generally about 60 percent of the county's annual agricultural production per year, said John Gardner, deputy commissioner with the county's weights and measures department.

The dairy migration has also affected the businesses that depend on dairies.

Vander Dussen calls it "the reverse of pioneering."

For example, the California Dairy Herd Improvement Association has operated out of Chino Airport since 1971. But the association, which tests milk for farmers, opened a satellite office in California's Central Valley in 2004.

The Chino association office serves about 128 dairies in the Chino Valley. The Central Valley office serves 43, said Rick Bealer, general manager. A few years ago, the Chino office served more than 150 area dairies, he said.

The association will remain as long as it's needed, Bealer said. "We're going to be here as long as the dairies need us here," he said.

Joe Florkowski can be reached by e-mail at joe.florkowskior by phone at (909) 483-9391.

[Close Window](#)
[Send To Printer](#)

Article Display Date:

County, Colonies heading to court

Flood control requirements remain major sticking point

By Edward Barrera, Staff Writer
Inland Valley Daily Bulletin

Next Monday's trial between San Bernardino County and the developers of the Colonies project in Upland will finally begin to settle some of the most significant questions of the four-year battle.

A judge at San Bernardino Superior Court will decide the extent of the county's rights to flood control facilities on the Colonies Partners' 434-acre property in northeast Upland.

About 67 acres are being used for water storage and storm runoff.

An appellate court last summer decided that the 67 acres mandated by the county to be used for flood control is more than what was originally allowed from a 1933 easement.

An easement is the right of a public entity to make use of land primarily owned by another owner for a limited purpose, such as a utility line.

But the appellate court added that a 1939 easement might give the county more access.

"We are anxiously waiting for the trial to begin," said Dan Richards, Colonies co-managing partner. "This has gone on long enough."

The county could face a huge financial hit if any ruling favors the Colonies since, as the appellate court noted, "the burden on the Colonies' property is far more significant than slight."

A lawsuit for damages is waiting in the wings, predicated not only on any land illegally taken but on costs spent for basin renovations and impact on Colonies Partners due to construction delays.

Colonies will be asking for upward of \$200 million in any award judgment.

The specter of that award, which would wipe out the county's West End flood control district fund, is what pushed county officials to attempt settlement talks last month. Though negotiations initially appeared promising, they soon fizzled out.

"It was not close enough to get it done. That's the bottom line," said county Supervisor Paul Blane, who has been vocal about how it could affect the second district.

Richards, who would not divulge details, said he believed a deal was done before it fell apart.

County and Colonies officials came close last year when negotiators struck a deal to reimburse the developers for basin costs and compensate them for taking 37 acres. The deal would have cost the county about \$75 million in land and cash payments. But it was never approved by the full Board of Supervisors.

"I don't see how (the Colonies) have been injured at any point," Supervisor Dennis Hansberger said. "(The county) has a lot at stake. I don't think there is a lot at stake for the Colonies. If they lose everything, they will still make tens of millions of dollars."

Colonies officials have said that the county took their property without just compensation and reneged on promises to pay for flood control renovations, which the company has already spent nearly \$25 million to make.

Richards said even with a ruling in the Colonies' favor, the developers would still be open to a settlement, though the price keeps going up.

"Unfortunately, the taxpayers are the loser, and we are not happy about that," he said. "The Board of Supervisors have to be held accountable. When this is ultimately resolved, and the public understands the true accounting of the missteps by the county, the supervisors will have to bear that responsibility."

The county also filed a suit against Caltrans, San Bernardino Associated Governments and the city of Upland, intending to hold them financially responsible if the county is forced to pay any damages.

Officials from the county and Colonies say they believe that any judgment will be appealed.

Edward Barrera can be reached by e-mail at edward.barrera@dailybulletin.com or by phone at (909) 483-9356.