

CHINO BASIN WATERMASTER



NOTICE OF MEETINGS

Thursday, April 13, 2005

9:00 a.m. – Joint Appropriative & Non-Agricultural Pool Meeting

AT THE CHINO BASIN WATERMASTER OFFICES

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

Tuesday, April 19, 2005

9:00 a.m. – Agricultural Pool Meeting

AT THE INLAND EMPIRE UTILITIES AGENCY OFFICES

*6075 Kimball Ave. Bldg. A Board Room
Chino, CA 91710
(909) 993-1600*



CHINO BASIN WATERMASTER

April 14, 2005

9:00 a.m. – Joint Appropriative and Non-Agricultural Pool Meeting

April 19, 2005

9:00 a.m. – Agricultural Pool Meeting

AGENDA PACKAGE

**CHINO BASIN WATERMASTER
JOINT MEETING APPROPRIATIVE
& NON-AGRICULTURAL POOLS**

9:00 a.m. – April 14, 2005
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 Joint Appropriative and Non-Agricultural Pool Meeting held March 10, 2005
(Page 1)

B. FINANCIAL REPORTS

1. Cash Disbursements for the month of March 2005 (Page 13)
2. Combining Schedule of Revenue, Expenses and Changes in Working Capital for the Period July 1, 2004 through February 28, 2005 (Page 17)
3. Treasurer's Report of Financial Affairs for the Period January 1, 2005 through February 28, 2005 (Page 19)
4. Profit & Loss Budget vs. Actual July 2004 through February 2005 (Page 21)

II. BUSINESS ITEMS

A. EDISON PROPERTY CONVERSION

Consider Approval of the Edison Property Conversion (Page 23)

B. FORBEARANCE PROGRAM

Consider Approval for Continuance of the Forbearance Program (Page 27)

C. FIELD STAFF CONTRACT

Consider Approval of the Field Staff Contract (Page 39)

III. REPORTS/UPDATES

A. WATERMASTER GENERAL LEGAL COUNSEL REPORT

1. Attorney-Manager Meetings
2. Santa Ana River Application Process (Page 57)
3. North Gualala Litigation Amicus
4. Pending Legislation

B. CEO/STAFF REPORT

1. Budget Workshop Update
2. Strom Report Review
3. Replenishment Obligation Update
4. Turner Basin Renovation Test
5. MZ3 Water Quality Update

IV. INFORMATION

1. Status Report No. 12 (*Page 59*)
2. Status Report No. 13 (*Page 81*)
3. Newspaper Articles (*Page 103*)

V. POOL MEMBER COMMENTS

VI. OTHER BUSINESS

VII. FUTURE MEETINGS

April 14, 2005	9:00 a.m.	Appropriative & Non-Agricultural Pool Meeting
April 14, 2005	12:00 p.m.	Attorney-Manager's Meeting @ CVWD
April 19, 2005	9:00 a.m.	Agricultural Pool Meeting @ IEUA
April 20, 2005	9:00 a.m.	MZ1 Technical Committee Meeting
April 28, 2005	9:00 a.m.	Advisory Committee Meeting
April 28, 2005	11:00 a.m.	Watermaster Board Meeting
May 02, 2005	12:00 p.m.	Budget Workshop

Meeting Adjourn

**CHINO BASIN WATERMASTER
AGRICULTURAL POOL MEETING**

9:00 a.m. – April 19, 2005

At The Offices Of

Inland Empire Utilities Agency

6075 Kimball Ave., Bldg. A, Board Room

Chino, CA 91710

AGENDA

CALL TO ORDER

AGENDA - ADDITIONS/REORDER

I. CONSENT CALENDAR

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A. MINUTES

1. Minutes of the Agricultural Pool Meeting held March 10, 2005 *(Page 7)*

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VII. FUTURE MEETINGS

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April 14, 2005	12:00 p.m.	Attorney-Manager's Meeting @ CVWD
April 19, 2005	9:00 a.m.	Agricultural Pool Meeting @ IEUA
April 20, 2005	9:00 a.m.	MZ1 Technical Committee Meeting
April 28, 2005	9:00 a.m.	Advisory Committee Meeting
April 28, 2005	11:00 a.m.	Watermaster Board Meeting
May 2, 2005	12:00 p.m.	Budget Workshop

Meeting Adjourn



CHINO BASIN WATERMASTER

I. CONSENT CALENDAR

A. MINUTES

1. Joint Appropriative and Non-Agricultural Pool Meeting –
March 10, 2005

Draft Minutes
CHINO BASIN WATERMASTER
JOINT APPROPRIATIVE & NON-AGRICULTURAL POOL MEETING
March 10, 2005

The joint Appropriative and Non-Agricultural Pool Meeting was held at the offices of Chino Basin Watermaster, 9641 San Bernardino Road, Rancho Cucamonga, CA, on March 10, 2005 at 9:00 a.m.

APPROPRIATIVE POOL MEMBERS PRESENT

Dave Crosley, Chair	City of Chino
Raul Garibay	City of Pomona
Ken Jeske	City of Ontario
Robert DeLoach	Cucamonga Valley Water District
James T. Bryson	Fontana Water Company
Bill Stafford	Marygold Mutual Water Company
Bob Feenstra	Agricultural Pool
Ray Wellington	San Antonio Water Company
J. Arnold Rodriguez	Santa Ana River Water Company
Mark Kinsey	Monte Vista Water District
Mike Maestas	City of Chino Hills

NON-AGRICULTURAL POOL MEMBERS PRESENT

Justin Scott-Coe	Vulcan Materials Company (Calmat Division)
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Watermaster Staff Present

Kenneth R. Manning	Chief Executive Officer
Sheri Rojo	Finance 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.

Others Present

Rita Kurth	Cucamonga Valley Water District
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Chair Crosley called the meeting to order at 9:02 a.m.

AGENDA - ADDITIONS/REORDER

I. CONSENT CALENDAR

A. MINUTES

1. Minutes of the Joint Appropriative and Non-Agricultural Pool Meeting held February 10, 2005

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

Moved to approve Consent Calendar Item A with the deletion of a members name off the minutes dated February 10, 2005, as presented

B. FINANCIAL REPORTS

1. Cash Disbursements for the month of February 2005
2. Combining Schedule of Revenue, Expenses and Changes in Working Capital for the Period July 1, 2004 through January 31, 2005
3. Treasurer's Report of Financial Affairs for the Period January 1, 2005 through January 31, 2005
4. Profit & Loss Budget vs. Actual July 2004 through January 2005

*Motion by DeLoach, second by Wellington, and by unanimous vote
Moved to approve Consent Calendar Item B, as presented*

C. STATUS REPORT #13

Consider Authorization to File Status Report 13 with Court and Authorize Staff and Counsel to Make Minor Edits as Necessary

Item C – Status Report #13 was pulled for discussion.

Chair Crosley inquired as to the actual due date of Status Report #13. Counsel Fife stated that when the courts required CBWM to do OBMP status reports there were dates set and at that time it was required to do one every six months. When that reporting was taking place CBWM actually notified the court that our reporting would be accelerated voluntarily and if it ever seemed necessary to cut that reporting down, that also would be acceptable to the court. The voluntary schedule of acceleration of reporting threw out the due dates; CBWM has now switched back to an every six month reporting period and there are still no real due dates. Counsel Fife stated there is a bit of confusion whether this is number 12 or 13 and the records need to be check for that clarification. A draft of 12 was done but never finished and 12 might be rolled over into 13 and reflect a six month period. Mr. Kinsey inquired as to how this issue relates to the Executive Summary which was presented last month. Counsel Fife noted that the summary presented last month was the Executive Summary to the State of the Basin Report which also coincides with the Annual Report. Mr. Manning noted that CBWM is going through a negotiated contract with the contractor for the next Annual Report which should be ready for press in early April. Mr. Wellington confirmed that once the numbers of the status reports are confirmed the reporting dates will be from June to December 2004. Mr. Manning stated that was correct. Chair Crosley noted that some of the information in Status Report #13 is dated and needs some freshening up especially in the areas of the Desalters and the Forbearance numbers.

*Motion by DeLoach, second by Wellington, and by majority vote – City of Pomona did not vote
Moved to approve Consent Calendar Item C including Status Report #12 and Status Report #13 which covers the periods of June to December 2004 and some of the dates and numbers will be updated to date, as presented*

II. BUSINESS ITEMS**A. MITIGATION OF TEMPORARY LOSS OF HYDRAULIC CONTROL**

Mr. Manning stated that in December 2002 Watermaster and Inland Empire Utilities Agency (IEUA) submitted a proposal to the Regional Board requesting TDS and Nitrogen objectives be established using Maximum Benefit concepts. The Regional Board had accepted the proposal with some slight modifications; one of those modifications would be that Watermaster and IEUA would submit a mitigation of temporary loss of hydraulic control – this is what is being presented now. Mr. Wildermuth stated that when Wildermuth prepared the Maximum Benefit Proposal one of the things that the Regional Board noticed was that from time to time we can actually lose a small amount of hydraulic control. Mr. Wildermuth gave a detailed description of the loss of hydraulic control and incorporated the temporary loss of the Desalters. Mr. Wildermuth noted that the Regional Board requested the mitigation plan on the temporary loss of hydraulic control and requested that this plan had to be turned in, time certain, after the Basin Plan was adopted.

The Basin Plan was officially adopted in December 2004 and at that time a request was made to the Regional Board to give them some time to investigate before presenting the mitigation of temporary loss of hydraulic control report; that time was informally granted by the Regional Board. Mr. Wildermuth reviewed some historical hydrology in the basin. Mr. Wildermuth noted the only cost to Watermaster for this project is that persons can not recharge recycled water in some circumstances. A discussion ensued with regard to costs. Mr. Wildermuth requested that if what is being proposed here is acceptable then it will be presented to the Regional Board. A long discussion ensued with regard to replenishment water along with recharged recycled water. Mr. Wellington commented that if the River shows an increase in nitrogen or TDS and it can be attributed to Chino Basin then it triggers something and if it can not be attributed to Chino Basin it is not triggered. Mr. Wildermuth noted that statement was correct and if it triggers it without imperilment, as long as Watermaster is doing everything we stated we were going to do in the OBMP then all will be fine. The question of how one would categorize Hydraulic Control was presented. Mr. Wildermuth stated he would initially categorize Hydraulic Control as a way to maximize the yield of the basin by minimizing outflows. The question regarding the two possible scenarios in the write up regarding Hydraulic Control was presented. Mr. Wildermuth stated that he will attempt to bring in some charts to explain this question better. Mr. Wildermuth gave a brief description without the charts on Hydraulic Control. The question of whether or not the releases from Seven Oaks affect the Chino Basin hydraulically was presented. Mr. Wildermuth stated that as part of the Hydraulic Control monitoring that needs to be watched carefully. A discussion ensued with regard to water release and TDS in Prado. The question if this item will be moved through the process of the Advisory Committee and Watermaster Board was presented. Mr. Manning stated that was correct and Mr. Wildermuth stated that the Regional Board could come back with comments and/or requests for changes. The question of whether or not approving this plan will shut out the ability to discuss this issue at the attorney manager meetings was presented. Counsel Fife noted this would not obligate us to not discuss this at the attorney-manager meetings.

Motion by Wellington, second by DeLoach, and by unanimous vote, Non-Agricultural concurred Moved to approve the proposed mitigation of temporary loss of hydraulic control plan with the knowledge and that if the Regional Board requests changes it will be brought through the Pool, Advisory, and Board process again for review and approval, as presented.

III. REPORTS/UPDATES

A. WATERMASTER GENERAL LEGAL COUNSEL REPORT

1. Attorney-Manager Meetings

Counsel Fife stated there is an agenda out for the next meeting that will be held on Tuesday at noon at IEUA. If there are any comments on the agenda let counsel know as soon as possible. A discussion ensued with regard to the agenda and several parties noted comments would be forthcoming. Chair Crosley noted he had missed the last workshop in February when Mr. Wildermuth presented some preliminary findings and noted he recalled a draft report was to be handed out prior to the meeting for review, to be best prepared for the discussions. Mr. Wildermuth stated some graphics, tables, and a minimal summary in pdf form will be posted on the Wildermuth ftp site on March 14, 2005 for review. A discussion ensued with regard to re-operating the basin. Mr. Manning noted that in looking at the proposed agenda on item no. 2 which refers to new issues and stated that is where these issues would be open for discussion. The question regarding the next scheduled meeting being a technical meeting or an attorney-manager meeting was presented. Counsel Fife stated that he along with Counsel Slater expressed at the last Pool, Advisory and Board meetings their desire to get this issue moving because of the items coming up at the end of this year. The meeting is characterized primarily as a technical meeting to go over Wildermuth's work and to move us back into the attorney-manager negotiations. An agenda was put out with all the issues on it in an attempt to jump start the discussions. Mr. Jeske reiterated that at the pool meetings it was discussed that it would be a technical

meeting and no attorneys would be present at this next meeting. The comment regarding the need to prioritize the issues was presented. A brief discussion ensued.

2. Santa Ana River Application Process

Counsel Fife stated that Mr. Wildermuth, Mr. Manning and himself met with the State Board staff on Monday regarding Watermaster's application; it was a very positive meeting. Some very positive feedback was received from that staff and they were very impressed by our concrete lined channels. Staff is trying to get together with OCWD and Western to make sure everybody moves forward with the State Board together rather than attempting to go at it alone. Counsel Fife stated he will continue to bring back reports on this issue.

3. Senator Kuehl's Water Bill

Counsel Fife noted this is Senate Bill 820; since the last time the Pools met text for this bill has been released and the full bill is in the packet along with a summary that Hatch & Parent prepared.

Counsel Fife noted there are a couple other bills on the back table that are interesting. Senate Bill 773, an assembly bill which concerns recharge; it is a very short bill right now. This bill is attempting to exempt from the Regional Boards permitting requirement; any recharge of waste water that meets State and Federal drinking water standards. If this bill passes it could have some very interesting implications for Chino Basin. The other Senate Bill 1453 could also have some implications; this bill is an attempt to create water courts in California. The most interesting question to the Chino Basin regarding this bill would be, would the parties prefer to have the adjudication in a water court or continue locally with Judge Gunn. These bills need to be thought about and watched carefully, and again could have implications on the Chino Basin.

B. CEO/STAFF REPORT

1. AGWA Update

Mr. Manning noted this item is an update on the AGWA committee which started in 1994; Mr. Rossi is very involved in this committee and currently acts as chair. Mr. Manning stated that he has currently been asked to chair the communications public information's committee for that organization. AGWA is primarily there for an effective means of enhancing groundwater basins and promote reliability of the groundwater basins. There is a board meeting for that committee which is meeting at CBWM on March 21, 2005 at 1:00 p.m. for those who want to attend.

Mr. DeLoach noted that ACWA was preparing its Blue Print Report and noted that earlier versions of that report was really weak in the areas of groundwater storage and if Mr. Manning had any influence over that report to have that area expanded. Mr. Manning noted that a draft of that report which is currently out includes some of those expanded numbers and input. This will be followed up on and a report will be given with any new information.

Mr. Manning stated that as chair of the public information campaign, the committee is focusing on three areas; 1) a newsletter, 2) potential conference in the future and, 3) the web page.

2. Budget Schedule

Mr. Manning stated that the draft budget will be available in April; there will be a workshop scheduled slightly after the draft is distributed and if all goes well and on schedule the budget will be in the May package for Pool, Advisory, and Watermaster Board approval. If there are any revisions to be made, the budget will then come back in June through the approval process. No dates for the workshop has been set, however look for it being in the late April time frame.

3. DOGS/CWIS Update

Mr. Manning stated this is a program that Watermaster has been involved with and noted it started with John Rossi and Martha Davis's input in putting together a data collection process. The Pools, Advisory Committee, or Watermaster Board has not been brought up to speed on the progress of this project to date. Watermaster staff has been working with Wildermuth Environmental on the development of this idea and our key staff person is Danielle Maurizio. Danielle will present a slide show on what has transpired and where staff plans on seeing this process evolve. Ms. Maurizio presented the committee members with the presentation titled "DOGS (Data Organizational Group and Subgroups), CWIS (Chino Watershed Information System) Map-Based Water Resource Data Management System". Ms. Maurizio reviewed the background of Phase I of the project which started in October 2003 and gave an analysis of the project approach. Ms. Maurizio noted the mapping and viewing data will be easy to use and allow users to quickly view data along with being able to annotate and print. The benefits to Watermaster parties were reviewed and the future work to be performed was examined in detail. The question regarding what type of access the producer party has to the database which is being developed was presented. Ms. Maurizio noted that data requests still come through Watermaster, however, this database would allow for a much faster process because so many locations house different sets of information that need to be collected. The question regarding base maps and GIS mapping was presented. Mr. Wildermuth stated there are a tremendous number of alternatives that can all be customized by whoever uses these maps. In the development of the scoping for this project it was the intent that various access levels would be granted according to need and authority. This system will allow water parties to enter water levels and production data. It was noted that there might be some redundancy in this new system because most agencies already have something like this in place at their facilities. Mr. Wildermuth stated the intent of this system is to avoid duplication. A discussion ensued with regard to access to the database system. Mr. Manning stated that the intent of the process is that as it evolves it will meet the needs of the users; as we move through this process, given the sensitivity to data and data acquisition, we will keep presenting the progress back to the committee members to keep all parties informed. This is only Phase I of the project and Phase II is in the process of evolving and will be built out over many phases to ensure we have all the parties included and give maximum protocol access to parties for what is needed. Water quality data will also be selective in release of data for only authorized parties to receive that information. A discussion ensued with regard to the recent Jurupa issue and it was noted that this new data system was not designed to alleviate what happened, although, the Watermaster's GIS system in-house is. Mr. Manning thanked Ms. Maurizio for all her efforts in this project and for her presentation.

4. Future Recharge Facility Improvements

Mr. Manning stated there is a handout on the back table titled "Future Recharge Facility Improvements" for reference to this item. This is a list which was compiled by IEUA that also had input from Watermaster and others on things that have been reintroduced for reconsideration. During the process of building the facilities there were decisions made during that process to balance the projects and fit the amount of money that was then available and so a number of improvements on the basins were deleted or scaled back. In the process of reviewing recharge over the past few months staff has recognized that there are some items that need to be put back on the list and this is a list of those items that need consideration under the grant funding that IEUA has of \$15 million dollars. Mr. Manning reviewed some of the items on the list that need to be considered.

IV. INFORMATION

- 1. Newspaper Articles

V. POOL MEMBER COMMENTS

No comment was made regarding this item.

VI. OTHER BUSINESS

The question of whether Watermaster is recharging in the Montclair Basins was presented. Mr. Treweek stated that we are recharging there and noted that San Antonio dam is releasing 200 c.f.s. which is a good flow of water, and based on that, staff opened the gates at Montclair and Brooks. Those two Basins are presently full and take enough water in each day to refill them.

VII. FUTURE MEETINGS

March 10, 2005	9:00 a.m.	Appropriative & Non-Agricultural Pool Meeting
March 10, 2005	11:00 a.m.	Agricultural Pool Meeting @ CBWM
March 15, 2005	12:00 p.m.	Manager's Meeting @ IEUA
March 21, 2005	1:00 p.m.	AGWA Meeting
March 24, 2005	9:00 a.m.	Advisory Committee Meeting
March 24, 2005	11:00 a.m.	Watermaster Board Meeting
March 28, 2005	8:30 a.m.	Water Quality Meeting
March 30, 2005	9:00 a.m.	MZ1 Technical Meeting

The Joint Appropriative and Non-Agricultural Pool Meeting Adjourned at 10:08 a.m.

Secretary: _____

Minutes Approved: _____



CHINO BASIN WATERMASTER

I. CONSENT CALENDAR

A. MINUTES

1. Agricultural Pool Meeting –
March 10, 2005

Draft Minutes
CHINO BASIN WATERMASTER
AGRICULTURAL POOL MEETING
March 10, 2005

The Agricultural Pool Meeting was held at the offices of Chino Basin Watermaster, 9641 San Bernardino Road, Rancho Cucamonga, CA, on March 10, 2005 at 11:00 a.m.

Agricultural Pool Members Present

Glen Durrington, Chair	Crops
Peter Hettinga	Dairy
Bob Feenstra	Milk Producers Council
John Huitsing	Dairy
Ed Gonsman	State of California, California Institute for Men
Nathan Mackamul	State of California, CIM/CIW

Watermaster Staff Present

Sheri Rojo	Finance Manager
Gordon Treweek	Project Engineer
Danielle Maurizio	Senior Engineer
Sherri Lynne Molino	Recording Secretary

Watermaster Consultants Present

Michael Fife	Hatch & Parent
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Others Present

Steve Lee	Reid & Hellyer
Rick Rees	Geomatrix for CIM

Mr. Manning called the Agricultural Pool meeting to order at 11:15 a.m. in the absence of Chair deBoom

AGENDA - ADDITIONS/REORDER

Mr. Manning asked the attending committee members of the Agricultural Pool if they would appoint a temporary chair for this meeting since both the chair and vice-chair were absent. Glen Durrington accepted to take over as temporary chair for the March 10, 2005 Agricultural Pool meeting.

Motion by Feenstra, second by Huitsing, and by unanimous vote
Moved to approve appointing Glen Durrington as temporary chair for the March 10, 2005 Agricultural Pool meeting, as presented

I. CONSENT CALENDAR

A. MINUTES

1. Minutes of the Agricultural Pool Meeting held February 15, 2005

B. FINANCIAL REPORTS

1. Cash Disbursements for the month of February 2005
2. Combining Schedule of Revenue, Expenses and Changes in Working Capital for the Period July 1, 2004 through January 31, 2005

3. Treasurer's Report of Financial Affairs for the Period January 1, 2005 through January 31, 2005
4. Profit & Loss Budget vs. Actual July 2004 through January 2005

C. STATUS REPORT #13

Consider Authorization to File Status Report 13 with Court and Authorize Staff and Counsel to Make Minor Edits as Necessary

Motion by Feenstra, second by Huitsing, and by unanimous vote

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

II. BUSINESS ITEMS

A. MITIGATION OF TEMPORARY LOSS OF HYDRAULIC CONTROL

Mr. Manning stated that in December 2002 Watermaster and Inland Empire Utilities Agency (IEUA) submitted a proposal to the Regional Board requesting TDS and Nitrogen objectives be established using the Maximum Benefit concept. The Regional Board accepted the proposal with some slight modifications and those modifications were incorporated into the 2004 Basin Plan Amendment. One condition of the Maximum Benefit based objective was that Watermaster and IEUA submit a mitigation plan for this temporary loss of hydraulic control, which the proposal is being presented today. If approved, this proposal will be presented to the Regional Board. If modifications are requested those changes will come back through the Watermaster process. Mr. Wildermuth stated that in the OBMP the concept of hydraulic control came up. What hydraulic control means is there is very little outflow in the greater part of the Chino Basin, what is called Chino North or Chino Management Zones 1, 2, and 3. Mr. Wildermuth described in detail what occurs when the land transitions in the southern end of the basin from agricultural to other uses. The Regional Board was presented with a proposal stating that we are going to maintain hydraulic control and in turn asked if we can receive some of the benefits from doing this. Mr. Wildermuth discussed TDS and reclamation. As a condition of the Basin Plan being amended triggered a requirement for the Watermaster and IEUA to develop a proposal to mitigate any temporary loss of hydraulic control. In the agenda package starting on page 23 is that proposal. The proposal states if there is a loss, and we can detect it, but there is not imperilment of downstream beneficial uses and the desalters are running and doing their job, then all will be okay. If there is a loss in hydraulic control and we do impair downstream uses, then our mitigation is going to be to stop recharging recycled water until hydraulic control can be regained. The financial impact to Watermaster if Watermaster was using recycled water for replenishment purposes is that it costs less. This proposal was run by the Regional Board and their staff felt it had merit, however, once the final proposal is submitted to the Regional Board they might as for modifications or changes. The question if there was a downside to this proposal was presented and Mr. Wildermuth stated that there was no downside. A discussion ensued with regard to storm flow and wet years.

Motion by Feenstra, second by Huitsing, and by unanimous vote

Moved to approve the mitigation of temporary loss of hydraulic control plan, as presented

Added Comment:

Mr. Feenstra thanked Mr. Treweek and the Watermaster staff for providing the very informative sheets on the results from the storms and noted how powerful the information is. Mr. Feenstra asked that each time this report is updated if the Agricultural Pool could receive it in email form. Mr. Manning stated the storm reports are still being based on by visual data due to the SCADA system is not up and running 100%. The information/data is collected by Watermaster staff physically going to the basins and observing the characteristics of the basins. Staff has learned over the course of the past eight storm events that with a significantly less precipitation the basin could have received the same amount of benefit from our basins. There are still a number of basins that

are not fully functional for utilization and once the SCADA system is up and running that will change. The SCADA data that is currently coming in is on water level data and no operational data is being received. Mr. Manning discussed the recent Prado Dam incident and the working relationship with the Flood Control District. A question regarding the release at Seven Oaks was presented and Mr. Manning stated that release does not affect the Chino Basin. A brief discussion ensued with regards to Seven Oaks. A question regarding the recent storms affecting the nitrate levels in the basins was presented. Mr. Wildermuth commented that the rain has not and inquired if the question was that the rain would lower the nitrate concentration in the basins and stated that would not be the case either.

Mr. Feenstra requested that the Sheila Kuehl bill be put back on the agenda for the next Agricultural Pool meeting because there are some real concerns over that bill regarding agricultural uses statewide.

III. REPORTS/UPDATES

A. WATERMASTER GENERAL LEGAL COUNSEL REPORT

1. Attorney-Manager Meetings

Counsel Fife stated that this year there are a number of items under the Peace Agreement which need to be resolved including at the end of the year the reappointment of the nine member board. Counsel Fife noted this meeting is a continuation of the process that was started last March. An agenda was sent out for the attorney-manager meeting which is scheduled for March 15, at noon at IEUA, and if there are any questions regarding that agenda Counsel stated he can be seen directly after the meeting.

2. Santa Ana River Application Process

Counsel Fife stated that the applications processes are starting to move forward again. Mark Wildermuth, Ken Manning, and Counsel Fife met with the State Board staff on Monday and gave them an introduction to the Chino Basin. It was a very cordial meeting and went very well. Since the State Board primarily works with surface water and this application deals with groundwater there was a lot of explaining and questions during the meeting. Staff received good feed back from that meeting and they seemed generally impressed with the project and we will continue to forward with them.

3. Senator Kuehl's Water Bill

Counsel Fife commented since the last Agricultural Pool members met the text for that bill has been released and is provided in full in the agenda packet. Along with the full bill the summary written by Hatch & Parent is also in the packet.

In addition to that bill there are two more bills of interest on the back table. One bill is the Senate bill 773 and assembly bill 1453 these are both bills that could have an impact in the Chino Basin. One bill concerns the recharge of treated water and possibly changing the permit requirements and the other one is to create a system of water courts. The water court issue has been discussed for a number of years and is now coming into a possible play. It raises an issue in Chino Basin because if a system of water courts is created the idea would be that all water cases should be in one of those special water courts. This is something that the Chino Basin needs to think about; whether we would prefer to be in a water court or prefer to be in our local San Bernardino Superior Court. There could possibly be advantages to both of these scenarios. Advantages and disadvantages to both ideas will need to be discussed as a group and thought will need to go into if there should be any input as this bill moves forward.

B. CEO/STAFF REPORT1. AGWA Update

Mr. Manning stated that the AGWA (Association of Groundwater Agencies) of which John Rossi is the acting chair, this association was established in 1994 and incorporates all of the groundwater areas within all management zones in California into an agency looking out for groundwater issues. Mr. Manning stated that he has been asked to handle the Public Information Communications Committee and he will be working on newsletters, conferences, and an improvement on the current web page.

2. Budget Schedule

Mr. Manning stated that the Watermaster schedule calls for the draft budget to be available in April; there will be a workshop scheduled slightly after the draft is distributed and if all goes well and on schedule the budget will be in the May package for Pool, Advisory, and Watermaster Board approval. If there are any revisions to be made, the budget will then come back in June through the approval process. No dates for the workshop has been set, however look for it being in the late April time frame.

3. DOGS/CWIS Update

Mr. Manning stated this is a program that Watermaster has been involved with and noted it started with John Rossi and Martha Davis's input in putting together a data collection process. The Pools, Advisory Committee, or Watermaster Board has not been brought up to speed on the progress of this project to date. Watermaster staff has been working with Wildermuth Environmental on the development of this idea and our key staff person is Danni Maurizio. Danni will present a slide show on what has transpired and where staff plans on seeing this process evolve. Ms. Maurizio presented the committee members with the presentation titled "DOGS (Data Organizational Group and Subgroups), CWIS (Chino Watershed Information System) Map-Based Water Resource Data Management System". Ms. Maurizio reviewed the background of Phase I of the project which started in 2003 and gave an analysis of the project approach. Ms. Maurizio noted the mapping and viewing data will be easy to use and allow users to quickly view data along with being able to annotate and print. The benefits to Watermaster parties were reviewed and the future work to be performed was examined in detail. Mr. Manning stated that this process is going to provide many parties with a great deal of opportunity to provide services to all of Watermaster's member agencies. Because there is a lot of sensitivity to data and release of data this information will be protected and only those people who are allowed to see the data will be allowed access to it. The Board and Watermaster Pools will be kept informed as this project moves forward through this process. A question regarding current wells was presented and discussed briefly.

4. Future Recharge Facility Improvements

Mr. Manning noted there is a handout on the back table regarding this item and is currently available for information purposes. During the course of the expenditure of nearly \$40 million dollars for the improvements to the basins there was an entire wish list created at the start of this project. As the projects began several items needed to be cut out in order to fit the projects financially into the budget. Because there is now additional monies available from grants through IEUA at this point in time, \$15 million dollars, staff has gone back to that wish list of projects that were deleted and put them back onto this list for consideration. As staff begins to look at each of the items for potential inclusion within the next project, staff will be looking at what their value will be to the basin. There are a number of items on this list which will improve what has already been started and potential expansion of what has already been started. Progress reports will be brought back as things move forward.

IV. INFORMATION

- 1. Newspaper Articles

V. POOL MEMBER COMMENTS

A question regarding tolerances for Perchlorate was presented. Mr. Manning stated that the current action level in California is .6 ppb and the debate that has been in the papers recently is based upon the National Academy of Sciences report which was released about a month ago. Mr. Manning noted the subsequent adoption of a temporary number that combines both ingestion of food and water for all sources of 24.5 ppb on Perchlorate. The EPA's number and their temporary standard does not affect us in California because we are still bound by .6 ppb standard, however, it could have an affect on California in time as they start to looking at establishing a national standard.

VI. OTHER BUSINESS

No comment was made regarding this item.

VII. FUTURE MEETINGS

March 10, 2005	9:00 a.m.	Appropriative & Non-Agricultural Pool Meeting
March 10, 2005	11:00 a.m.	Agricultural Pool Meeting @ CBWM
March 15, 2005	12:00 p.m.	Manager's Meeting @ IEUA
March 21, 2005	1:00 p.m.	AGWA Meeting
March 24, 2005	9:00 a.m.	Advisory Committee Meeting
March 24, 2005	11:00 a.m.	Watermaster Board Meeting
March 28, 2005	8:30 a.m.	Water Quality Meeting
March 30, 2005	9:00 a.m.	MZ1 Technical Meeting

The Agricultural Pool Meeting Adjourned at 11:50 a.m.

Secretary: _____

Minutes Approved: _____

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CHINO BASIN WATERMASTER

I. CONSENT CALENDAR

B. FINANCIAL REPORTS

1. Cash Disbursements March 2005
2. Combining Schedule of Revenue, Expenses and changes in Working Capital for the Period July 1, 2004 through February 28, 2005
3. Treasurer's Report of Financial Affairs for February 1 through February 28, 2005
4. Profit & Loss Budget vs. Actual July 2004 through February 2005



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: April 14, 2005
April 19, 2005
April 28, 2005

TO: Committee Members
Watermaster Board Members

SUBJECT: Cash Disbursement Report – March 2005

SUMMARY

Issue – Record of cash disbursements for the month of March 2005.

Recommendation – Staff recommends the Cash Disbursements for March 2005 be received and filed as presented.

Fiscal Impact – All funds disbursed were included in the FY 2004-05 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 March 2005 were \$363,545.43. The most significant expenditures during the month were Wildermuth Environmental Inc. in the amount of \$163,220.06 and Hatch & Parent in the amount of \$54,322.63.

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CHINO BASIN WATERMASTER
Cash Disbursement Detail Report
March 2005

Type	Date	Num	Name	Amount
Mar 05				
Bill Pmt -Check	3/4/2005	9388	PETTY CASH	-476.59
General Journal	3/5/2005	05/03/4	PAYROLL	-5,944.13
General Journal	3/5/2005	05/03/4	PAYROLL	-18,703.86
Bill Pmt -Check	3/8/2005	9389	A & R TIRE	-40.02
Bill Pmt -Check	3/8/2005	9390	ALLEN DISPLAY	-209.75
Bill Pmt -Check	3/8/2005	9391	APPLIED COMPUTER TECHNOLOGIES	-1,354.85
Bill Pmt -Check	3/8/2005	9392	ARROWHEAD MOUNTAIN SPRING WATER	-34.81
Bill Pmt -Check	3/8/2005	9393	BEST BUY	-532.90
Bill Pmt -Check	3/8/2005	9394	BLACK & VEATCH CORPORATION	-17,247.50
Bill Pmt -Check	3/8/2005	9395	BOWCOCK, ROBERT	-125.00
Bill Pmt -Check	3/8/2005	9396	CALPERS	-2,135.65
Bill Pmt -Check	3/8/2005	9397	CHEVRON	-104.70
Bill Pmt -Check	3/8/2005	9398	DIRECTV	-71.98
Bill Pmt -Check	3/8/2005	9399	HAMRICK, PAUL	-125.00
Bill Pmt -Check	3/8/2005	9400	HSBC BUSINESS SOLUTIONS	-262.43
Bill Pmt -Check	3/8/2005	9401	HUITSING, JOHN	-125.00
Bill Pmt -Check	3/8/2005	9402	IDEAL GRAPHICS	-89.43
Bill Pmt -Check	3/8/2005	9403	JAMES JOHNSTON	-630.00
Bill Pmt -Check	3/8/2005	9404	KRUGER, W. C. "BILL"	-125.00
Bill Pmt -Check	3/8/2005	9405	KUHN, BOB	-125.00
Bill Pmt -Check	3/8/2005	9406	LOPEZ, AL	0.00
Bill Pmt -Check	3/8/2005	9407	NEUFELD, ROBERT	-750.00
Bill Pmt -Check	3/8/2005	9408	NEXTEL COMMUNICATIONS	-505.05
Bill Pmt -Check	3/8/2005	9409	OFFICE DEPOT	-611.76
Bill Pmt -Check	3/8/2005	9410	PARK PLACE COMPUTER SOLUTIONS, INC.	-1,925.00
Bill Pmt -Check	3/8/2005	9411	PAYCHEX	-162.45
Bill Pmt -Check	3/8/2005	9412	RBM LOCK & KEY	-457.33
Bill Pmt -Check	3/8/2005	9413	REMINGTON PARTNERS, INC.	-600.00
Bill Pmt -Check	3/8/2005	9414	RICOH BUSINESS SYSTEMS-Maintenance	-639.50
Bill Pmt -Check	3/8/2005	9415	SAVIN CORPORATION dba RICOH BUSINESS	-36.00
Bill Pmt -Check	3/8/2005	9416	STATE COMPENSATION INSURANCE FUND	-950.96
Bill Pmt -Check	3/8/2005	9417	UNION 76	-305.59
Bill Pmt -Check	3/8/2005	9418	UNITEK TECHNOLOGY INC.	-149.77
Bill Pmt -Check	3/8/2005	9419	VELASQUEZ JANITORIAL	-1,200.00
Bill Pmt -Check	3/8/2005	9420	VERIZON	-415.53
Bill Pmt -Check	3/8/2005	9421	VIP AUTO DETAILING	-404.65
Bill Pmt -Check	3/8/2005	9422	YUKON DISPOSAL SERVICE	-123.90
Bill Pmt -Check	3/9/2005	9423	CAFE CALATO	-84.31
General Journal	3/15/2005	05/03/6	PAYROLL	-5,784.60
General Journal	3/15/2005	05/03/6	PAYROLL	-18,308.66
Bill Pmt -Check	3/18/2005	9424	ROUTE 66 SUBS	-125.92
Bill Pmt -Check	3/22/2005	9425	CAFE CALATO	-91.80
Bill Pmt -Check	3/24/2005	9427	ACWA SERVICES CORPORATION	-216.91
Bill Pmt -Check	3/24/2005	9426	BANK OF AMERICA	-2,590.21
Bill Pmt -Check	3/24/2005	9428	CALPERS	-2,135.65
Bill Pmt -Check	3/24/2005	9429	CITIZENS CONFERENCING	-156.52
Bill Pmt -Check	3/24/2005	9430	CUCAMONGA VALLEY WATER DISTRICT	-4,900.00
Bill Pmt -Check	3/24/2005	9431	ELLISON, SCHNEIDER & HARRIS, LLP	-2,083.00
Bill Pmt -Check	3/24/2005	9432	ESRI	-850.00
Bill Pmt -Check	3/24/2005	9433	FIRST AMERICAN REAL ESTATE SOLUTIONS	-125.00
Bill Pmt -Check	3/24/2005	9434	HATCH AND PARENT	-54,322.63
Bill Pmt -Check	3/24/2005	9435	INLAND COUNTIES INSURANCE SERVICES, INC.	-216.77
Bill Pmt -Check	3/24/2005	9436	MAURIZIO, DANNIELLE	-117.99
Bill Pmt -Check	3/24/2005	9437	MCI	-900.15
Bill Pmt -Check	3/24/2005	9438	POWERS ELECTRIC PRODUCTS CO.	-327.11
Bill Pmt -Check	3/24/2005	9439	PUMP CHECK	-2,185.50
Bill Pmt -Check	3/24/2005	9440	RICOH BUSINESS SYSTEMS-Lease	-639.50
Bill Pmt -Check	3/24/2005	9441	SCUBA DUBA GOLF COURSE SERVICES	-15,000.00
Bill Pmt -Check	3/24/2005	9442	THE FURMAN GROUP, INC.	-3,094.00
Bill Pmt -Check	3/24/2005	9443	UNITED PARCEL SERVICE	-262.14
Bill Pmt -Check	3/24/2005	9444	UNITEK TECHNOLOGY INC.	-416.78
Bill Pmt -Check	3/24/2005	9445	WILDERMUTH ENVIRONMENTAL INC	-163,220.06
Bill Pmt -Check	3/24/2005	9446	RICOH BUSINESS SYSTEMS-Lease	-3,591.31
Bill Pmt -Check	3/24/2005	9447	RICOH BUSINESS SYSTEMS-Maintenance	-36.00
General Journal	3/31/2005	05/03/9	PAYROLL	-5,711.58
General Journal	3/31/2005	05/03/9	PAYROLL	-18,350.24
Mar 05				-363,545.43

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CHINO BASIN WATERMASTER
 COMBINING SCHEDULE OF REVENUE, EXPENSES AND CHANGES IN WORKING CAPITAL
 FOR THE
 PERIOD JULY 1, 2004 THROUGH FEBRUARY 28, 2005

	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			4,807,253		74,241				4,881,494	\$3,984,888
Interest Revenue			55,353	6,443	2,379			14	64,189	78,330
Mutual Agency Project Revenue		161,556							161,556	0
Grant Income									-	0
Miscellaneous Income	-								-	0
Total Revenues	-	161,556	4,862,606	6,443	76,620	-	-	14	5,107,239	4,063,218
Administrative & Project Expenditures										
Watermaster Administration	505,798								505,798	621,784
Watermaster Board-Advisory Committee	31,664								31,664	37,018
Pool Administration			7,984	44,874	2,008				54,866	91,153
Optimum Basin Mgmt Administration		869,236							869,236	1,019,183
OBMP Project Costs		1,602,451							1,602,451	3,733,694
Education Funds Use								908	908	375
Mutual Agency Project Costs	37,275								37,275	80,004
Total Administrative/OBMP Expenses	574,737	2,471,687	7,984	44,874	2,008			908	3,102,198	5,583,211
Net Administrative/OBMP Income	(574,737)	(2,310,131)								
Allocate Net Admin Income To Pools	574,737		432,726	132,790	9,220				-	0
Allocate Net OBMP Income To Pools		2,310,131	1,739,325	533,745	37,061				-	0
Agricultural Expense Transfer			706,759	(706,759)					-	0
Total Expenses			2,886,795	4,650	48,289	-	-	908	3,102,198	5,583,211
Net Administrative Income			1,975,811	1,793	28,331			(894)	2,005,041	(1,519,993)
Other Income/(Expense)										
Replenishment Water Purchases						8,097,107			8,097,107	0
MZ1 Supplemental Water Assessments						1,625,000			1,625,000	2,179,500
Water Purchases									-	0
MZ1 Imported Water Purchase									-	(2,278,500)
Groundwater Replenishment						(1,290,815)			(1,290,815)	0
Net Other Income			-	-	-	8,431,292	-	-	8,431,292	(99,000)
Net Transfers To/(From) Reserves			1,975,811	1,793	28,331	8,431,292	-	(894)	10,436,333	(1,618,993)
Working Capital, July 1, 2004			3,471,229	463,055	173,739	4,133,061	158,251	2,195	8,401,530	
Working Capital, End Of Period			5,447,040	464,848	202,070	12,564,353	158,251	1,301	18,837,863	
03/04 Production			136,795.139	41,978.182	2,914.774				181,688.095	
03/04 Production Percentages			75.291%	23.105%	1.604%				100.000%	

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**CHINO BASIN WATERMASTER
TREASURER'S REPORT OF FINANCIAL AFFAIRS FOR THE PERIOD
FEBRUARY 1 THROUGH FEBRUARY 28, 2005**

DEPOSITORIES:

Cash on Hand - Petty Cash		\$ 500
Bank of America		
Governmental Checking-Demand Deposits	\$ 1,002,348	
Savings Deposits	9,635	
Zero Balance Account - Payroll	-	1,011,983
Vineyard Bank CD - Agricultural Pool		403,145
Local Agency Investment Fund - Sacramento		10,047,479
TOTAL CASH IN BANKS AND ON HAND	2/28/2005	\$ 11,463,107
TOTAL CASH IN BANKS AND ON HAND	1/31/2005	10,969,977
PERIOD INCREASE (DECREASE)		\$ 493,130

CHANGE IN CASH POSITION DUE TO:

Decrease/(Increase) in Assets:	Accounts Receivable	\$ -
	Assessments Receivable	684,427
	Prepaid Expenses, Deposits & Other Current Assets	11,861
(Decrease)/Increase in Liabilities	Accounts Payable	(25,078)
	Accrued Payroll, Payroll Taxes & Other Current Liabilities	4,043
	Transfer to/(from) Reserves	(182,123)
PERIOD INCREASE (DECREASE)		\$ 493,130

<u>SUMMARY OF FINANCIAL TRANSACTIONS:</u>	Petty Cash	Govt'l Checking Demand	Zero Balance Account Payroll	Savings	Vineyard Bank	Local Agency Investment Funds	Totals
Balances as of 1/31/2005	\$ 500	\$ (7,289,077)	\$ -	\$ 9,635	\$ 401,440	\$ 17,847,479	\$ 10,969,977
Deposits	-	856,156	-	-	1,705	-	857,861
Transfers	-	7,756,852	43,148	-	-	(7,800,000)	-
Withdrawals/Checks	-	(321,583)	(43,148)	-	-	-	(364,731)
	\$ 500	\$ 1,002,348	\$ -	\$ 9,635	\$ 403,145	\$ 10,047,479	\$ 11,463,107
PERIOD INCREASE OR (DECREASE)	\$ -	\$ 8,291,425	\$ -	\$ -	\$ 1,705	\$ (7,800,000)	\$ 493,130

CHINO BASIN WATERMASTER
TREASURER'S REPORT OF FINANCIAL AFFAIRS FOR THE PERIOD
FEBRUARY 1 THROUGH FEBRUARY 28, 2005

INVESTMENT TRANSACTIONS

Effective Date	Transaction	Depository	Activity	Redeemed	Days to Maturity	Interest Rate(*)	Maturity Yield
2/7/2005	Withdrawal	L.A.I.F.	(7,800,000)				
TOTAL INVESTMENT TRANSACTIONS			\$ (7,800,000)	-			

* The earnings rate for L.A.I.F. is a daily variable rate; 2.00% was the effective yield rate at the Quarter ended December 31, 2004

INVESTMENT STATUS
February 28, 2005

Financial Institution	Principal Amount	Number of Days	Interest Rate	Maturity Date
Local Agency Investment Fund	\$ 10,047,479			
Time Certificates of Deposit	-			
TOTAL INVESTMENTS	\$ 10,047,479			

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
 Finance Manager
 Chino Basin Watermaster

CHINO BASIN WATERMASTER
Profit & Loss Budget vs. Actual
July 2004 through February 2005

	<u>Jul '04 - Feb 05</u>	<u>Budget</u>	<u>\$ Over Budget</u>	<u>% of Budget</u>
Ordinary Income/Expense				
Income				
4010 · Local Agency Subsidies	161,556.04	132,000.00	29,556.04	122.39%
4110 · Admin Asmnts-Approp Pool	4,807,004.41	3,755,236.00	1,051,768.41	128.01%
4120 · Admin Asmnts-Non-Agri Pool	74,240.87	97,652.00	-23,411.13	76.03%
4700 · Non Operating Revenues	64,437.31	78,330.00	-13,892.69	82.26%
Total Income	<u>5,107,238.63</u>	<u>4,063,218.00</u>	<u>1,044,020.63</u>	<u>125.69%</u>
Gross Profit	5,107,238.63	4,063,218.00	1,044,020.63	125.69%
Expense				
6010 · Salary Costs	281,446.04	401,704.00	-120,257.96	70.06%
6020 · Office Building Expense	74,407.79	100,800.00	-26,392.21	73.82%
6030 · Office Supplies & Equip.	27,587.71	45,500.00	-17,912.29	60.63%
6040 · Postage & Printing Costs	53,496.94	67,100.00	-13,603.06	79.73%
6050 · Information Services	74,293.46	105,076.00	-30,782.54	70.7%
6060 · Contract Services	131,152.36	106,000.00	25,152.36	123.73%
6080 · Insurance	16,555.36	21,710.00	-5,154.64	76.26%
6110 · Dues and Subscriptions	11,735.00	16,600.00	-4,865.00	70.69%
6140 · WM Admin Expenses	1,391.90	2,500.00	-1,108.10	55.68%
6150 · Field Supplies	506.43	4,250.00	-3,743.57	11.92%
6170 · Travel & Transportation	12,575.23	24,650.00	-12,074.77	51.02%
6190 · Conferences & Seminars	8,006.14	16,000.00	-7,993.86	50.04%
6200 · Advisory Comm - WM Board	7,346.06	13,459.00	-6,112.94	54.58%
6300 · Watermaster Board Expenses	24,318.41	23,559.00	759.41	103.22%
8300 · Appr PI-WM & Pool Admin	7,983.78	13,659.00	-5,675.22	58.45%
8400 · Agri Pool-WM & Pool Admin	10,709.75	16,417.00	-5,707.25	65.24%
8467 · Agri-Pool Legal Services	29,514.50	45,000.00	-15,485.50	65.59%
8470 · Ag Meeting Attend -Special	4,650.00	10,000.00	-5,350.00	46.5%
8500 · Non-Ag PI-WM & Pool Admin	2,008.45	6,077.00	-4,068.55	33.05%
6500 · Education Funds Use Expens	908.00	375.00	533.00	242.13%
9500 · Allocated G&A Expenditures	-187,356.43	-290,106.00	102,749.57	64.58%
Subtotal G&A Expenditures	<u>593,236.88</u>	<u>750,330.00</u>	<u>-157,093.12</u>	<u>79.06%</u>
6900 · Optimum Basin Mgmt Plan	800,527.62	933,566.00	-133,038.38	85.75%
6950 · Mutual Agency Projects	37,275.43	80,004.00	-42,728.57	46.59%
9501 · G&A Expenses Allocated-OBMP	68,707.42	85,617.00	-16,909.58	80.25%
Subtotal OBMP Expenditures	<u>906,510.47</u>	<u>1,099,187.00</u>	<u>-192,676.53</u>	<u>82.47%</u>
7101 · Production Monitoring	25,170.17	54,957.00	-29,786.83	45.8%
7102 · In-line Meter Installation	10,292.91	93,969.00	-83,676.09	10.95%
7103 · Grdwtr Quality Monitoring	79,015.77	148,792.00	-69,776.23	53.11%
7104 · Gdwtr Level Monitoring	53,771.45	135,072.00	-81,300.55	39.81%
7105 · Sur Wtr Qual Monitoring	165,804.83	282,220.00	-116,415.17	58.75%
7106 · Wtr Level Sensors Install	0.00	19,114.00	-19,114.00	0.0%
7107 · Ground Level Monitoring	181,112.83	433,720.00	-252,607.17	41.76%
7108 · Hydraulic Control Monitoring	207,942.58	437,987.00	-230,044.42	47.48%
7200 · PE2- Comp Recharge Pgm	319,500.36	413,177.00	-93,676.64	77.33%
7300 · PE3&5-Water Supply/Desalte	0.00	20,885.00	-20,885.00	0.0%

CHINO BASIN WATERMASTER
Profit & Loss Budget vs. Actual
July 2004 through February 2005

	<u>Jul '04 - Feb 05</u>	<u>Budget</u>	<u>\$ Over Budget</u>	<u>% of Budget</u>
7400 · PE4- Mgmt Plan	97,320.82	795,099.00	-697,778.18	12.24%
7500 · PE6&7-CoopEfforts/SaltMgmt	17,323.72	251,343.00	-234,019.28	6.89%
7600 · PE8&9-StorageMgmt/Conj Use	52,377.67	140,400.00	-88,022.33	37.31%
7690 · Recharge Improvement Debt Pymt	274,169.00	274,169.00	0.00	100.0%
7700 · Inactive Well Protection Prgm	0.00	28,302.00	-28,302.00	0.0%
9502 · G&A Expenses Allocated-Projects	118,648.99	204,488.00	-85,839.01	58.02%
Subtotal Special Projects Expenditures	<u>1,602,451.10</u>	<u>3,733,694.00</u>	<u>-2,131,242.90</u>	<u>42.92%</u>
Total Expense	<u>3,102,198.45</u>	<u>5,583,211.00</u>	<u>-2,481,012.55</u>	<u>55.56%</u>
Net Ordinary Income	2,005,040.18	-1,519,993.00	3,525,033.18	-131.91%
Other income/Expense				
Other Income				
4231 · MZ1 Assigned Water Sales	0.00	600,000.00	-600,000.00	0.0%
4210 · Approp Pool-Replenishment	8,094,622.16	0.00	8,094,622.16	100.0%
4220 · Non-Ag Pool-Replenishment	2,485.40	0.00	2,485.40	100.0%
4230 · MZ1 Sup Wtr Assessment	1,625,000.25	1,579,500.00	45,500.25	102.88%
Total Other Income	<u>9,722,107.81</u>	<u>2,179,500.00</u>	<u>7,542,607.81</u>	<u>446.07%</u>
Other Expense				
5010 · Groundwater Replenishment	1,290,815.00	2,278,500.00	-987,685.00	56.65%
9999 · To/(From) Reserves	10,436,332.99	-1,618,993.00	12,055,325.99	-644.62%
Total Other Expense	<u>11,727,147.99</u>	<u>659,507.00</u>	<u>11,067,640.99</u>	<u>1,778.17%</u>
Net Other Income	<u>-2,005,040.18</u>	<u>1,519,993.00</u>	<u>-3,525,033.18</u>	<u>-131.91%</u>
Net Income	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	<u>0.0%</u>



CHINO BASIN WATERMASTER

II. BUSINESS ITEMS

A. Consider Approval of
Edison Property
Conversion



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: April 14, 2005
April 19, 2005
April 28, 2005

TO: Committee Members
Watermaster Board Members

SUBJECT: Edison Property Conversion

SUMMARY

The City of Ontario has requested that Watermaster confirm the understanding of the parties to the Peace Agreement that the property commonly known as the "Edison Farm property" located generally at Edison Avenue and Vineyard Avenue will be eligible for a conversion credit upon its conversion to urban use. The City of Ontario has submitted a letter dated March 9, 2005 (attached) and has asked that Watermaster execute the letter in order to provide confirmation of its understanding.

Issue – Conversion Claim by City of Ontario Concerning Edison Farm Property.

Recommendation – Staff recommends that any conversion claim made by the City of Ontario for the Edison Farm Property should be processed consistent with other conversion claims and that Watermaster staff should be directed to sign the confirmation letter submitted by the City of Ontario.

Fiscal Impact – Because staff finds that the property in question should be eligible for a conversion credit as that process was originally conceived, there is no fiscal impact of adoption of the recommendation.

BACKGROUND

Under the terms of Exhibit "H", paragraph 10(b), any appropriator who undertakes, directly or indirectly, during any year, to permanently provide water service to lands which during the immediate preceding five consecutive years was devoted to irrigated agriculture may report such change to the Watermaster who will credit that appropriator with a certain amount of water.

By Order dated November 15, 2005, the Court approved an Amendment to the Judgment concerning land use conversion. This amendment is now referenced as Attachment 1 to the Judgment. Attachment 1 specifies that the area eligible for land use conversion credits is the area demarcated as Conversion Area No. 1, a map of which is included in Attachment 1.

In the Peace Agreement, the parties agreed that the amount of water allocated for conversion credits would be 2 acre-feet per acre. (Peace Agreement § 5.3(h).)

APPLICATION TO EDISON FARM PROPERTY

The Edison Farm property was previously owned by Sunkist Growers, Inc., a party to the Judgment in the Overlying (Non-Agricultural) Pool. Sunkist is unique among the members of the Non-Agricultural Pool because in addition to its industrial processing facility, it has also maintained an agricultural operation, which includes the Edison Farm property. The result of this situation is that even though the Edison Farm property has been used for agricultural purposes for many years, and thus would be eligible for a conversion credit under the Judgment, it was not included in the delineation of Conversion Area No. 1 during the formulation of the 1995 Amendment to the Judgment.

As described in the letter from the City of Ontario, the Edison Farm property has now been sold to Lewis Homes who proposes to develop the property. Once developed, water service will be provided by the City of Ontario.

The parties to the Peace Agreement addressed the question of inclusion of the Edison Farm property through the attorney-manager process. The consensus of the parties was that the property meets the requirements to be eligible for a conversion credit, and that such a conversion should not affect the water rights under the Judgment of Sunkist.

STAFF FINDINGS AND RECOMMENDATION

Watermaster staff has analyzed the history of agricultural use of the property in question and has found that under the intended standards of the Judgment, the property should be eligible to receive a conversion credit. On this basis, Staff recommends that the Pools and the Advisory Committee recommend to the Board that it direct staff to accept a conversion claim submitted by the City of Ontario once the City is providing water service to urban development on the property and that Watermaster process such claim consistent with the procedures described in the Judgment and the Peace Agreement as if the property was formally included within Conversion Area No.1.



PUBLIC WORKS AND
COMMUNITY SERVICES AGENCY

ONTARIO MUNICIPAL SERVICES CENTER

ALAN D. WAPNER
MAYOR PRO TEM

GERALD A. DuBOIS
PAUL S. LEON
JASON ANDERSON
COUNCIL MEMBERS

March 9, 2005

GREGORY C. DEVEREAUX
CITY MANAGER

KENNETH L. JESKE
PUBLIC WORKS & COMMUNITY
SERVICES DIRECTOR

MARY E. WIRTES, MMC
CITY CLERK

JAMES R. MILHISER
TREASURER

Kenneth R Manning, CEO
Chino Basin Watermaster
9641 San Bernardino Road
Rancho Cucamonga, CA 91730

Re: Conversion Claim By City of Ontario Concerning Edison Farm Property

Dear Mr. Manning:

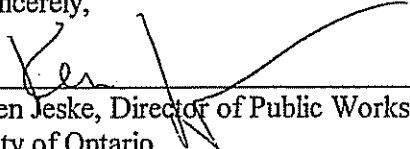
I am sending this letter to confirm the understanding reached by the parties to the Peace Agreement with respect to the City of Ontario's (City) claim for conversion of water rights associated with the proposed development of the Edison Farm property (which is generally located at Edison Avenue and Vineyard Avenue) for urban use. In August 2003, Sunkist Growers, Inc. (Sunkist) sold the Edison Farm property to Lewis Investment Company, LCC (Lewis). (We understand that Sunkist still owns other land overlying the Chino Basin.) Prior to that sale, the Edison Farm property had been used for agricultural purposes by various persons who leased the land from Sunkist. Lewis now intends to develop the property for urban uses. Subject to the receipt of all the necessary government approvals, the City intends to supply water to Lewis' development on the Edison Farm property.

Section 5.3(h) of the Peace Agreement provides for the conversion of 2.0 acre feet of water rights per acre of agricultural land that is developed to urban uses, with such converted water rights allocated to the appropriator which will provide water service to the subject property. Given the facts, the Edison Farm property was agricultural land prior to the sale to Lewis, the property will be developed for urban uses, and the City will provide water service to the property, we believe that the elements for conversion will be satisfied.

Kenneth R Manning, Chief Executive Officer
Michael Fife, Esq., Hatch and Parent
March 9, 2005
Page 2/2

Therefore, we request that the Watermaster agree that (1) the Watermaster will approve the City's conversion claim for the Edison Farm property, and (2) Sunkist's water rights in the Overlying Non-Agricultural Pool will not be debited or decreased.

Sincerely,



Ken Jeske, Director of Public Works/CS
City of Ontario

Agreed by the Chino Basin Watermaster

Kenneth R Manning, Chief Executive Officer
Watermaster

Date

CC: John B. Withers, John Withers Associates
18800 Von Karman Avenue, Suite 190, Irvine, CA 92612

Michael Fife, Esq.
Hatch and Parent, 1020 State Street, Santa Barbara, CA 93102-0720



CHINO BASIN WATERMASTER

II. BUSINESS ITEMS

B. Consider Continuance of the Forbearance Program



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: April 14, 2005
April 19, 2005
April 28, 2005

TO: Committee Members
Watermaster Board Members

SUBJECT: Continuance of the Forbearance Program

Summary

Issue – Continuance of MZ1 Forbearance Program for a Fourth Year

Recommendation – Staff recommends that the MZ1 Forbearance Program be continued for a fourth year.

Fiscal Impact – Costs associated with the purchase of substitute water will be continued for another year.

Background

Program Element Four of the OBMP Implementation Plan acknowledges the existence of subsidence and fissuring within Management Zone 1 ("MZ1"). Program Element Four requires that information should be collected and analyzed by Watermaster, so that an effective long-term plan can be developed and further, that certain actions will be taken under an interim management plan to minimize subsidence and fissuring or reduce them to tolerable levels. (OBMP Implementation Plan, at p.26.)

On August 29, 2002, a workshop was held to present to the Court, through the Special Referee, the details of Watermaster's Interim Plan for the Management of Subsidence. As a result of this workshop, on September 26, 2002, the Watermaster Advisory Committee and Board unanimously adopted the Interim Plan. On October 17, 2002, the Court Ordered Watermaster to proceed with implementation of the Interim Plan.

One of the central components of the Interim Plan is the voluntary forbearance program. Any party to the Judgment may be eligible to participate in the voluntary forbearance program by exercising its election to

receive Substitute Water by completing and filing a "Notice of Forbearance" no later than August 1 of each year that the Interim Plan remains in place.

Under the Interim Plan, Watermaster committed to arrange for the delivery of up to 3,000 acre-feet of water from the Metropolitan Water District and Inland Empire Utilities Agency via the Water Facilities Authority for each of the three years that the Interim Plan is in effect.

The Interim Plan specifies that after this initial three year period, "Watermaster may, in its sole discretion, continue to arrange for the delivery of Substitute Water." (Interim Plan Section 3.) Currently, the third year of the three-year initial period of operation of the forbearance program is nearly complete.

FINDINGS AND RECOMMENDATION

Watermaster staff and consultants have participated in the MZ1 Technical Committee and through that committee have found that while the MZ1 technical investigations have produced important data concerning subsidence, it is not clear at this time whether sufficient information has been collected in order to formulate a long term plan.

In addition, Watermaster has found that controlled groundwater production has been accomplished through the forbearance program, and that there are indications that the forbearance program has been successful in minimizing subsidence.

Based on these findings, staff recommends that Watermaster exercise its discretion under Section 3 of the Interim Plan to continue the forbearance program for another year.

PROPOSED WATERMASTER INTERIM PLAN FOR MANAGEMENT OF SUBSIDENCE

I. RECITALS

- A. The Peace Agreement was executed in June 2000; Watermaster subsequently approved the Agreement and the Court ordered that Watermaster proceed in accordance with its terms;
- B. Watermaster also approved an Optimum Basin Management Program (OBMP) for the Chino Basin, and Exhibit B to the Peace Agreement contained an Implementation Plan for the OBMP (Implementation Plan);
- C. Program Element Four of the Implementation Plan acknowledges the existence of subsidence and fissuring within Management Zone 1 and further states that, although there is some uncertainty as to the causes, “[t]he occurrence of subsidence and fissuring in Management Zone 1 is not acceptable and should be reduced to tolerable levels or abated . . .” (Implementation Plan at p. 26);
- D. Program Element Four requires that information should be collected and analyzed by Watermaster, so that an effective long-term plan can be developed and further, that certain actions will be taken under an interim management plan to minimize subsidence and fissuring or reduce them to tolerable levels (OBMP Implementation Plan at p. 26.);
- E. Watermaster intends that the interim management plan must fairly and reasonably allocate expenses among the parties to the Judgment and that it shall include the following components: voluntary modifications to groundwater production patterns in Management Zone 1 (MZ1), a monitoring the long-term balance of recharge and production within MZ1, identification of data needs and the knowledge deficiency, an effort to bridge gaps in knowledge base and lead to the proper formulation of a long-term plan;

- F. Competing contentions have been offered by the parties to the Judgment related to a number of matters including but not limited to the extent of Watermaster's jurisdiction to address subsidence with or without the consent of the parties and the proper rights and remedies of the parties to the Judgment under paragraph 15 or otherwise;
- G. Without prejudice to or limitation on (i) any party's position, (ii) the competing contentions that have been made or may be asserted regarding subsidence, and (iii) the rights or remedies referenced in the preceding recital or otherwise held by any party, Watermaster has developed this Interim Plan. The agreement or acquiescence by any party to the Judgment with regard to Watermaster's decision to implement the Interim Plan by securing Substitute Water for eligible parties shall not be considered a waiver of their right to object to or oppose future Watermaster actions or to further contest the propriety of proposed cost allocations among parties to the Judgment;
- H. As proposed, the Interim Plan includes a purely voluntary participation by parties to the Judgment in the partial forbearance in groundwater production in those cases where the party to the Judgment is eligible to receive Substitute Water as arranged by Watermaster. In proposing the Interim Plan, Watermaster makes no presumed or assumed relationship between the historical causes of subsidence, express or implied, by its agreement to secure Substitute Water for the benefit of any eligible party and the studies that are associated with the Interim Plan. The portion of the Interim Plan that is designed to make Substitute Water available to parties to the Judgment is the result of multiple considerations including, but not limited to, available facilities, cost of water, and future demands; and
- I. The proposed Interim Plan is the product of a concerted effort to gain support from the parties to the Judgment. The Interim Plan has been discussed by stakeholders; it has been presented to the Pool Committees, the Advisory Committee and the Watermaster Board for consideration.

NOW THEREFORE, with a consensus among the parties to the Judgment and in consideration of the continuing voluntary commitments made by and among the parties to the Judgment, Watermaster will request an order of the Court instructing it to proceed in accordance with this interim management plan for MZ1 (Interim Plan) that reasonably and fairly allocates costs among the parties to the Judgment in accordance with the Judgment, the Peace Agreement and the OBMP with the following terms:

1. Formation of Technical Group. A technical group will be formed among the Producers for the purpose of monitoring and recommending actions in satisfaction of the requirement in Program Element Four of the Implementation Plan based upon credible scientific information.
 - a. Objectives. In pursuing the goal of Program Element Four for the Interim Plan, the Technical Group shall serve as a clearing house for scientific information, as well as the source for full professional discussion, input and peer review by its members, for the benefit of Watermaster. The Technical Group shall provide comment where appropriate and assist Watermaster in Watermaster's development of recommendations for consideration and potential action by Watermaster under the Interim Plan. In addition, the Technical Group will provide similar assistance to Watermaster in its effort to develop a long-term plan as provided in Program Element Four. An important objective and work product of the Technical Group shall be its effort to serve in advisory capacity to assist Watermaster in its development of a Long-Term Plan. The Technical Group and Watermaster shall develop the Interim and Long-Term Plans consistent with the Peace Agreement and OBMP.
 - b. Membership. Membership in the Technical Group shall be reserved for representatives from those parties to the Judgment that are presently producing groundwater within MZ1. Each of the following producers shall be entitled to one representative on the Technical Group: Chino, Chino Hills, Ontario, Upland, Pomona, MVWD, So. Cal. Water, CIM independently, and the Ag Pool.
 - c. Full and Fair Discussion. Discussion between and among the members of the Technical Group shall be considered as good faith settlement discussions and therefore privileged as an offer of compromise. This will ensure an environment of full and candid discussion among professionals. Representatives of the Technical Group will be required to execute acknowledgments of the privileged character of the discussions as a precondition to participation in meetings in a form substantially similar to Exhibit

“A” attached hereto. The privilege shall extend to all conversations among and between members of the Technical Group and any written work product that is developed and presented for the primary purpose of consideration by the Technical Group and its members. The existence of the privilege shall have no bearing on the existence or non-existence of other potential privileges that may be asserted with regard to any documents, reports or opinions.

d. Qualifications. A representative member of the Technical Group may be selected at the discretion of the party that is a member. However, the representative shall be of a professional background with an emphasis in operations, geology, hydrology or engineering fields.

e. Rules and Procedures of the Technical Group. The meeting of the Technical Group will be convened by Watermaster upon providing proper notice to the members. Watermaster shall provide all technical support for the meetings. Watermaster will make a good faith effort to facilitate the development of a consensus with due consideration for proper science among the members of the Technical Group. Where possible the Technical Group shall act by consensus. In those instances in which Watermaster is unable to achieve a consensus among the members of the group, Watermaster shall appoint a facilitator to assist the Technical Group.

2. Monitoring Program. Watermaster will proceed with a comprehensive monitoring program for all of MZ1 in accordance with Program Element Four.

a. Extensometers and Piezometers. Watermaster will proceed to install the extensometers and piezometers as provided in Program Element Four no later than September 1, 2002. Watermaster shall execute the Right of Entry Agreement attached hereto as Exhibit “B.” no later than July 1, 2002.

b. Initial Wells Included Within Study Zone. Within MZ1, a list of wells has been compiled by Watermaster and is attached as Exhibit “C” hereto and incorporated herein by this reference. Watermaster may add other wells to the study group where supported by sound scientific data.

c. Review. Watermaster Staff shall regularly review the technical data and make periodic reports to the Technical Group. This report shall occur a minimum of two times a year and as often as

necessary for the Technical Group to receive appropriate input, feedback and direction. Watermaster will consider recommendations from the Technical Group but it reserves its discretion to determine what portion of its annual budget will be allocated for the monitoring program.

3. Substitute Supply of Water. Watermaster will arrange for the delivery of up to 3,000 acre-feet of water from the Metropolitan Water District and the Inland Empire Utilities Agency via the Water Facilities Authority (WFA) for each of the first three years that the Interim Plan is in effect. Thereafter, Watermaster may, in its sole discretion, continue to arrange for the delivery of Substitute Water. Watermaster will make Substitute Water available to induce voluntary participation in the Interim Plan.
 - a. Eligibility. Each party to the Judgment within MZ1 may be eligible to receive Substitute Water for each well that meets the following conditions:
 - (1) The well must be identified on Exhibit "C";
 - (2) The party must have produced more than 50 (fifty) acre-feet of water from the identified well in Water Year 2001-2002 and determined that it is likely to produce more than 50 (fifty) acre-feet in 2002-2003 and each subsequent year the Interim Plan is in place;
 - (3) The party must be able to physically receive Substitute Water the Metropolitan Water District (MWD) and the Inland Empire Utilities Agency (IEUA) via the WFA.
 - (4) The party must agree to modify groundwater production so that it produces a quantity of water that is less than the base quantity under Paragraph 5.a. and corresponds to the amount of Substitute Water made available by Watermaster
 - b. Election. Any party to the Judgment may be eligible to participate in the voluntary program by exercising its election to receive Substitute Water by completing and filing "Notice of Forbearance" in accordance with Exhibit "D" with Watermaster no later than August 1 of each year that the Interim Plan remains in place. If a party makes that election in a given year and no other party does so, the party which made the election may rescind that election on or before August 10 of that year. A proposed schedule for voluntary participation by the parties to the Judgment in 2002-2003 is attached hereto as Exhibit "E." The parties to the Judgment may confirm or modify their participation by filing a

notice with Watermaster no later than August 1 2002. The fact that a party elects to include one or more wells in one year shall not obligate that party to include the same wells in subsequent years.

c. Cost. The cost of the Substitute Water to the Participating Producers shall be the then prevailing WFA treatment and operations costs plus the IEUA surcharge. Exhibit "F", attached hereto, provides the methodology on how the cost of the Substituted Water will be calculated.

d. Quantities. Each of the Participating Producers shall reduce groundwater production as described in Paragraph 5 in exchange for Watermaster having made the Substitute Water available to the Participating Producers as set forth in the annual notice filed before August 1 of each year the Interim Plan is in place. The participation proposed by Watermaster in 2002-2003 is set forth in Exhibit "E."

e. Storage. Each acre-foot of Substitute Water or Alternative Water supplied by Watermaster to a Participating Producer shall be considered in-lieu storage under the Judgment. This means that every acre-foot of Substitute Water or Alternative Water that is delivered to a Participating Producer to replace groundwater production by that producer will be considered un-pumped water and then credited to storage. Once the Substitute Water or Alternative Water is stored as Supplemental Water, the Substitute Water or Alternative Water shall be made available by Watermaster to the parties to the Judgment based upon their respective amounts of over-production. If a party to the Judgment elects to purchase the stored water to offset all, or a portion of their annual overproduction, the cost of the Supplemental Water held as stored water made available for replenishment shall be the then prevailing "market price" of replenishment (approximately \$201-\$215 per acre-foot). The price will be subject to the usual 85% - 15% assessment procedure applicable to the purchase and sale of stored water under the Judgment (Judgment Exhibit H, Para. 7(a), pp. 69-70). In the event not all stored water is purchased from Watermaster, it may make any excess water available to appropriate pool members on a first come, first served basis.

4. Alternative Water Supply. As an alternative to making Substitute Water available to the Participating Producers in accordance with Paragraph 3, Watermaster, in its sole discretion, may elect to provide other potable water ("Alternative Water"). Any quantity of Alternative Water provided to a Participating Producer would be credited against Watermaster's obligation to arrange for up to 3,000 acre-feet of Substitute Water.

- a. Cost. If Watermaster *elects* in its sole discretion to secure Alternative Water instead of the Substitute Water, the cost incurred by Watermaster in arranging for the Alternative Water shall be a Watermaster expense. If the Participating Producer elects, in its sole discretion, to take delivery of the alternative supply, the per acre-foot cost to the Participating Producer shall be at the same cost as the Substitute Water as provided in Paragraph 3 unless Watermaster, in its sole discretion, elects to offer the Alternative Water at a lesser cost to the Participating Producer.
 - b. Potential Sources. Potential sources of supply include, but are not limited to, the following: interconnections with other local agencies, desalted water, recycled water, increased deliveries from the Ramona feeder and the Monte Vista Intertie Pipeline. The availability of any potential sources of Alternative Water may be subject to the execution of future agreements between and among parties to the Judgment.
 - c. No Commitment. Nothing herein shall commit Watermaster or any party to the Judgment to fund water system improvements for the benefit of any party to the Judgment or to buy water made available by Watermaster instead of that provided pursuant to paragraph 3. Moreover, no party to the Judgment which extracts and uses water solely outside MZ1 shall be required to bear any expenses other than as expressly provided for in this Interim Plan, including but not limited to Exhibit "F" herein, for implementation of the Interim Plan, without its written consent or further Watermaster action in accordance with the Judgment.
5. Conditions on Participation. Any Participating Producer that satisfies the eligibility requirements set forth in Paragraph 3a and provides proper and timely notice to Watermaster in accordance with Exhibit "D", agrees to comply with the following conditions:
- a. Reduction in Production. Production of groundwater from the wells identified by the Participating Producer in accordance with Exhibit "D", shall be temporarily reduced below the historical amount of production for that well for a period of nine (9) months in each year. The temporary reduction in production shall commence on October 1 and conclude on the following June 30. Generally, historical production shall be considered to be the groundwater production by the affected producer from the identified wells during the months of October 1 through June 30 during the seven-year base period of 1994-2001.

- b. Reduction Contingent Upon Substitute Water or Alternative Water Being Made Available to the Participating Producer. The continuing obligation of any Participating Producer to reduce their respective extractions is expressly subject to a continuing condition that Watermaster provides an equivalent quantity of Substitute Water or Alternative Water to the Participating Party.
 - c. Resumption of Production. A Participating Producer may resume production from each well identified in Exhibit "D" between July 1 and September 30 upon written notice to Watermaster staff and the Technical Group.
 - d. Continued Monitoring. Watermaster staff, in consultation with the Technical Group, will continue to monitor conditions within MZ1 during the entire year, and it may recommend varying periods for consideration by Participating Producers for each year the Interim Plan remains in place.
 - e. Emergency. Any Participating Producer that has reduced production in accordance with the provisions of Paragraph 5.a. shall be entitled to resume production in the event of an emergency or Watermaster's failure to provide Substitute Water or Alternate Water. An emergency shall exist when there is an occurrence such as a drought, storm, flood, fire or an unexpected supply interruption or equipment outage impairing the ability of a Participating Producer to make water deliveries.
6. Other Voluntary Measures. In their complete discretion, all parties to the Judgment that own or operate wells with MZ1 are encouraged to consider voluntary measures that may facilitate the goals of this Interim Plan.
7. No Admission of Liability or Waiver of Rights by Any Producer.
- a. No Acknowledgment of Responsibility. By participating in this voluntary plan for MZ1, no party admits liability or acknowledges responsibility for the actions taken in accordance with the Interim Plan. The parties to the Judgment agree to enter into this Interim Plan voluntarily and in exchange for the benefits provided, agree to abide by its terms. Except for their agreement to proceed in accordance with the provisions of this interim plan and the Judgment, all parties are expressly reserving all claims, rights and defenses as to all matters. The parties to the Judgment do not waive their respective rights regarding interpretation of the Judgment, the OBMP Implementation Plan, the Peace Agreement or other provision of law. No party to the Judgment may use the fact that any other party elected to voluntarily reduce production

and receive Substitute Water or Alternate Water as evidence of any fact, in any legal or equitable proceeding of any kind.

- b. No Waiver of Voting Rights. A participating producer does not waive or alter their voting rights under the Judgment, whatever they may be, by its agreement to receive Substitute Water or Alternate Water in-lieu of producing groundwater.

 - c. No Limitation on Watermaster. Nothing in this agreement limits the ability of Watermaster or any party to the Judgment to negotiate a different formula for the cost of alternate or substitute water with members of the Agricultural Pool, including CIM, if member wells are subsequently deemed eligible to participate in the Interim Plan or a Long-Term Plan.
8. Term. The initial term of this Interim Plan is 3 years. Thereafter, this Interim Plan shall be either extended, amended or replaced by a Long-Term Plan to abate or reduce subsidence and fissuring.
9. Construction. This Interim Plan shall be construed consistent with the Judgment and the Peace Agreement. In the event of a conflict between the provisions of this Plan and the Judgment or the Peace Agreement, the Peace Agreement and the Judgment shall co

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CHINO BASIN WATERMASTER

II. BUSINESS ITEMS

C. Consider Approval of the
Field Staff Contract



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: April 14, 2005
April 19, 2005
April 28, 2005

TO: Committee Members
Watermaster Board Members

SUBJECT: Field Services Contract with Wildermuth Environmental, Inc.

Summary

Issue – Seeking approval for the field staff contract.

Recommendation – Staff recommends approval of the contract.

Fiscal Impact – The contract formalizes the existing arrangement between Watermaster and Wildermuth Environmental, Inc.

Background

Under the OBMP, Watermaster performs a variety of activities that require field staff. These activities include but are not limited to reading meters and collecting water samples from wells. In the past, the field staff that have been utilized for these functions have been employees of Wildermuth Environmental, Inc. (WEI) These field staff have been utilized to perform these functions for Watermaster under an informal agreement between Watermaster and WEI while the Watermaster parties considered whether these field staff should become employees of Watermaster.

Several months ago, the Watermaster Personnel Committee recommended that the field staff should remain employees of WEI and that Watermaster should utilize their services through a Field Services Contract with WEI and the parties directed Watermaster staff and consultants to implement that recommendation. Since that time, Watermaster has taken several steps in order to implement this recommendation: a certain field staff position deemed essential to Watermaster functions was made a formal Watermaster employee, certain items of equipment used by the field staff were sold to WEI, and it is Watermaster's understanding that WEI may lease office space in proximity to Watermaster's offices.

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Contract Field Services

THIS CONTRACT (the "Contract"), is made and entered into this ____ day of April 2005, by and between the Chino Basin Watermaster (hereinafter referred to as "Watermaster"), and Wildermuth Environmental, Inc., of Lake Forest, California (hereinafter referred to as "Consultant"), for the Contract Field Services.

NOW, THEREFORE, in consideration of the mutual promises and obligations set forth herein, the parties agree as follows:

1. PROJECT MANAGER ASSIGNMENT: All technical direction related to this Contract shall come from the designated Project Manager. Details of the Watermaster's assignment are listed below:

Project Manager: Kenneth Manning, Chief Executive Officer
Address: 9641 San Bernardino Road
Rancho Cucamonga, California 91730-4665
Telephone: (909) 484-3888
Facsimile: (909) 484-3890
Email: kmanning@cbwm.org

2. CONSULTANT ASSIGNMENT: Special inquiries related to this Contract and the effects of this Contract shall be referred to the following:

Consultant: Joseph LeClaire, Vice President
Address: 23692 Birtcher Centre
Lake Forest, California 92630
Telephone: (949) 420-3030
Facsimile: (949) 420-4040
Email: jleclaire@wildh2o.com

3. SCOPE OF WORK, and SCHEDULE: The scope of work ("Work") and schedule ("Work Schedule") are described in Exhibit A to this Contract, the terms of which are incorporated herein by reference.
4. TERM: The term of this Contract shall extend from the date of the Notice to Proceed, and terminate upon June 30, 2008.
5. FEES FOR SERVICES: Watermaster shall pay Consultant's properly executed invoice once approved by Watermaster's Chief Financial Officer, but no later than thirty (30) days following receipt of the invoice. Payment of Consultant's invoices may be withheld, at Watermaster's reasonable discretion, for any services Watermaster deems unacceptable because they do not meet or exceed Watermaster's standards or requirements and/or do not conform to the terms of this Contract. At its sole discretion, Watermaster may require Consultant to correct and/or revise any services it has rejected as unacceptable. Upon completion of the revised and/or

corrected services, Consultant may resubmit the invoice for those services for payment by Watermaster.

Exhibit B contains Consultant's billing schedule which is typically updated January 1 of each year. The new rates will be reflected in bills for services rendered in January. Watermaster will be presumed to have agreed to the new rates if it does not make any other written arrangements with Consultant or terminate this Contract within ten (10) days of receiving the first bill with the new rates. Consultant will have the right to terminate this Contract if Watermaster declines to pay the increased rates.

Consultant's monthly invoices shall include a cost breakdown by name, classification, hourly billing rate, hours worked, task description, percent of project completed (when appropriate) and percent of project remaining (when appropriate). Expenses shall be submitted with receipts and reimbursed at cost without markup.

Watermaster may, at any time, make changes to the scope of work, including additions, reductions, and changes to any or all of the Work, as directed in writing by the Watermaster. Such changes shall be reflected in a written amendment to this Contract signed by both parties. The NOT-TO-EXCEED Amount and Work Schedule shall be equitably adjusted, if required, to account for such changes, and shall be set forth in the Amendment.

6. CONTROL OF THE WORK: Consultant shall perform the Work in compliance with the Work Schedule. If performance of the Work falls behind schedule, the Consultant shall accelerate the performance of the Work to comply with the Work Schedule as directed by the Project Manager. If the nature of the Work is such that Consultant is unable to accelerate the Work without compromising the quality of the services provided hereunder, Consultant shall promptly notify the Project Manager of the delay, the causes of the delay, and submit a proposed revised Work Schedule.
7. MODIFICATIONS. This Contract may not be modified or amended unless such modifications or amendments are in writing and signed by both parties hereto.
8. FITNESS FOR DUTY:
 - A. Fitness: Consultant shall be responsible for ensuring that each of its personnel performing any of the services contemplated under this Contract:
 1. shall report for work in a manner fit to do their job;
 2. shall have the technical (including any necessary certifications and/or degrees), health and safety training required to do their job;

3. shall not be under the influence of or in possession of any alcoholic beverages or of any controlled substance (except a controlled substance as prescribed by a physician so long as the performance or safety of the Work or other employees of Consultant or Watermaster is not affected thereby);
4. shall not have been convicted of any criminal offense which, by its nature, may have a discernible adverse impact on the business or reputation of Watermaster.

9. INSURANCE: During the term of this Contract, the Consultant shall maintain at Consultant's sole expense, the following insurance.

A. Minimum Scope of Insurance:

1. General Liability: \$1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage. Coverage shall be at least as broad as Insurance Services Office form number GL 0001-87 covering Comprehensive General Liability. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location, or the general aggregate limit shall be twice the required occurrence limit.
2. Automobile Liability: \$1,000,000 combined single limit per accident for bodily injury and property damage. Coverage shall be at least as broad as Insurance Services Office form number CA 00 01 87, covering Automobile Liability, including "any auto."
3. Workers' Compensation and Employers Liability: Workers' compensation limits as required by the Labor Code of the State of California and employers Liability limits of \$1,000,000 per accident.
4. Professional Liability insurance in the amount of \$1,000,000 per occurrence.

B. Deductibles and Self-Insured Retention: Any deductibles or self-insured retention must be declared to and approved by the Watermaster. At the option of the Watermaster, either: the insurer shall reduce or eliminate such deductibles or self-insured retention as respects the Watermaster, its officers, officials, employees and volunteers; or the Consultant shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

C. Other Insurance Provisions: The policies are to contain, or be endorsed to contain, the following provisions:

1. General Liability and Automobile Liability Coverage

- a. The Watermaster, its officers, officials, employees and volunteers are to be designated as additional insured, with endorsements GL 20 11 07 66, CG2010 1185 and/or CA 20 01 (Ed. 0178), as respects: liability arising out of activities performed by or on behalf of the Consultant, products and completed operations of the Consultant, premises owned, occupied or used by the Consultant, or automobiles owned, leased, hired or borrowed by the Consultant.
- b. The Consultant's insurance coverage shall be primary insurance as respects the Watermaster, its officers, officials, employee, volunteers, members of the Board of Directors and the Watermaster's member agencies. Any insurance or self-insurance maintained by the Watermaster, its officers, officials, employees, or volunteers shall be excess of the Consultant's insurance and shall not contribute with it.
- c. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the Watermaster, its officers, officials, employees, volunteers, or Board of Directors.
- d. The Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.
- e. The Consultant may satisfy the limit requirements in a single policy or multiple policies. Any such additional policies written as excess insurance shall not provide any less coverage than that provided by the first or primary policy.

2. Workers' Compensation and Employers Liability Coverage

The insurer shall agree to waive all rights of subrogation against the Watermaster, its officers, officials, employees volunteers and Board of Directors for losses arising from work performed by the Consultant for the Watermaster.

3. All Coverages

Each insurance policy required by this contract shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the Watermaster. Any such reduction in coverage

shall constitute valid grounds for termination of this Contract by Watermaster.

- D. Acceptability of Insurers: With the exception of Professional Liability Insurance, all insurance is to be placed with insurers with a Best's rating of no less than A:VII, and who are admitted insurers in the State of California. Professional Liability Insurance is to be placed with insurers with a Best's rating of no less than B:VII, and who are admitted insurers in the State of California. If Consultant's current insurers are not admitted in the State of California, then Consultant shall change insurers upon the expiration of the current policy or at the first practicable opportunity.
- E. Verification of Coverage: Consultant shall furnish the Watermaster with certificates of insurance and with original endorsements effecting coverage required by the Watermaster for themselves and all subcontractors prior to commencing work or allowing any subcontractor to commence work under any subcontract. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. All certificates and endorsements are to be approved by the Watermaster before work commences. The Watermaster reserves the right to require complete, certified copies of all required insurance policies, at any time.
- F. Submittal of Certificates: Consultant shall submit all required certificates and endorsements to the following:

Chino Basin Watermaster
Sheri Rojo, Chief Financial Officer
9641 San Bernardino Road
Rancho Cucamonga, California 91730-4665

10. LEGAL RELATIONS AND RESPONSIBILITIES

- A. Professional Responsibility: The Consultant shall be responsible to the level of competency presently maintained by other practicing professionals performing the same or similar type of work in California.
- B. Status of Consultant: The Consultant is retained as an independent Consultant only, for the sole purpose of rendering the services described herein. Neither Consultant, nor its agents, officers, employees or subcontractors are employees of Watermaster and shall not be considered employees of Watermaster for any purposes whatsoever.
- C. Observing Laws and Ordinances: The Consultant shall keep itself fully informed of all existing and future state and federal laws and all county and city ordinances and regulations which in any manner affect the conduct of

any services or tasks performed under this Contract, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same. The Consultant shall at all times observe and comply with all such existing and future laws, ordinances, regulations, orders and decrees, including, in part, all applicable wage and hour laws, and shall protect and indemnify, as required herein, the Watermaster, its officers, employees and agents against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree, whether by the Consultant or its employees.

- D. Subcontract Services: Approval of any subcontracts for the performance of any services under this Contract shall be subject to the sole discretion of, and written approval by, the Project Manager.
- F. Travel and Subsistence Pay: The Consultant shall make payment to each worker for travel and subsistence payments which are needed to execute the work and/or service, as such travel and subsistence payments are defined in the WEI employee manual.
- G. Liens: Consultant shall pay all sums of money that become due from any labor, services, materials or equipment furnished to Consultant on account of said services to be rendered or said materials to be furnished under this Contract and that may be secured by any lien against the Watermaster. Consultant shall fully discharge each such lien at the time performance of the obligation secured matures and becomes due.
- H. Indemnification: The Consultant agrees to protect, defend, indemnify and hold harmless the Watermaster, its officers, directors, agents, employees, servants, and volunteers free and harmless from any and all liability, claims, judgments, costs and demands, including demands arising from injuries or death of persons (including employees of the Watermaster and the Consultant) and damage to property, directly or indirectly out of the negligent acts or omissions by the Consultant, its employees, agents, representatives or subcontractors under or in connection with this Contract. The Consultant further agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands or suit, including attorneys' fees, at the sole expense of the Consultant. Watermaster retains the right to exercise its reasonable discretion to approve the choice of counsel retained by Consultant to defend Watermaster's interests in any matter governed by the terms of this indemnification provision.

The Watermaster agrees to protect, defend, indemnify and hold harmless the Consultant, its officers, directors, agents, employees, servants, and volunteers free and harmless from any and all liability, claims, judgments, costs and demands, including demands arising from injuries or death of persons (including employees of the Watermaster and the Consultant) and

damage to property, directly or indirectly out of the negligent acts or omissions by the Watermaster, its employees, agents, representatives or subcontractors under or in connection with this Contract. The Watermaster further agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands or suit, including attorneys' fees, at the sole expense of the Watermaster. Watermaster retains the right to exercise its reasonable discretion to approve the choice of counsel retained by Consultant to defend Watermaster's interests in any matter governed by the terms of this indemnification provision.

Subject to and limited by the provisions agreed to by the Watermaster and Consultant in the preceding paragraphs and to the fullest extent permitted by law, Consultant's total liability to Watermaster and anyone claiming by, through or under the Watermaster for any claim, cost, or damages caused in part by negligence of the Consultant and in part by the negligence of the Watermaster or any other negligent entity or individual, shall not exceed the percentage share that Consultant's negligence bears to the total negligence of the Watermaster, Consultant, and all other negligent entities and individuals determined on the basis of comparative negligence principles. Watermaster further agrees to hold harmless Consultant, from any claim, cost, or damages but only to the extent of the percentage share that Watermaster's negligence bears to the total negligence which Watermaster, Consultant and all other negligent entities and individuals determined on the basis of comparative negligence principles.

- I. Conflict of Interest: No official of the Watermaster who is authorized in such capacity and on behalf of the Watermaster to negotiate, make, accept or approve, or to take part in negotiating, making, accepting or approving this Contract, or any subcontract relating to services or tasks to be performed pursuant to this Contract, shall become directly or indirectly personally interested in this Contract.
- J. Equal Opportunity: During the performance of this Contract, the Consultant shall not unlawfully discriminate against any employee or employment applicant because of race, color, religion, sex, age, marital status, ancestry, physical or mental disability, sexual orientation, veteran status or national origin.
- K. Non-Conforming Work and Warranty: Consultant represents and warrants that the Work and Documentation shall be adequate to serve the purposes described in the Contract. For a period of not less than one (1) year after acceptance of the completed Work, Consultant shall, at no additional cost to Watermaster, correct any and all errors in and shortcomings of the Work or Documentation. Consultant shall within three (2) calendar weeks, correct any error or shortcoming that renders the Work or Documentation dysfunctional or unusable and shall correct other errors within thirty (30)

calendar days after Consultant's receipt of notice of the error. Upon request of Watermaster, Consultant shall correct any such error deemed important by Watermaster in its sole discretion to Watermaster's continued use of the Work or Documentation within seven (7) calendar days after Consultant's receipt of notice of the error. If the Project Manager rejects all or any part of the Work or Documentation as unacceptable and agreement to correct such Work or Documentation cannot be reached without modification to the Contract, Consultant shall notify the Project Manager, in writing, detailing the dispute and reason for the Consultant's position. Any dispute that cannot be resolved between the Project Manager and Consultant shall be resolved in accordance with the provisions of this Contract.

L. Disputes:

1. All disputes arising out of or in relation to this Contract shall be determined in accordance with this section. The Consultant shall pursue the Work to completion in accordance with the instruction of the Watermaster's Project Manager notwithstanding the existence of dispute, unless instructed in writing by the Project Manager to temporarily stop the Work. By entering into this Contract, both parties are obligated, and hereby agree, to submit all disputes arising under or relating to the Contract which remain unresolved after the exhaustion of the procedures provided herein, to independent arbitration. Except as otherwise provided herein, arbitration shall be conducted under California Code of Civil Procedure Sections 1280, et. seq, or their successor.
2. Any and all disputes during the pendency of the Work shall be subject to resolution by the Watermaster Project Manager and the Consultant shall comply, pursuant to the Watermaster Project Manager's instructions. These instructions will be in writing and will cite this part of the Agreement. If the Consultant is not satisfied with any such resolution by the Watermaster Project Manager, the Consultant may file a written protest and request for arbitration with the Watermaster Project Manager within seven (7) calendar days after receiving written notice of the Watermaster's decision. Failure by Consultant to file a written protest within seven (7) calendar days shall constitute waiver of protest, and acceptance of the Watermaster Project Manager's resolution.
3. In the event of arbitration, the parties hereto agree that there shall be a single neutral Arbitrator who shall be selected in the following manner:
 - a. The Demand for Arbitration shall include a list of five names of persons acceptable to the Consultant to be appointed as

Arbitrator. The Watermaster shall determine if any of the names submitted by Consultant are acceptable and, if so, such person will be designated as Arbitrator.

- b. In the event that none of the names submitted by Consultant are acceptable to Watermaster, or if for any reason the Arbitrator selected in Step (a) is unable to serve, the Watermaster shall submit to Consultant a list of five names of persons acceptable to Watermaster for appointment as Arbitrator. The Consultant shall, in turn, have seven (7) calendar days in which to determine if one such person is acceptable.
- c. If after Steps (a) and (b), the parties are unable to mutually agree upon a neutral Arbitrator, the matter of selection of an Arbitrator shall be submitted to the San Bernardino County Superior Court pursuant to Code of Civil Procedure Section 1281.6, or its successor. The costs of arbitration, including but not limited to reasonable attorneys' fees, shall be recoverable by the party prevailing in the arbitration. If this arbitration is appealed to a court pursuant to the procedure under California Code of Civil Procedure Section 1294, et. seq., or their successor, the costs of arbitration shall also include court costs associated with such appeals, including but not limited to reasonable attorneys' fees which shall be recoverable by the prevailing party.

M. Attorneys' Fees: In the event an action is commenced by a party to this Contract against the other to enforce its rights or obligations arising from this Contract, the prevailing party in such action, in addition to any other relief and recovery ordered by the court or arbitration, shall be entitled to recover all statutory costs, plus reasonable attorneys' fees.

11. OWNERSHIP OF MATERIALS AND DOCUMENTS/CONFIDENTIALITY:

The Watermaster retains ownership of any and all partial or complete reports, drawings, plans, notes, computations, lists, and/or other materials, documents, information, or data ("Work Product") prepared by the Consultant and/or the Consultant's subcontractor(s) pertaining to this Contract. In addition, Watermaster shall retain sole possession and ownership of any information used by Consultant or Consultant's contractors that would be considered confidential under Watermaster's policy regarding disclosure of information, unless appropriate waivers have been obtained pursuant to this policy. All other materials and documents are also confidential and shall be available to the Watermaster from the moment of their preparation, and the Consultant shall deliver same to the Watermaster whenever requested to do so by the Project Manager and/or

Watermaster. The Consultant agrees that same shall not be made available to any individual or organization, private or public, without the prior written consent of the Watermaster.

Watermaster shall have no rights to proprietary software, GIS shape files and other data developed at the Consultant's sole expense and that are used to complete the Scope of Work

12. PUBLIC RECORDS POLICY: Information made available to the Watermaster may be subject to the California Public Records Act (Government Code Section 6250 et seq.) The Watermaster's use and disclosure of its records are governed by this Act. The Watermaster shall use its best efforts to notify Consultant of any requests for disclosure of any documents pertaining to Consultant.

In the event of litigation concerning disclosure of information Consultant considers exempt from disclosure; (e.g., Trade Secret, Confidential, or Proprietary) Watermaster shall act as a stakeholder only, holding the information until otherwise ordered by a court or other legal process. If Watermaster is required to defend an action arising out of a Public Records Act request for any of the information Consultant has marked "Confidential," "Proprietary," or "Trade Secret," Consultant shall defend and indemnify Watermaster from all liability, damages, costs, and expenses, including attorneys' fees, in any action or proceeding arising under the Public Records Act.

13. TITLE AND RISK OF LOSS:

- A. Documentation: Title to the Documentation shall pass to Watermaster when prepared; however, a copy may be retained by Consultant for its records and internal use. Consultant shall retain such Documentation in a controlled access file, and shall not reveal, display or disclose the contents of the Documentation to others without the prior written authorization of Watermaster or for the performance of Work related to the Project.

Watermaster may utilize the Work Product and Documentation in any manner it deems necessary to carry out its function as the Watermaster and need not obtain written approval from Consultant prior to doing so. If Watermaster released the Work Product to a third party without the Consultant's prior written consent, or changes or uses the Work Products other than as intended hereunder, Watermaster shall do so at its sole risk and discretion, and Consultant shall not be liable for any claims and/or damages resulting from or connected with the release of or any third party's use of the Work Product.

- B. Disposition: Consultant shall dispose of items to which Watermaster has title as directed in writing by the Project Manager and/or Watermaster at the termination of this Contract.
14. PROPRIETARY RIGHTS:
- A. Rights and Ownership: Watermaster's rights to inventions, discoveries, trade secrets, patents, copyrights, and other intellectual property, including the Information and Documentation, and revisions thereto (hereinafter collectively referred to as "Proprietary Rights"), used or developed by Consultant in the performance of the Work, shall be governed by the following provisions:
1. Proprietary Rights conceived, developed, or reduced to practice by Consultant in the performance of the Work shall be the property of Watermaster, and Consultant shall cooperate with all appropriate requests to assign and transfer same to Watermaster.
 2. If Proprietary Rights conceived, developed, or reduced to practice by Consultant prior to the performance of the Work are used in and become integral with the Work or Documentation, or are necessary for Watermaster to have complete enjoyment of the Work or Documentation, Consultant shall grant to Watermaster a non-exclusive, irrevocable, royalty-free license, as may be required by Watermaster for the complete enjoyment of the Work and Documentation.
15. NOTICES: Any notice may be served upon either party by delivering it in person, or by depositing it in a United States Mail deposit box with the postage thereon fully prepaid, and addressed to the party at the address set forth below:
- Watermaster: Sheri Rojo, Chief Financial Officer
9641 San Bernardino Road
Rancho Cucamonga, California 91730-4665
- Consultant: Joseph P. LeClaire, Vice President
Wildermuth Environmental, Inc.
23692 Birtcher Centre
Lake Forest, California 92630
- Any notice given hereunder shall be deemed effective in the case of personal delivery, upon receipt thereof, or, in the case of mailing, at the moment of deposit in the course of transmission with the United States Postal Service.
16. SUCCESSORS AND ASSIGNS: All of the terms, conditions and provisions of this Contract shall inure to the benefit of and be binding upon

the Watermaster, the Consultant, and their respective successors and assigns. Notwithstanding the foregoing, no assignment of the duties or benefits of the Consultant under this Contract may be assigned, transferred or otherwise disposed of without the prior written consent of the Watermaster; and any such purported or attempted assignment, transfer or disposal without the prior written consent of the Watermaster shall be null, void and of no legal effect whatsoever.

Notwithstanding the foregoing, no assignment of the duties or benefits of the Watermaster under this Contract may be assigned, transferred or otherwise disposed of without the prior written consent of the Consultant; and any such purported or attempted assignment, transfer or disposal without the prior written consent of the Consultant shall be null, void and of no legal effect whatsoever.

17. RIGHT TO AUDIT: The Watermaster reserves the right to review and/or audit all Consultants' records related to the Work. The option to review and/or audit may be exercised during the term of the Contract, upon termination, upon completion of the Contract, or at any time thereafter up to twelve (12) months after final payment has been made to Consultant. The Consultant shall make all records and related documentation available within three (3) working days after said records are requested by the Watermaster.
18. INTEGRATION: The Contract Documents represent the entire Contract of the Watermaster and the Consultant as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered by the Contract Documents. This Contract may not be modified, altered or amended except by written mutual agreement by the Watermaster and the Consultant.
19. GOVERNING LAW: This Contract is to be governed by and constructed in accordance with the laws of the State of California.
20. TERMINATION FOR CONVENIENCE: The Watermaster reserves and has the right to immediately suspend, cancel or terminate this Contract at any time upon written notice to the Consultant. In the event of such termination, the Watermaster shall pay Consultant for all authorized and Consultant-invoiced services up to the date of such termination.

The Consultant reserves and has the right to immediately suspend, cancel or terminate this Contract at any time upon written notice to the Watermaster. In the event of such termination, the Watermaster shall pay Consultant for all authorized and Consultant-invoiced services up to the date of such termination.

21. FORCE MAJEURE: Neither party shall hold the other responsible for the effects of acts occurring beyond their control; e.g., war, riots, strikes, natural disasters, etcetera.

22. NOTICE TO PROCEED: No services shall be performed or furnished under this Contract unless and until this document has been properly signed by all responsible parties and a Notice to Proceed order has been issued to the Consultant.

IN WITNESS WHEREOF, the parties hereto have caused the Contract to be entered as of the day and year written above.

Chino Basin Watermaster:

Wildermuth Environmental Inc.:

Kenneth R. Manning (Date)
Chief Executive Officer

Mark J. Wildermuth (Date)
President/CEO

Exhibit A
Description of Work
For
Field Services Pursuant to the Chino Basin Optimum Basin Management Program
and other Activities of Interest to the Watermaster

Scope of Work

Consultant will provide trained personnel to conduct the field programs described in the Chino Basin Optimum Basin Management Program and other field programs that the Watermaster and the Consultant concur. The types of activities that will be included in this scope of work include:

- Piezometric level monitoring
- Water quality monitoring
- Stream discharge monitoring
- Surface water quality samples from streams and recharge basins
- Water levels in recharge basins
- Ground level monitoring
- Well and water use inspections
- Contact with Chino and adjacent basin pumpers to obtain groundwater well (station) information, pumping, piezometric level and water quality data;
- Other activities as can be agreed to by Watermaster and the Consultant.

Consultant will provide the Watermaster with Standard Operating Procedures (SOPs) prior to starting work in the field.

Watermaster and Consultant will coordinate each month on the monitoring activities that will be done during the following month. In general, Watermaster and Consultant will agree on the required monitoring activities to be accomplished for a given month by the end of the third week of the month prior to doing the work. Consultant will strive to accommodate short-notice requests by Watermaster for field services. The Consultant will provide the staff to complete the monitoring assignment and to update the appropriate Watermaster databases.

The Watermaster may, at Watermaster discretion, ask the Consultant to perform monitoring activities on behalf other of Parties to the Judgment where such monitoring is also of interest to Watermaster. An example of this could include the monitoring of surface and ground water in support of Inland Empire Utilities Agency monitoring requirements for the recharge of recycled water.

Staffing, Equipment and Facilities

The Consultant will provide properly trained staff, vehicles, equipment, and office space required to complete the scope of work. The location of the office space will be in the Chino Basin Area.

Deliverables and Schedule

The Consultant will update Watermaster databases to include the information collected in this Contract and will prepare reports as requested by Watermaster.

Costs and Payment

Watermaster and the Consultant will review costs on a monthly basis and make appropriate assignments of work in subsequent months based on cost to date, funds available in the Watermaster's and the Party's budgets.

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CHINO BASIN WATERMASTER

III. REPORTS/UPDATES

A. WATERMASTER GENERAL LEGAL COUNSEL REPORT

2. Santa Ana Application Process



United States Department of Agriculture
Office of the General Counsel

Pacific Region—San Francisco Office
33 New Montgomery, 17th Floor
San Francisco, CA 94105-4511

Telephone: 415-744-3011
Facsimile: 415-744-3170
Internet: joshua.rider@usda.gov

April 4, 2005

State Water Resources Control Board
Division of Water Rights
P.O. Box 2000
Sacramento, CA 95812-2000

Attention: Jane Farwell

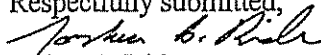
RE: Protest of application #31369

Dear Ms. Farwell:

By submission dated March 7, 2003, the United States Department of Agriculture Forest Service protested the application #31369 submitted by the Chino Basin Watermaster on November 4, 2002. After reviewing the Chino Basin Watermaster's answer to the protest, it is the understanding of the Forest Service that application #31369 will have no effect on National Forest lands or interests.

Based on this reply, the Forest Service respectfully withdraws the protest to application #31369. The remainder of the Forest Service's submission of March 7, 2003, concerning applications #31370, #31371, and #31372, remains in effect.

If any further clarification is required, or any questions arise in this matter, please contact me at the address, phone number, email or facsimile number on this correspondence.

Respectfully submitted,

Joshua S. Rider

Attorney for the Forest Service

Cc: Randall J. Gould: USDA Forest Service

Cc: Michael T. Fife, Attorney
Hatch and Parent
Post Office Drawer 720
Santa Barbara, California 93102-0720

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CHINO BASIN WATERMASTER

IV. INFORMATION

1. Status Report No. 12

Chino Basin Watermaster Status Report No. 12

(Covering June 2004 through August 2004)



September 2004

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OPTIMUM BASIN MANAGEMENT PROGRAM

In its Order of September 28, 2000, extending the term of the nine-member Watermaster Board, the Court ordered Watermaster to provide semiannual reports regarding the progress of OBMP implementation. In Status Report Number 4, filed with the Court on September 30, 2002, Watermaster notified the Court that Watermaster intended to provide quarterly status reports because of the rapid pace of OBMP implementation. By a subsequent Order of October 17, 2002, the Court added additional reporting items to the quarterly status report.

This Status Report Number 12 is filed pursuant to this revised schedule and reports on the period from June 1, 2004 to August 31, 2004.

PROGRAM ELEMENT 1 – DEVELOP AND IMPLEMENT COMPREHENSIVE MONITORING PROGRAM

Groundwater-Level Monitoring

BACK-GROUND Watermaster has three active groundwater-level monitoring programs operating in the Chino Basin – a semiannual basin-wide program; an intensive key well monitoring program associated with the Chino I / II Desalter well fields and the Hydraulic Control Monitoring Program (HCMP); and an intensive piezometric monitoring program associated with land subsidence and ground fissuring (see Land Surface Monitoring below) in Management Zone 1 (MZ1).

THIS PERIOD For the semiannual program, Watermaster staff manually measures water levels in approximately 340 agricultural wells twice per year. In conjunction with the semiannual program, Watermaster staff manually measures water levels at about 112 key wells in the southern portion of the Basin and around the Chino I / II Desalter well fields once per month. During this reporting period, Watermaster staff installed pressure transducers/data loggers in 10 of these key wells to automatically record water levels once every 15 minutes. For the MZ-1 program, Watermaster consultants collect groundwater level data at 35 wells in the southern portion of MZ1. Data are collected manually at MZ1 wells once every two months, and automatically once every 15 minutes using a pressure transducer/data logger installed at each well.

These Watermaster programs also rely on municipal producers, other government agencies, and private entities to supply their groundwater level measurements on a cooperative basis. Watermaster digitizes all these measurements and combines them into a relational database maintained at Watermaster's office.

TO COME During fiscal year 2004/05, Watermaster staff will expand the use of pressure transducers/data loggers. Watermaster staff will purchase and install about 20 additional pressure transducers/data loggers at key wells and at selected wells in the northern portions of Chino Basin where highly-detailed groundwater level data are scarce.



Groundwater-Quality Monitoring

BACK-
GROUND

Prioritizing Wells to Serve Multiple Purposes. The private wells chosen for the 2004-05 water quality monitoring program are located primarily between Interstate 60 and the Santa Ana River (SAR).

Water Quality Analyses

- All groundwater samples are analyzed for general mineral and general physical parameters.
- Wells within or near the two volatile organic compound (VOC) plumes south of the Ontario and Chino Airports are being analyzed for VOCs, in addition to the general minerals and general physical parameters.
- All private wells in the key well program are being analyzed for perchlorate because of its widespread occurrence in the 1999-2001 sampling program, and the concerns expressed by appropriators faced with expensive ion exchange treatment costs for perchlorate-contaminated wells.

Sampling Program of Selected Private Wells. Watermaster developed its streamlined, key-well water quality monitoring program in which approximately 114 private "key wells" are sampled bi-annually (i.e. once every two years) in the southern portion of Chino Basin. Therefore, approximately 57 wells will be sampled on an annual basis. The steps taken in determining the key wells were:

- The basin was divided into a grid, with each cell being 2000 square meters (m^2).
- For each grid cell, the average TDS and NO_3 values were calculated (using the last five years of available data).
- The water quality data of each individual well were examined. Wells most closely matching the average constituent concentrations were chosen as representative. One to two wells in each grid square were retained (the wells not chosen in the key well program, but still matching these criteria, are the alternate wells for each grid cell). Preference was given to wells with the following characteristics:
 - Known construction;
 - Choice as a groundwater level key well;
 - Likelihood of surviving the regional land development.
- Basin-wide TDS and NO_3 arithmetic averages were recalculated using just the key wells and compared to the total basin arithmetic averages. New maps were made representing the water quality conditions of the key wells and qualitatively compared to the original basin maps.

Watermaster has developed a comprehensive water quality program whereby water quality data from other sources are routinely collected, quality-control checked and loaded into Watermaster's database. Data sources included:

- Appropriators



- Department of Health Services (DHS) – these data are currently downloaded from DHS annually
- Department of Toxic Substance Control (DTSC) for the Stringfellow Acid Pits
- Regional Water Quality Control Board (RWQCB) for water quality data associated with sites under Cleanup and Abatement Orders (CAO).

THIS PERIOD

Watermaster is working closely with the Appropriative Pool members and their state-certified contract laboratories in order to obtain water quality data as an electronic data deliverable (EDD). These data would be transmitted either directly from the laboratory or from the Appropriators, after their QA/QC check of the laboratory data. The EDDs will enhance the quality and timeliness of the Watermaster's database.

TO COME

With respect to the recharge of recycled water, Watermaster and IEUA are planning to construct a number of monitoring wells at recharge basins to monitor the influence of recharge on groundwater levels in general, and to monitor the water quality resulting from the recharge of supplemental and storm waters. At least one monitoring well will be installed downgradient of each recharge facility that receives recycled water. The construction schedule will be included in subsequent status reports.

Groundwater-Production Monitoring

BACK-GROUND

Monitoring of Agricultural Production Wells. Initially production monitoring involved the installation of meters on wells operated by members of the Agricultural Pool. As of the end June 2004, Watermaster counted about 489 active agricultural wells and equipped 393 of these wells with operating meters. The other 96 wells have or will become inactive within 18-24 months because of urban development in the south Chino area.

ON GOING

All Producing Wells Are Monitored Quarterly. Watermaster staff reads the newly installed and/or rehabilitated meters on the agricultural wells quarterly. A "water duty" method is used to estimate production at agricultural wells that do not have meters.

TO COME

Need For Water Use/Disposal Form To Be Reviewed. The OBMP Implementation Plan includes a provision that requires the agricultural producers to submit a water use/disposal form describing the sources of water used by each producer and how that water is disposed of after each use. Filling out the water use and disposal form and reporting the results have not been implemented. Watermaster will initiate discussions of the need for this form with the Water Quality Committee

Surface-Water Monitoring

BACK-GROUND

Measure Water Quality and Water Levels In Recharge Basins. Watermaster conducts a surface water monitoring program to characterize the water quality of water in recharge basins and the water levels in some of these basins. The purpose of this program is to estimate the volume and quality of recharge. This information will be used in subsequent years to estimate the safe yield of the Basin and for other management purposes.

ON GOING

Currently, Watermaster monitors the water quality in 20 basins: Upland, Declez, Etiwanda Spreading Grounds, Victoria, Hickory, Lower Day Banana, Ely 1, Ely 3, Wineville, San Sevaine 1, San Sevaine 5, Turner 1, Princeton, Montclair 1, Montclair 2, Montclair 3, Montclair 4, Brooks, and Grove. Generally, the water quality samples are taken after storm events, i.e., during the



period from November 1 through March 30; however, monitoring of nuisance flows also occurs. Each basin is usually sampled three to five times each year. In fiscal year 2004-05 the sampling rate will increase substantially for basins that are scheduled to receive recycled water.

THIS PERIOD Watermaster staff sampled the nuisance water captured in Grove Basin on June 22, July 20, and August 24, 2004.

BACK-GROUND **Surface Water Monitoring for Santa Ana River Began In June 2003.** One of the goals of the OBMP is to maximize Chino Basin yield. A key component in maximizing yield is to minimize groundwater discharge into the SAR. Watermaster developed a surface water monitoring program for the SAR that, in conjunction with Watermaster groundwater monitoring programs, is used to characterize those reaches of the SAR that are gaining water from the Basin, and to determine if significant discharge of Chino Basin groundwater to the SAR is occurring. A conceptual monitoring plan involving IEUA, OCWD, the RWQCB, and Watermaster was finalized. These agencies determined that the conceptual monitoring plan was adequate and developed a detailed work plan to implement a surface water and groundwater monitoring program. The work plan was completed in June 2003, and year-round water quality sampling and flow monitoring in the SAR have begun.

ON GOING Watermaster now measures the SAR flow and selected water quality parameters as key elements of the HCMP. Watermaster collects water quality samples and measures flow at four Santa Ana River stations (Van Buren, Etiwanda, Hamner, and River Road) plus another eight locations on tributaries, year round on a bi-weekly basis. In addition, Watermaster obtains discharge data from permanent USGS and OCWD stream gauge locations on the SAR and its tributaries. Discharge and water quality data from publicly owned treatment works (POTWs) that discharge to the SAR in this reach are obtained from the POTWs.

Land-Surface Monitoring

BACK-GROUND **Multifaceted Approach.** Watermaster staff developed a multifaceted land surface monitoring program to develop data for a long-term management plan for land subsidence in Management Zone 1 (MZ1). The monitoring program consists of three main elements:

1. An aquifer system monitoring facility is located in the southern portion of MZ1, an area that has experienced concentrated and differential land subsidence and ground fissuring. A major component of the aquifer system monitoring facility is a cluster of multiple depth piezometers that measure water level and pressure changes at 11 different depths. Another major component is a dual borehole extensometer that measures deformation within the aquifer system at deep and shallow levels. Together, the two components correlate the hydraulic and mechanical responses of the aquifer system to different aquifer stresses, such as pumping at wells.
2. Synthetic aperture radar interferometry (InSAR) measures land surface deformation across the entire Chino Basin using remote sensing techniques.
3. Benchmark surveys along selected profiles of the Chino Basin. The benchmark surveys (1) establish a datum from which to measure future land surface deformation, (2) "ground-truth" the InSAR data, (3) allow determination of historical subsidence at any



historical benchmarks that can be recovered, and (4) evaluate the effectiveness of the long-term management plan.

ON
GOING

Depth Specific Data. Permanent transducers and data logging equipment are recording depth specific groundwater level data at the Ayala Park piezometers. Transducers also are recording groundwater level data at wells owned by the cities of Chino and Chino Hills and the California Institution for Men (CIM). These transducers record groundwater levels at all wells once every 15 minutes, and also record "on/off" pumping cycles at the active production wells.

Deep Aquifer-System Stress Test.

BACK
GROUND

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, as evidenced by a lack of water level response in CH-18 (east of the fissure zone) due to pumping at CH-19 (west of fissure zone). Image-well analysis of pumping-test responses indicates that this barrier approximately coincides with the location of the historic zone of ground fissuring. This spatial coincidence suggests a cause-and-effect relationship between the barrier, the steep gradient of subsidence across the barrier as indicated by InSAR, ground level surveys and the ground fissuring.

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TO
COME

Starting on September 1, 2004, Watermaster will begin a controlled deep aquifer-system stress test. In summary, the test calls for constant discharge from three wells owned by the City of Chino Hills (CH-1B, CH-15B, and CH-19), while most other wells in the area remain off. These wells have similar perforated intervals from about 300-1,100 ft-bgs and primarily influence water levels in the deep portions of the aquifer system – deeper than about 300 ft-bgs. The pumping test is planned to end on October 31, 2004 {Note: CH-17 was also planned to pump during the test, but mechanical problems at this well preclude pumping}

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The primary objective of this test is to transition the deformation of aquifer-system sediments from elastic compression to inelastic compaction. If accomplished, it will 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. In doing so, it will define a key parameter required for estimating the maximum elastic storage capacity of the confined aquifer system. When inelastic compaction is clearly identified, through analysis of stress-strain diagrams (see discussion below), the pumping test will stop.

Other objectives of the stress test are to (1) constrain estimates of key aquifer-system parameters that could be used in later modeling efforts, (2) confirm and elucidate the existence of a groundwater barrier within the sediments below about 300 ft-bgs, and (3) provide data for a proposed injection test at CH-1B.

During the deep aquifer system stress test of October 2003, drawdown was not great enough to cause clearly-defined inelastic compaction. It is hoped that by pumping CH-19, CH-15B, and CH-1B at full capacity, that piezometric heads in the deep aquifer system will drawdown further than during the pumping test of October 2003 (~150 ft at PA-7), and cause the onset of inelastic compaction.



With regard to CH-1B, groundwater pumped from this well has relatively high concentrations of arsenic that do not permit pumping this well directly into Chino Hills' distribution system. Yet it is imperative that this well participate in the stress test in an attempt to transition the aquifer-system deformation to inelastic compaction. Watermaster and Chino Hills have jointly funded the connection of CH-1B (and CH-15B) to the storm drain system through a "flush line" discharge pipe, which will allow the pumping of CH-1B during the test. However, the pH of water pumped from CH-1B is above 8.5, which is the limit imposed by the Regional Board for discharge to aquatic waters. Watermaster is working on a physical solution to reduce pH of the pumped groundwater and a monitoring plan to satisfy the Regional Board's permitting requirements.

BACK-
GROUND

Deep piezometer rehabilitation. During the summer drawdown in the 2003 it became evident that some degree of intercommunication was developing among the piezometers in the deep cluster (PB) at Ayala Park, and that the deepest piezometer, PB-1, and perhaps others, were also intermittently communicating with the much higher heads in the shallow aquifer system. The leakage apparently was occurring through faulty joints in the two-inch PVC casings, although actual breaks in the casings may also exist. Evidence suggests that many of the problems may have resulted from defects in the casing of PB-1 that allowed leakage directly into the gravel envelopes around the screened intervals of shallower piezometers. To the extent that this is true, repair of PB-1 could solve most of the problems.

THIS
PERIOD

Rehabilitation of the PB piezometers was conducted during June/July 2004, using a "well-in-a-well" construction technique. This involved filling the screened interval (5 to 20 ft) of the piezometer casing with coarse, highly permeable sand, which is then topped with about 10 ft of graded medium to very fine sand and silt to form a filter cap of very low permeability. A 1-inch inner pipe, the well within the well, is jetted through the filter cap in an attempt to communicate with the original gravel envelope and surrounding formation. Before final jetting down into position, the inner pipe, temporarily set about 20 ft above the screen, allows water standing in the 2-inch casing to be displaced to the surface while a sealing bentonite grout was pumped down the annulus between the 2-inch casing and the inner pipe.

This technique was tested and refined by experimenting in PB-6, the shallowest of the deep piezometer cluster. Based on the results at PB-6, Watermaster attempted to rehabilitate PB-1 using similar methodologies.

Preliminary evaluation of piezometric data from all piezometers in PB indicates that the rehabilitation procedures were at least partially successful. In particular, PB-2 and PB-4 appear so far to be producing reasonable and accurate data. However, a comprehensive analysis of the rehabilitation results can not be completed until the end of the current drawdown season (end of October 2004).

TO
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A comprehensive analysis of the rehabilitation results at PB will commence at the end of the current drawdown season (end of October). Further rehabilitation, if needed, will be recommended at the conclusion of the analysis, along with a detailed description of rehabilitation procedures.

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InSAR. The objective of this task is to characterize ground surface deformation in Chino Basin using Synthetic Aperture Radar Interferometry (InSAR). This analysis will be performed for a



historical period (1992-2003) and on an on-going basis thereafter. The advantage of InSAR is that it provides a 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.

THIS
PERIOD

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 time history of subsidence in MZ-1.

TO
COME

Vexcel has submitted a cost estimate of \$200,000 to complete the comprehensive analysis of all historical synthetic aperture radar data (1992-2003) to characterize in detail the time history of subsidence in MZ-1. Watermaster has budgeted the above amount for InSAR analysis in its fiscal year 2004/05 budget. A contract will be executed between Watermaster and Vexcel to complete the work by the first quarter of calendar 2005. Part of the contract will include the presentation of the analysis results by Vexcel staff to the MZ-1 Technical Committee.

Benchmark Surveys. The Interim Monitoring Program (IMP) work plan called for the deep extensometer, 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 is begun 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 work to obtain current elevations. These comprehensive surveys are planned to be repeated annually during spring season of highest regional water levels.

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, the IMP work plan calls for the semiannual measuring of both vertical and horizontal displacements. These horizontal and vertical displacements are expected to define 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 repeated semi-annually during the late spring and early fall periods of highest and lowest water levels – in an attempt to monitor fissure movement that may be associated with elastic and/or inelastic aquifer deformation.



THIS
PERIOD

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 to date were presented to the MZ-1 Technical Committee at its July 21, 2004 meeting. Also at this meeting, the project manager from AE made a presentation to describe survey methodologies, accuracy, results, and challenges, as well as answered questions.

The vertical displacement at monuments that occurred from April 2003 to April 2004 was presented. Comparing monument elevations over the April to April time period should reveal the inelastic component of compaction, if any, that 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 the aquifer system deformation. Water levels measured as part of the IMP (in the vicinity of Ayala Park) support this assumption. The monuments near Ayala Park showed little to no subsidence over this time period. However, the monuments located in the northern portions of the surveyed area consistently showed 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 data have not yet been collected or analyzed as part of the IMP in these northern portions of the survey area that seemingly are experiencing inelastic subsidence.

The subsidence that occurred in the area over the October 1993 to December 1995 period was measured by InSAR. The subsidence indicated by InSAR data has been interpreted as primarily permanent subsidence caused by inelastic aquifer system compaction. If so, the survey data are indicating that the distribution of inelastic compaction in 2003-04 is significantly different compared to that of the early 1990's. In particular, maximum 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 subsidence, if any, in this same area.

The horizontal displacement at monuments of the Ayala Park Array that occurred from April 2003 to November 2003 and November 2003 to April 2004, respectively was determined through distance measurements between adjacent monuments, and is based on the assumption that the southeastern monument was stable over the period of measurement. The measurements indicate the elastic nature of the land surface displacement over the course of the pumping and recovery seasons, as well as the apparent presence of a groundwater barrier within the deep aquifer system.

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 on the west 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. 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. The horizontal movements of benchmarks in the vicinity of the fissure zone merit further monitoring using the same surveying methods for at least one additional year.

TO
COME

The next survey of the Ayala Park array of monuments is planned for October 2004. The timing of this survey will coincide with the time just prior to the cessation of the controlled pumping test planned for September/October 2004. As such, this survey will measure both vertical and horizontal displacements between monuments during a time of maximum water level drawdown (stress) within the aquifer system. The October 2004 survey data can then be compared to the April 2004 survey data (maximum water level recovery in the aquifer system), in an effort to monitor fissure movement, if any, that may be associated with elastic and/or inelastic aquifer-system deformation.

Well Construction, Abandonment, and Destruction Monitoring

BACK-
GROUND

Watermaster staff monitors the condition of wells on a regular basis. Wells that may be improperly abandoned/destroyed are reported to Riverside and San Bernardino Counties as they are discovered.

Watermaster staff inspected 150 suspect wells during a 2002-03 field inspection and determined that 113 of these wells were properly abandoned and 37 wells will require some modification to meet the standard for a properly abandoned well. A well repair/abandonment program was prepared and approved by Watermaster. Watermaster continues to develop a wellhead protection program and makes recommendations on closure of abandoned wells. Ongoing land development will require continued well abandonment activity by Watermaster.

**PROGRAM ELEMENT 2 –
DEVELOP AND IMPLEMENT COMPREHENSIVE RECHARGE PROGRAM**

A centerpiece of the OBMP is enhancement of the Basin recharge capacity, so that high quality storm water and available recycled water can be retained in the Basin.

Recharge Facilities Improvement Project (Seven Bid Packages)

Bid Package No. 1—Reconfiguration of Banana, College Heights, Lower Day, RP3 and Turner Basins

COMPLETED

Bid Package No. 1, which included major earthwork at Banana, College Heights, Lower Day, RP-3, and Turner Basins, was awarded to LTE Excavating on March 24, 2003. Work was scheduled for completion by November 15, 2003, but was delayed while awaiting delivery of sluice gates and their actuator assemblies. These items were received and installed; and the bid package was accepted on May 12, 2004



Bid Package No. 2 – Basin Improvements (3 ea), Drop Inlets (3 ea), and Rubber Dams (4 ea)

COMPLETED

Bid Package No. 2 consisted of construction of the drop inlet structures for Brooks Street Basin, Turner Basin; and Victoria Basin; rubber dams for College Heights/Upland Basins, Turner No.1 Basin, Lower Day Basin, and RP-3 Basin; and various improvements at Declez Basin, Ely Basins, and 8th Street Basins. This package was awarded to Banshee Construction with work beginning on July 16, 2003. Work on this contract was scheduled to be completed by March 15, 2004; however, rain delays slowed completion of excavation and soil cement berms. All the work on this bid package was accepted on August 18, 2004.

Bid Package No. 3 – Jurupa Basin to RP-3 Force Main

THIS PERIOD

Bid Package No. 3 involves construction of approximately 11,000 linear feet of 36-inch CML&C force main between Jurupa Basin and RP-3 Basin. The force main will be used to convey storm water, imported water, and recycled water between the pump station at Jurupa Basin and the RP-3 Basins. This package was awarded to W. A. Rasic Construction Company with work beginning on August 6, 2003. The Contractor has completed 93% of the force main, and has provided a "substantially complete" estimate of mid September 2004.

Bid Package No. 4 – Jurupa Basin to RP-3 Pump Station

THIS PERIOD

Bid Package No. 4 consists of construction of the Jurupa Pump Station, 100 feet of 48-inch pipeline, and 400 feet of 36 inch, CML&C steel force main. The package was awarded to LT Engineering with work beginning on February 19, 2004. The Contractor anticipates a construction period of 8 months with substantial completion in November 2004.

Bid Package No. 5 – SCADA System

THIS PERIOD

This bid package includes the SCADA system and electrical improvements at all the basins. The 100 % design was submitted, reviewed, and sent out for bid in January 2004. The package was awarded to Denboer Engineering with construction beginning in March 2004. The contractor is now 65% complete, with substantial completion in December 2004.

Bid Package No. 6 – MWD Turnouts

THIS PERIOD

This bid package covers the construction of three new MWD turnouts: CB-11TB and CB-15T on the Rialto Pipeline, and CB-18T on the Etiwanda Intertie near San Sevaine Channel. This package was awarded to Griffith Construction with work beginning on February 4, 2004. The contractor is now 84% completion, with substantial completion in September 2004.

Bid Package No. 7 – Priority, Funding and Scope of Misc. Projects

THIS PERIOD

This bid package will complete miscellaneous projects not included in the previous bid packages. Among the projects included in this bid package are:

- Habitat Mitigation Area at RP-3



- Upland Basin Improvements
- Victoria Basin Improvements
- Hickory Rubber Dam, Pump Station and Force Main
- SCADA module

This package was bid and awarded to Brutoco Engineering & Construction on July 21, 2004. The construction is estimated to take five months, with substantial completion in December 2004.

THIS
PERIOD

Groundwater Recharge Coordinating Committee (GRCC)

The GRCC meets monthly to monitor and coordinate the Recharge Facilities Improvement Project, focusing on design issues, construction management, and operations manuals. Watermaster's FY2004-05 budget provides \$413,000 for current operation and maintenance activities.

In addition to design review, the GRCC has initiated work on individual operations procedures for all the recharge basins, as well as obtaining regulatory agency approvals and permits.

PROGRAM ELEMENT 3 – DEVELOP AND IMPLEMENT WATER SUPPLY PLAN FOR THE IMPAIRED AREAS OF THE BASIN; AND

PROGRAM ELEMENT 5 – DEVELOP AND IMPLEMENT REGIONAL SUPPLEMENTAL WATER PROGRAM

These program elements focus on the shift of production in the southern end of the Basin away from agricultural uses and toward urban uses. Without the OBMP, this land use conversion would result in a decrease in production in the southern end of the Basin, ultimately leading to rising water levels. If groundwater levels in the southern end of the Basin rise too high, then water may "spill" out of the Basin into the Santa Ana River. Such uncontrolled spillage caps the overall Safe Yield of the Basin. The Basin can be managed to avoid this possibility.

Directly tied to the threat of rising water levels in the southern area is the diminished desire of appropriators in the southern end of the Basin to pump water because of impaired water quality. The ability to compensate for the loss of agricultural production with increased appropriative production is inhibited because of these water quality concerns. Greater appropriative production in this area therefore requires water treatment, an issue addressed through the construction of desalter facilities.



The Chino I/II Desalters

BACK-
GROUND

The Chino I Desalter was originally constructed by SAWPA to provide 8.1 million gallons per day (MGD) of product water using reverse osmosis treatment. The project also included extraction wells, raw water pipeline, and product water pipelines and pump stations.

THIS
PERIOD

Chino I Expansion/Chino II Desalter. This expansion includes the construction of an additional 4.9 MGD of parallel treatment capacity (nitrate removal via ion exchange) at Chino I and 10 MGD of similar ion exchange at the Chino II Desalter. A construction contract was signed and construction is underway with completion scheduled for March 2005. Watermaster staff reviewed the proposed well construction for the new wells for Desalter II and determined that the location and construction were consistent with the OBMP Implementation Plan

OH
GOING

Chino I Desalter Other Improvements. Other facilities either under design or construction include three new extraction wells (construction completed), a raw water pipeline (construction 80% completed), a Chino Hills pump station and product water pipeline (construction 35% completed), and a volatile organic compound (VOC) treatment system (construction 35% completed) ahead of the ion exchange treatment.

OH
GOING

Chino II Desalter Other Improvements. Other facilities either under design or construction include nine new extraction wells (seven under construction, two wells completed), four raw water pipelines (two in early construction, two in design), two product water pipelines (one completed construction, one completed design), and site improvements (construction underway).

All the projects underway to expand the Chino I/II Desalters should be completed by March 2005.

PROGRAM ELEMENT 4 – DEVELOP AND IMPLEMENT COMPREHENSIVE GROUNDWATER MANAGEMENT PLAN FOR MANAGEMENT ZONE 1

Program Element 4 details the steps undertaken by Watermaster to reduce or abate subsidence and fissuring in Management Zone 1.

THIS
PERIOD

The MZ1 Technical Committee Meetings – July 21, 2004 and August 25, 2004. Committee representatives were informed of the status of the various efforts to implement the monitoring program (see Land Surface Monitoring of Program Element 1). The meetings focused on the rehabilitation of the deep piezometers, the Associated Engineers (AE) semi annual survey of the Ayala Park Array of benchmarks, the Vexcel cost estimate and schedule for the InSAR studies, and the analysis of piezometric and extensometer data.

Voluntary Forbearance. The City of Chino and the City of Chino Hills submitted certifications documenting their respective voluntary participation in forbearance of groundwater production. Through the end of June 2004, the City of Chino submitted documentation of pumping reductions of 1,718 acre-feet toward its forbearance goal of 1,500 acre-feet for 2003/2004. The City of Chino Hills submitted documentation of forbearance of 1417 acre-feet through April 2004, and a credit of 83 acre-feet for May 2004.



Agency	Forbearance through June 2004	Forbearance Goal 2003/2004
City Of Chino	1718 acre-feet	1,500 acre-feet
City Of Chino Hills	1500 acre-feet	1,500 acre-feet

TO COME Pending Legal Actions Regarding Subsidence. In its October 17, 2002 Order, the Court ordered Watermaster to keep the Court apprised of any legal actions that could question the Court's jurisdiction over subsidence. Watermaster is not aware at this time of any such actions. The hearing regarding the City of Chino's Paragraph 15 Motion concerning subsidence was continued by the court until September, 2005.

**PROGRAM ELEMENT 6 –
DEVELOP AND IMPLEMENT COOPERATIVE PROGRAMS WITH THE REGIONAL WATER
QUALITY CONTROL BOARD, SANTA ANA REGION (REGIONAL BOARD) AND OTHER
AGENCIES TO IMPROVE BASIN MANAGEMENT; AND**

**PROGRAM ELEMENT 7 –
DEVELOP AND IMPLEMENT SALT MANAGEMENT PROGRAM**

The "water quality committee" as envisioned in the OBMP Implementation Plan has been formally constituted. Since the development of the OBMP, Watermaster has worked closely with the Regional Water Quality Control Board, the Department of Toxic Substances Control, and others to define water quality challenges and to refine the water quality management criteria in the Chino Basin. Watermaster continues to review water quality conditions in the Basin and to consider future water quality management activities beyond the Chino Basin desalting program.

BACK- GROUND **Water Quality Management.** In response to the results of RWQCB and Watermaster's groundwater quality monitoring programs (Program Element 1) Watermaster has refined its water quality monitoring to focus on the following key areas:

- Watermaster is identifying and characterizing water quality anomalies, such as the VOC anomaly south of the Ontario International Airport (OIA). Status Reports on each of the anomalies were developed by Watermaster and were presented to the Water Quality Committee for their review.
- Watermaster staff receives and reviews all reports that are produced by dischargers that are conducting investigations under order by the RWQCB and the Department of Toxic Substances Control (DTSC).
- Watermaster staff is assisting the RWQCB with research, monitoring, and the crafting of investigative, and cleanup and abatement orders for potential dischargers involved with the OIA.
- Watermaster staff continues to participate in the process of developing TMDLs for Reach 3 of the Santa Ana River and other water bodies in the lower Chino



Basin. No progress has been made during the last quarter because of the State budget crisis and staffing issues at the RWQCB.

Water Quality Committee

BACK-
GROUND

Watermaster staff and consultants continue to update our understanding of the contaminants of concern in the various plumes, and the extent of their migration and remediation. In addition, Wildermuth Environmental continued their analysis of the environmental records search performed by EDR. This consisted of a query of state and federal databases of known users and dischargers of potentially hazardous chemicals. Watermaster is analyzing the relationship of potential sources of perchlorate with down gradient impacted production wells. On March 30, 2004, Black & Veatch delivered their "Draft Technical Memorandum –Treatment Technology Review" which analyses current and emerging treatment technologies for specific contaminants of concern in the Chino Basin; including nitrates, perchlorate, arsenic, and specific VOCs.

THIS
PERIOD

With respect to the VOC plume at OIA, Wildermuth Environmental completed their data gathering effort at the RWQCB and prepared five draft Letters of Notification/Cleanup and Abatement Orders for review by the RWQCB prior to their mailing to identified potential dischargers. At the Chino Airport VOC plume, Watermaster obtained permission from private well owners to release VOC water quality data to the RWQCB. Tetra Tech, a consulting engineering firm performing quarterly groundwater monitoring of the VOC plume immediately southwest of the airport property in turn obtained these data from the RWQCB to assist in their efforts to model plume movement.

Tetra Tech is under contract to the County of San Bernardino, Department of Architecture and Engineering, the owner and operator of Chino Airport, and is attempting to determine the sources of the VOC plume. Tetra Tech is currently negotiating to install five additional groundwater monitoring wells, and to perform additional soil gas surveys, in order to locate the VOC sources. Watermaster's water level and water quality monitoring programs over the last several years have resulted in a robust database that is being used by Watermaster and other stakeholders in the basin to help answer these kinds of questions.

With respect to perchlorate in MZ-3, a number of wells in the Fontana area of Chino Basin have been impacted and shut down because of relatively low levels of perchlorate (but above the State Action Level of 6 µg/l). Some parties in the basin believe that significant perchlorate sources near the Mid-Valley Landfill (Goodrich, Aerojet, Quickset, Emhart Industries, Denova Environmental, Pyro Spectacular, Rialto Ammunition Storage Point, et al.) in the Rialto-Colton basin may also be sources of perchlorate in Chino Basin. The proposed transport pathway is leakage across the Rialto-Colton Fault. Members of the WQC proposed that Watermaster perform a hydrogeologic investigation of that area to better understand cross basin transport. The investigation may be prohibitively expensive, given the complexity of the fault system and aquifer heterogeneity.

In a related study, the RWQCB has done an extensive historical perchlorate usage literature review and has produced a sizable volume of circumstantial evidence that large quantities of Chilean fertilizer may have been used for citrus in the Fontana area.

TO
COME

Neil Sturchio, Professor and Head of the Earth and Environmental Sciences at the University of Illinois at Chicago, has developed a technique for using stable isotope ratios of oxygen and chloride to distinguish the origin of perchlorate (man-made or Chilean fertilizer). Natural perchlorate carries a unique ¹⁸O and ³⁷Cl signature – very robust parameters that can be used to distinguish between man-made and natural sources of perchlorate. Professor Sturchio has



tested several samples of leachate from fertilizer nitrogen (from the Atacama Desert in Chile) and rocket fuel sources. One of the innovations that Professor Sturchio has developed is the use of a flow-through column with an bifunctional anion-exchange resin. This is required to concentrate the typically low levels of perchlorate in groundwater so that the perchlorate can be analyzed isotopically.

Watermaster intends to utilize this isotopic perchlorate analysis to determine if source of the perchlorate in groundwater MZ-3 is anthropogenic or from Chilean fertilizer.

Watermaster and Regional Board Propose TDS and Nitrogen Objectives to Promote Maximum Benefit of Waters Available to the Chino Basin

BACK-
GROUND

Watermaster staff worked with the Total Dissolved Solids (TDS)/ Nitrogen (N) Task Force to revise the sub-basin boundaries, and the TDS and N objectives for the Chino Basin to promote maximum beneficial use of waters in the Basin (as opposed to the Regional Board's current, more rigid anti-degradation based objectives). The maximum beneficial use approach will increase water supplies and lower costs over time while meeting water quality requirements. In December 2002, Watermaster proposed specific water-quality management zone boundaries, and N and TDS objectives for the Chino Basin to the RWQCB. The TDS/N Task Force and the RWQCB incorporated Watermaster recommendations in the TDS/N Basin Plan Amendment dated November 21, 2003.

The Basin Plan Amendment incorporating the sub-basin boundaries and maximum beneficial use concept was adopted by the RWQCB on January 24, 2004 (RWQCB Basin Plan Amendment, and Attachment to Resolution No. R8-2004-001). Watermaster staff immediately developed and submitted surface water and groundwater monitoring programs to the RWQCB on February 21, 2004. These monitoring programs measure the progress of CBWM and IEUA in achieving the "maximum benefit" goal for TDS/N in the Chino and Cucamonga Basins. The Basin Plan amendment was reviewed and approved by the State Water Resources Control Board (SWRCB) on September 8, 2004. It is currently under review by the Office of Administrative Law (OAL) and U.S. Environmental Protection Agency (USEPA).

BACK-
GROUND

Cooperative Effort to Determine State of Hydraulic Control. One remaining issue regarding the Basin Plan changes was to develop a monitoring plan to evaluate the state of hydraulic control in the southern end of the Basin. Hydraulic control is one tool that can be used to maximize the safe yield of the Basin. Watermaster staff developed a monitoring program for OBMP purposes and described this effort in the Initial State of the Basin Report (October 2002). The execution of this monitoring program is included in Program Element 1. Watermaster and IEUA have collaborated with OCWD and the RWQCB to select existing wells and to site nine new multi-piezometer wells that will be used to monitor and assess the state of hydraulic control.

In addition to being a core element of the OBMP, hydraulic control is a requirement of the Basin Plan Amendment. Watermaster, OCWD, and RWQCB staffs developed a conceptual monitoring program in June 2003 to assess the state of hydraulic control and to provide information to Watermaster to manage future production and recharge. The final work plan for the Hydraulic Control Monitoring Program was completed in May 2004, and implementation is now occurring. This program will change over time as new information is developed and will last for several years. The coordination and review of the hydraulic control monitoring data and the



development of management programs to maintain hydraulic control have been added to Program Elements 6 and 7.

Watermaster, IEUA, OCWD, and the Regional Board have agreed to construct nine new monitoring wells as part of the piezometric monitoring element of the HCMP. These monitoring wells are necessary because existing well locations and well construction are not sufficient to measure the extent of hydraulic control in the vicinity of the Desalter well fields and because of the loss of monitoring use of agricultural wells as these wells are destroyed in the land conversion from agricultural to urban uses. These new wells will document the creation of a regional depression in the piezometric surface, for both the shallow and deep aquifer systems, as a result of Desalter pumping. These wells will be installed during fiscal year 2004/05.

Funding for the construction of the nine monitoring wells will come from Watermaster, IEUA, and other sources. These other sources include \$250,000 from the Local Groundwater Assistance Fund, sponsored by the California Department of Water Resources (DWR) and about \$400,000 from the U.S. Bureau of Reclamation (BOR). The DWR funding will support the construction of two of the nine piezometric monitoring wells; the BOR funding will support construction of three of the nine piezometric monitoring wells.

THIS
PERIOD

The following tasks were performed during June-August 2004 for the nine HCMP wells:

- Continued land acquisition efforts for all wells
- Prepared various permits in support of land acquisition efforts
- Completed CEQA/NEPA processes for all wells
- Finalized the IEUA plans and specifications for wells MW-2/-3/-5/-7/-8/-9
- Finalized the IEUA bid package for wells MW -2/-3/-5/-7/-8/-9
- Supported Bureau of Reclamation (BOR) in its preparation of plans and specifications for wells MW-1/-4/-6
- Conducted the pre-bid meeting and site walk for all wells with drilling contractors in conjunction with IEUA/CBWM/BOR on August 5, 2004. IEUA and BOR provided separate bid packages to drilling contractors.

TO
COME

The following tasks are projected to be performed during September-November 2004 for the 9 HCMP wells:

- IEUA and BOR to award separate contracts to drilling contractor(s)
- IEUA to submit and negotiate finalized site acquisition offers to well site landowners
- Prepare and submit well construction permits and fees
- Begin construction of wells in November.



Salt Budget Tool To Establish TDS Objectives

COMPLETED

Watermaster has developed a salt budget tool to estimate the current and future salt loads to the Basin and the salt benefits of the OBMP. This tool was used to establish TDS objectives for the northern part of the Basin based on maximum beneficial use of water available to the region. These projections were based on the water supply plan in the Implementation Plan and include alternative recycled water and State Project water recharge scenarios. Watermaster consultants prepared a letter report (February 20, 2004) describing the salt budget and the Chino Basin Maximum Benefit Commitment. The commitments require Watermaster and IEUA to take specific actions triggered by ambient water quality and other time-certain conditions. An implementation schedule is specified, with the RWQCB responsible for overseeing compliance.

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PROGRAM ELEMENT 8 – DEVELOP AND IMPLEMENT GROUNDWATER STORAGE MANAGEMENT PROGRAM; AND

PROGRAM ELEMENT 9 – DEVELOP AND IMPLEMENT STORAGE AND RECOVERY PROGRAM

This section summarizes the work accomplished to date and the work planned over the next few months for the Chino Basin Dry Year Yield (DYY) and Storage and Recovery Programs. The DYY Program is a conjunctive use program between the Metropolitan Water District of Southern California (MWDSC) and several Basin appropriators, which would develop a maximum of 100,000 acre-feet of storage. These Programs also explore the potential for using up to 500,000 acre-feet of storage capacity.

BACK-GROUND

Completed Preliminary Design Report. The first draft of the DYY Preliminary Design Report was completed in July 2003 and submitted to Watermaster. The DYY Program documentation is organized into four volumes: Volumes I and II, prepared by Black & Veatch, comprise the Preliminary Design Report (PDR). Volume I describes the background information and design objectives of the Program, while Volume II describes the facilities to be designed to help the agencies meet their shift obligation. Volume III presents the groundwater modeling report developed by Wildermuth Environmental, Inc., and Volume IV contains the CEQA Findings of Consistency environmental documentation prepared by Tom Dodson and Associates.

ON GOING

DYY Shift Obligation. Participants in the DYY Program will be required to reduce (shift) their imported water usage by a predetermined amount during a dry year. Each participating agency will have a specific shift obligation that, when added together, will provide MWDSC with 33,000 acre-feet of dry year yield. The shift obligations were determined through meetings and correspondence among IEUA, Watermaster, Black & Veatch, and representatives from each participating agency.

The eight participating agencies are as follows:



• City of Chino	• Monte Vista Water District (MVWD)
• City of Chino Hills	• City of Ontario
• Cucamonga Valley Water District (CVWD)	• City of Pomona
	• City of Upland
• Jurupa Community Services District (JCSD)	

Facility Requirements and Site Selection. A preliminary screening of potential sites identified the most feasible locations for the DYY Program facilities. The information was presented to the agencies and a final selection was made. The Program facilities consist of five new ion exchange (IX) facilities, expansion of two existing IX facilities, construction of seven new non-water quality impaired wells, and two new perchlorate wellhead treatment facilities. The new wellhead IX facilities would contribute approximately 18,000 acre-feet of dry year yield, while the new well facilities would contribute approximately 15,000 acre-feet of additional yield. The total capital cost for the facilities is estimated to be \$38 million. MWDSC will contribute approximately \$27 million. The Groundwater Storage Program Funding Agreement between MWDSC, IEUA, Three Valleys Municipal Water District (TVMWD), and Watermaster was signed in July 2003.

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Final Design of PDR Facilities. The designs for the facilities outlined in the PDR are either under way, completed, or will commence shortly. All design documents are scheduled to be completed by September 2004.

BACK-
GROUND
Final Approval of DYY Storage Account. Pursuant to Article X of Watermaster's Rules and Regulations, IEUA submitted an Application to enter into a Storage and Recovery Program Storage Agreement. This Application was approved unanimously by all Pools and received unanimous approval from the Advisory Committee and Board on October 23, 2003. Watermaster and IEUA developed a storage agreement pursuant to the Application and processed that agreement through the Watermaster approval process in March 2004. The agreement was submitted to the Court for approval. Prior to Court approval, MWDSC is utilizing its existing Trust Storage Account with the intention of transferring its water stored in the Trust Account into the DYY account upon approval of the Storage Agreement.

BACK-
GROUND
Groundwater Modeling. The Chino Basin groundwater model was completed and the draft modeling report was submitted to Watermaster in July 2003. In addition to evaluating the effects of the DYY program on the Basin, the model was used to:

- Develop draft future replenishment and wet water recharge criteria based on requirements described in the Section 7.1b of the Watermaster Rules and Regulations regarding the balance of recharge and discharge. (See Wildermuth, Analysis of Supplemental Water Recharge Pursuant to the Peace Agreement. To be filed with the Court.)
- Evaluate the cumulative effects of transfers among the Parties as described in Section 9.3 of the Watermaster Rules and Regulations. (See Wildermuth, Evaluation of the Cumulative Effects of Transfers Pursuant to the Peace Agreement. To be filed with the Court.)



- Describe pumping patterns in Management Zone 1 that will not reduce piezometric levels below current conditions.

These management criteria were incorporated into the DYY program. The results of this work were presented to the Pool Committees, Advisory Committee, and the Watermaster Board in June and August 2003, and the final report was submitted in September 2003.

BACK-
GROUND

Engineering Review and Determination of the Operational Storage Requirement and Safe Storage. The Operational Storage Requirement was defined in the Peace Agreement as part of the storage in the Chino Basin "necessary to maintain the safe yield" of the Basin (Peace Agreement, Exhibit B – Implementation Plan, page 37). Safe storage is the maximum storage in the Basin that can occur without significant water quality and high groundwater related problems. The draft results of this work were presented to the Pool Committees, Advisory Committee, and the Watermaster Board in August 2003.

ON-
GOING

Other Uses of the Groundwater Model in the OBMP Implementation. The groundwater model is currently being used to investigate alternative management strategies including reduced storage in the eastern part of the basin, expanded storage and recovery programs, and assessing hydraulic control with various appropriator proposed pumping alternatives in the southern Chino Basin. A draft report documenting the modeling effort and related investigations will be submitted to Watermaster during the next reporting period.

CONCLUSION

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PERIOD

This has been an active reporting period for Watermaster, with major activities on a number of issues:

- Construction on Bid Packages 1 and 2 of the Recharge Facilities Improvement Project was accepted, and construction on Bid Packages 3-7 is progressing on schedule. Demonstration projects for recharge in College Heights, Montclair and Brooks Basins were undertaken.
- The groundwater level and quality monitoring programs have been reorganized to better support new initiatives, such as MZ1, HCMP, Nitrogen Loss, and Desalter Expansion. Selected wells are being equipped with automatic measuring and recording devices to continually collect water level data at wells at frequent intervals. Field sampling and laboratory analyses used in FY 2003/04 have transitioned to the new monitoring program.
- Planning and design of nine new HCMP monitoring wells was completed.
- Updated status reports were developed for Chino Basin plumes at Kaiser, GE Flat Iron, GE Test Cell, OIA and Chino Airport. An initial evaluation of potential perchlorate sources and plumes was undertaken based on an EDR database.
- Data from the Ayala Park Extensometer indicated that deformation within the aquifer system sediments has been primarily elastic compression and expansion during the 2003 pumping season and the FY2003/04 recovery season. Additional test protocols are being developed for FY2004-05.



- Following the resignation of John Rossi, the former Watermaster CEO, an extensive search was undertaken and Kenneth R. Manning was offered the position of new Watermaster CEO.

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CHINO BASIN WATERMASTER

IV. INFORMATION

2. Status Report No. 13

Chino Basin Watermaster Status Report No. 13

(Covering September 2004 through December 2004)



January 2005

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OPTIMUM BASIN MANAGEMENT PROGRAM

In its Order of September 28, 2000, extending the term of the nine-member Watermaster Board, the Court ordered Watermaster to provide semiannual reports regarding the progress of OBMP implementation. In Status Report Number 4, filed with the Court on September 30, 2002, Watermaster notified the Court that Watermaster intended to provide quarterly status reports because of the rapid pace of OBMP implementation. By a subsequent Order of October 17, 2002, the Court added additional reporting items to the quarterly status report. An additional month (December 2004) was added to Status Report No. 13 so that the Watermaster reporting schedule aligns with traditional practice.

This Status Report Number 13 is filed pursuant to this revised schedule and reports on the period from September 1, 2004 to December 31, 2004.

PROGRAM ELEMENT 1 – DEVELOP AND IMPLEMENT COMPREHENSIVE MONITORING PROGRAM

Groundwater-Level Monitoring

BACK-
GROUND

Watermaster has three active groundwater-level monitoring programs operating in the Chino Basin – a semiannual basin-wide program; an intensive key well monitoring program associated with the Chino I / II Desalter well fields and the Hydraulic Control Monitoring Program (HCMP); and an intensive piezometric monitoring program associated with land subsidence and ground fissuring (see Land Surface Monitoring below) in Management Zone 1 (MZ1).

THIS
PERIOD

For the semiannual program, Watermaster staff manually measures water levels in approximately 345 agricultural wells twice per year. In conjunction with the semiannual program, Watermaster staff manually measures water levels at about 107 key wells in the southern portion of the Basin and around the Chino I / II Desalter well fields once per month. Pressure transducers/data loggers are installed in 19 of these key wells to automatically record water levels once every 15 minutes. For the MZ-1 program, Watermaster consultants collect groundwater level data at 35 wells in the southern portion of MZ1. Data are collected manually at MZ1 wells once every two months, and automatically once every 15 minutes using a pressure transducer/data logger installed at each well.

These Watermaster programs also rely on municipal producers, other government agencies, and private entities to supply their groundwater level measurements on a cooperative basis. Watermaster digitizes all these measurements and combines them into a relational database maintained at Watermaster's office.

TO
COME

During fiscal year 2004/05, Watermaster staff will expand the use of pressure transducers/data loggers. Watermaster staff will purchase and install about 15-18 additional pressure transducers/data loggers at HCMP wells that are currently being drilled. During fiscal year 2005/06, Watermaster staff will purchase and install about 20 additional pressure



transducers/data loggers at key wells and at selected wells in the northern portions of Chino Basin where highly-detailed groundwater level data are scarce.

Groundwater-Quality Monitoring

Prioritizing Wells to Serve Multiple Purposes. The private wells chosen for the 2004-05 water quality monitoring program are located primarily between Interstate 60 and the Santa Ana River (SAR).

BACK-
GROUND

Water Quality Analyses

- All groundwater samples are analyzed for general mineral and general physical parameters.
- Wells within or near the two volatile organic compound (VOC) plumes south of the Ontario and Chino Airports are being analyzed for VOCs, in addition to the general mineral and general physical parameters.
- All private wells in the key well program are being analyzed for perchlorate because of its widespread occurrence in the 1999-2001 sampling program, and the concerns expressed by appropriators faced with expensive ion exchange treatment costs for perchlorate-contaminated wells.

Sampling Program of Selected Private Wells. Watermaster developed its streamlined, key-well water quality monitoring program in which approximately 114 private "key wells" are sampled bi-annually (i.e. once every two years) in the southern portion of Chino Basin. Therefore, approximately 57 wells will be sampled on an annual basis. The steps taken in determining the key wells were:

- The basin was divided into a grid, with each grid cell being 2000 square meters (m^2).
- For each grid cell, the average TDS and NO_3 values were calculated (using the last five years of available data).
- The water quality data of each individual well were examined. Wells most closely matching the average constituent concentrations were chosen as representative. One to two wells in each grid square were retained (the wells not chosen in the key well program, but still matching these criteria, are the alternate wells for each grid cell). Preference was given to wells with the following characteristics:
 - Known construction;
 - Choice as a groundwater level key well;
 - Likelihood of surviving regional land development.
- Basin-wide TDS and NO_3 arithmetic averages were recalculated using just the key wells and compared to the total basin arithmetic averages. New maps were made representing the water quality conditions of the key wells and qualitatively compared to the original basin maps.



Watermaster continues a comprehensive water quality program whereby water quality data from other sources are routinely collected, quality-control checked and loaded into Watermaster's database. Data sources included:

- Appropriators
- Department of Health Services (DHS) – these data are currently downloaded from DHS annually
- Department of Toxic Substance Control (DTSC) for the Stringfellow Acid Pits
- Regional Water Quality Control Board (RWQCB) for water quality data associated with sites under Cleanup and Abatement Orders (CAO).

THIS PERIOD

Watermaster is working closely with the Appropriative Pool members and their state-certified contract laboratories in order to obtain water quality data as an electronic data deliverable (EDD). These data are transmitted either directly from the laboratory or from the Appropriators, after their QA/QC check of the laboratory data. The EDDs will enhance the quality and timeliness of the Watermaster's database.

TO COME

With respect to the recharge of recycled water, Watermaster and IEUA are designing a number of monitoring wells at recharge basins to monitor the influence of recharge on groundwater levels in general, and to monitor the water quality resulting from the recharge of supplemental and storm waters. At least one monitoring well will be installed downgradient of each recharge facility that receives recycled water. The construction schedule will be included in subsequent status reports.

Groundwater-Production Monitoring

BACK-GROUND

Monitoring of Agricultural Production Wells. Initially production monitoring involved the installation of meters on wells operated by members of the Agricultural Pool. As of the end December 2004, Watermaster counted about 482 active agricultural wells and equipped 349 of these wells with operating meters. The other 133 wells have or will become inactive within 18-24 months because of urban development in the south Chino area or have inoperable meters.

ON GOING

All Producing Wells Are Monitored Quarterly. Watermaster staff reads the newly installed and/or rehabilitated meters on the agricultural wells quarterly. A "water duty" method is used to estimate production at agricultural wells that do not have meters.

TO COME

Need For Water Use/Disposal Form To Be Reviewed. The OBMP Implementation Plan includes a provision that requires the agricultural producers to submit a water use/disposal form describing the sources of water used by each producer and how that water is disposed of after each use. Filling out the water use and disposal form and reporting the results have not been implemented. Watermaster will initiate discussions of the need for this form with the Water Quality Committee.

Surface-Water Monitoring

BACK-GROUND

Measure Water Quality and Water Levels in Recharge Basins. Watermaster conducts a surface water monitoring program to characterize the water quality of water in recharge basins and the water levels in some of these basins. The purpose of this program is to estimate the volume and quality of recharge. This information will be used in subsequent years to estimate the safe yield of the Basin and for other management purposes.



ON
GOING

Currently, Watermaster monitors the water quality in 20 basins: Upland, Declez, Etiwanda Spreading Grounds, Victoria, Hickory, Lower Day, Banana, Ely 1, Ely 3, Wineville, San Sevaine 1, San Sevaine 5, Turner 1, Princeton, Montclair 1, Montclair 2, Montclair 3, Montclair 4, Brooks, and Grove. Generally, the water quality samples are taken after storm events, i.e., during the period from November 1 through March 30; however, monitoring of nuisance flows also occurs. Each basin is usually sampled three to five times each year. In fiscal year 2005-06 the sampling rate will increase substantially for basins that are scheduled to receive recycled water.

THIS
PERIOD

Watermaster staff sampled the storm water captured on the following dates in the named basins:

- 10/22/04 - Montclair 1-4;
- 10/25/04 - Lower Day, Ely 1-3, San Sevaine, and Turner 1;
- 10/26/04 - DeClez, Banana, Wineville, San Sevaine 5;
- 10/28/04 - DeClez, Wineville, Turner 1, 8th Street;
- 10/29/04 - San Sevaine 5, Brooks, Grove; and
- 11/30/04 - Victoria and Grove.

BACK-
GROUND

Surface Water Monitoring for Santa Ana River Began In June 2003. One of the goals of the OBMP is to maximize Chino Basin yield. A key component in maximizing yield is to minimize groundwater discharge into the SAR. Watermaster developed a surface water monitoring program for the SAR that, in conjunction with Watermaster groundwater monitoring programs, is used to characterize those reaches of the SAR that are gaining water from the Basin, and to determine if significant discharge of Chino Basin groundwater to the SAR is occurring. A conceptual monitoring plan involving IEUA, OCWD, the RWQCB, and Watermaster was finalized. These agencies determined that the conceptual monitoring plan was adequate and developed a detailed work plan to implement a surface water and groundwater monitoring program. The work plan was completed in June 2003, and year-round water quality sampling and flow monitoring in the SAR have begun.

ON
GOING

Watermaster now measures the SAR flow and selected water quality parameters as key elements of the HCMP. Watermaster collects water quality samples and measures flow at four Santa Ana River stations (Van Buren, Etiwanda, Hamner, and River Road) plus another eight locations on tributaries, year round on a bi-weekly basis. In addition, Watermaster obtains discharge data from permanent USGS and OCWD stream gauge locations on the SAR and its tributaries. Discharge and water quality data from publicly owned treatment works (POTWs) that discharge to the SAR in this reach are obtained from the POTWs.

Land-Surface Monitoring

BACK-
GROUND

Multifaceted Approach. Watermaster staff developed a multifaceted land surface monitoring program to develop data for a long-term management plan for land subsidence in Management Zone 1 (MZ1). The monitoring program consists of three main elements:



1. An aquifer system monitoring facility is located in the southern portion of MZ1, an area that has experienced concentrated and differential land subsidence and ground fissuring. A major component of the aquifer system monitoring facility is a cluster of multiple depth piezometers that measure water level and pressure changes at 11 different depths. Another major component is a dual borehole extensometer that measures deformation within the aquifer system at deep and shallow levels. Together, the two components correlate the hydraulic and mechanical responses of the aquifer system to different aquifer stresses, such as pumping at wells.
2. Synthetic aperture radar interferometry (InSAR) measures land surface deformation across the entire Chino Basin using remote sensing techniques.
3. Benchmark surveys along selected profiles of the Chino Basin. The benchmark surveys (1) establish a datum from which to measure future land surface deformation, (2) "ground-truth" the InSAR data, (3) allow determination of historical subsidence at any historical benchmarks that can be recovered, and (4) evaluate the effectiveness of the long-term management plan.

Depth Specific Data. Permanent transducers and data logging equipment are recording depth specific groundwater level data at the Ayala Park piezometers. Transducers also are recording groundwater level data at wells owned by the cities of Chino and Chino Hills and the California Institution for Men (CIM). These transducers record groundwater levels at all wells once every 15 minutes, and also record "on/off" pumping cycles at the active production wells.

Deep Aquifer-System Stress Test.

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, as evidenced by a lack of water level response in CH-18 (east of the fissure zone) due to pumping at CH-19 (west of fissure zone). Image-well analysis of pumping-test responses indicates that this barrier approximately coincides with the location of the historic zone of ground fissuring. This spatial coincidence suggests a cause-and-effect relationship between the barrier, the steep gradient of subsidence across the barrier as indicated by InSAR, ground level surveys and the ground fissuring.

Starting on September 1, 2004, Watermaster began a controlled deep aquifer-system stress test. In summary, the test consisted of constant discharge from two wells owned by the City of Chino Hills (CH-15B and CH-19); while most other wells in the area remained off. These wells have similar perforated intervals from about 300-1,100 ft-bgs and primarily influence water levels in the deep portions of the aquifer system – deeper than about 300 ft-bgs. The pumping test ended on October 6, 2004 due to increasing pH levels in CH-15B {Note: CH-1B was also planned to pump during the test, but high pH levels at this well precluded pumping}.

The primary objective of this test was to transition the deformation of aquifer-system sediments from elastic compression to inelastic compaction. The data collected during this test indicate that this objective was achieved, but confirmation is pending until the water level recovery is complete. If so, the test provided "threshold" piezometric heads at the extensometer location that should not be approached in the future if permanent (inelastic) compaction within the

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aquifer-system is to be avoided. This is a key parameter required for estimating the maximum elastic storage capacity of the confined aquifer system.

Other objectives of the stress test were to (1) estimate key aquifer-system parameters that could be used in later modeling efforts, (2) confirm and elucidate the existence of a groundwater barrier within the sediments below about 300 ft-bgs, and (3) provide data for a possible injection test at CH-1B.

BACK-GROUND

Deep piezometer rehabilitation. During the summer drawdown in the 2003 it became evident that some degree of intercommunication was developing among the piezometers in the deep cluster (PB) at Ayala Park, and that the deepest piezometer, PB-1, and perhaps others, were also intermittently communicating with the much higher heads in the shallow aquifer system. The leakage apparently was occurring through faulty joints in the two-inch PVC casings, although actual breaks in the casings may also exist. Evidence suggests that many of the problems may have resulted from defects in the casing of PB-1 that allowed leakage directly into the gravel envelopes around the screened intervals of shallower piezometers. To the extent that this is true, repair of PB-1 could solve most of the problems.

Rehabilitation of the PB piezometers was conducted during June/July 2004, using a "well-in-a-well" construction technique. This involved filling the screened interval (5 to 20 ft) of the piezometer casing with coarse, highly permeable sand, which is then topped with about 10 ft of graded medium to very fine sand and silt to form a filter cap of very low permeability. A 1-inch inner pipe, the well within the well, is jetted through the filter cap in an attempt to communicate with the original gravel envelope and surrounding formation. Before final jetting down into position, the inner pipe, temporarily set about 20 ft above the screen, allows water standing in the 2-inch casing to be displaced to the surface while a sealing bentonite grout was pumped down the annulus between the 2-inch casing and the inner pipe.

This technique was tested and refined by experimenting in PB-6, the shallowest of the deep piezometer cluster. Based on the results at PB-6, Watermaster attempted to rehabilitate PB-1 using similar methodologies.

THIS PERIOD

Preliminary evaluation of piezometric data from all piezometers in PB indicates that the rehabilitation procedures were at least partially successful. In particular, PB-2 and PB-4 appear so far to be producing reasonable and accurate data. A comprehensive analysis of the rehabilitation results at PB will commence at the end of the current drawdown season October 2004. Further rehabilitation, if needed, will be recommended at the conclusion of the analysis, along with a detailed description of rehabilitation procedures.

BACK-GROUND

InSAR. The objective of this task is to characterize ground surface deformation in Chino Basin using Synthetic Aperture Radar Interferometry (InSAR). This analysis will be performed for a historical period (1992-2003) and on an on-going basis thereafter. The advantage of InSAR is that it provides a continuous representation of land surface deformation. These data are 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.



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 time history of subsidence in MZ-1.

THIS PERIOD

Vexcel submitted a cost estimate of \$200,000 to complete the comprehensive analysis of all historical synthetic aperture radar data (1992-2003) to characterize in detail the time history of subsidence in MZ-1. Watermaster budgeted the above amount for InSAR analysis in its fiscal year 2004/05 budget. A contract was executed between Watermaster and Vexcel to complete the work by the first quarter of calendar 2005. Part of the contract includes the presentation of the analysis results by Vexcel staff to the MZ-1 Technical Committee in March 2005.

BACK GROUND

Benchmark Surveys. The Interim Monitoring Program (IMP) work plan called for the deep extensometer, 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 is begun 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 work to obtain current elevations. These comprehensive surveys are planned to be repeated annually during spring season of highest regional water levels.

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, the IMP work plan calls for the semiannual measuring of both vertical and horizontal displacements. These horizontal and vertical displacements are expected to define 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 repeated semi-annually during the late spring and early fall periods of highest and lowest water levels – in an attempt to monitor fissure movement that may be associated with elastic and/or inelastic aquifer deformation.

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 to date were presented to the MZ-1 Technical Committee at its July 21, 2004 meeting. Also at this meeting, the project manager from AE made a presentation to describe survey methodologies, accuracy, results, and challenges, as well as answered questions.



The vertical displacement at monuments that occurred from April 2003 to April 2004 was presented. Comparing monument elevations over the April to April time period should reveal the inelastic component of compaction, if any, that 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 the aquifer system deformation. Water levels measured as part of the IMP (in the vicinity of Ayala Park) support this assumption. The monuments near Ayala Park showed little to no subsidence over this time period. However, the monuments located in the northern portions of the surveyed area consistently showed 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 possible to classify the nature of the subsidence in this region (*i.e.* elastic vs inelastic).

Subsidence that occurred in MZ-1 over the October 1993 to December 1995 period was measured by InSAR, and was presented in the Initial State of the Basin Report (2002). This subsidence has largely been interpreted as permanent subsidence caused by inelastic aquifer system compaction. If so, the survey data are indicating that the distribution of inelastic compaction in 2003-04 is significantly different compared to that of the early 1990's. In particular, maximum 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 subsidence, if any, in this same area.

The horizontal displacements at monuments of the Ayala Park Array that occurred from April 2003 to November 2003 and November 2003 to April 2004, respectively were determined through distance measurements between adjacent monuments, and are based on the assumption that the southeastern monument was stable over the period of measurement. The measurements indicate the elastic nature of the land surface displacement over the course of the pumping and recovery seasons, as well as the apparent presence of a groundwater barrier within the deep aquifer system.

Groundwater production and water level data show that pumping of wells located west of the fissure zone and 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, a 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, 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. 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. The horizontal movements of benchmarks in the vicinity of the fissure zone merit further monitoring using the same surveying methods for at least one additional year. The next survey of the Ayala Park array of monuments is planned for April 2005.

Aquifer-System Modeling. The objectives of aquifer-system modeling in MZ-1 are:

- To evaluate fluid withdrawal as the mechanism of historical land subsidence (historical analysis)
- To predict the effects of potential basin management practices on groundwater levels and land subsidence (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 and 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 Extensometer facility. The 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 (below).
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 serve as a forensic and forecasting tool for MZ-1.

Development of Long-Term Management Plan. 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 key to the development and evaluation of this plan.

The OBMP implementation plan called for the development of the long-term management plan for MZ-1 by June 2005. Because the modeling efforts will not be completed by June 2005, the long-term management plan will not be completed by June 2005. The Special Referee has



been notified, and has indicated that the IMP progress and current activities are sufficient to warrant a delay in the development of the long-term management plan for MZ-1. A workshop will be scheduled for the second quarter of 2005 to update the Special Referee on IMP progress.

Well Construction, Abandonment, and Destruction Monitoring

BACK-
GROUND

Watermaster staff monitors the condition of wells on a regular basis. Wells that may be improperly abandoned/destroyed are reported to Riverside and San Bernardino Counties as they are discovered.

Watermaster staff inspected 150 suspect wells during a 2002-03 field inspection and determined that 113 of these wells were properly abandoned and 37 wells will require some modification to meet the standard for a properly abandoned well. A well repair/abandonment program was prepared and approved by Watermaster. Watermaster continues to develop a wellhead protection program and makes recommendations on closure of abandoned wells. Ongoing land development will require continued well abandonment activity by Watermaster.

**PROGRAM ELEMENT 2 –
DEVELOP AND IMPLEMENT COMPREHENSIVE RECHARGE PROGRAM**

A centerpiece of the OBMP is enhancement of the Basin recharge capacity, so that high quality storm water and available recycled water can be retained in the Basin.

Recharge Facilities Improvement Project (Seven Bid Packages)

Bid Package No. 1—Reconfiguration of Banana, College Heights, Lower Day, RP3 and Turner Basins

COMPLETED

Bid Package No. 1, which included major earthwork at Banana, College Heights, Lower Day, RP-3, and Turner Basins, was awarded to LTE Excavating on March 24, 2003. Work was scheduled for completion by November 15, 2003, but was delayed while awaiting delivery of sluice gates and their actuator assemblies. These items were received and installed; and the bid package was accepted on May 12, 2004

Bid Package No. 2 – Basin Improvements (3 ea), Drop Inlets (3 ea), and Rubber Dams (4 ea)

COMPLETED

Bid Package No. 2 consisted of construction of the drop inlet structures for Brooks Street Basin, Turner Basin; and Victoria Basin; rubber dams for College Heights/Upland Basins, Turner No.1 Basin, Lower Day Basin, and RP-3 Basin; and various improvements at Declerz Basin, Ely Basins, and 8th Street Basins. This package was awarded to Banshee Construction with work beginning on July 16, 2003. Work on this contract was scheduled to be completed by March 15, 2004; however, rain delays slowed completion of excavation and soil cement berms. All the work on this bid package was accepted on August 18, 2004.

Bid Package No. 3 – Jurupa Basin to RP-3 Force Main

THIS
PERIOD



Bid Package No. 3 involves construction of approximately 11,000 linear feet of 36-inch CML&C force main between Jurupa Basin and RP-3 Basin. The force main will be used to convey storm water, imported water, and recycled water between the pump station at Jurupa Basin and the RP-3 Basins. This package was awarded to W. A. Rasic Construction Company with work beginning on August 6, 2003. The contractor has completed 99% of the work, rendering the project "substantially complete" on November 30, 2004.

Bid Package No. 4 – Jurupa Basin to RP-3 Pump Station

THIS PERIOD

Bid Package No. 4 consists of construction of the Jurupa Pump Station, 100 feet of 48-inch pipeline, and 400 feet of 36 inch, CML&C steel force main. The package was awarded to LT Engineering with work beginning on February 19, 2004. The contractor has completed 85% of the work, with "substantial completion" estimated by February 1, 2005.

Bid Package No. 5 – SCADA System

THIS PERIOD

This bid package includes the SCADA system and electrical improvements at all the basins. The 100 % design was submitted, reviewed, and sent out for bid in January 2004. The package was awarded to Denboer Engineering with construction beginning in March 2004. The contractor is now 90% complete, with substantial completion in February 2005

Bid Package No. 6 – MWD Turnouts

THIS PERIOD

This bid package covers the construction of three new MWD turnouts: CB-11TB and CB-15T on the Rialto Pipeline, and CB-18T on the Etiwanda Intertie near San Sevaine Channel. This package was awarded to Griffith Construction with work beginning on February 4, 2004. The contractor is now 95% completion, with substantial completion in January 2005.

Bid Package No. 7 – Priority, Funding and Scope of Misc. Projects

THIS PERIOD

This bid package will complete miscellaneous projects not included in the previous bid packages. Among the projects included in this bid package are:

- Habitat Mitigation Area at RP-3
- Upland Basin Improvements
- Victoria Basin Improvements
- Hickory Rubber Dam, Pump Station and Force Main
- Grove Basin SCADA Improvements

This package was bid and awarded to Brutoco Engineering & Construction on July 21, 2004. The construction was estimated to take five months, but rain delays have extended the project 60 days. The package should be "substantially complete" in February 2005.

THIS PERIOD

Groundwater Recharge Coordinating Committee (GRCC)



The GRCC meets monthly to monitor and coordinate the Recharge Facilities Improvement Project, focusing on design issues, construction management, and operations manuals. Watermaster's FY2004-05 budget provides \$413,000 for current operation and maintenance activities.

In addition to design review, the GRCC has prepared draft operations procedures for all the recharge basins, as well as obtained regulatory agency approvals and permits.

Watermaster has been performing "demonstration" recharge of imported and storm water in the basins as they are completed. These demonstration project have been valuable in pointing out shortcomings in the design and construction of the recharge facilities. During this quarter, Watermaster captured 4,600 AF of "new yield" stormwater in the completed basins.

**PROGRAM ELEMENT 3 –
DEVELOP AND IMPLEMENT WATER SUPPLY PLAN FOR THE IMPAIRED AREAS OF THE
BASIN; AND**

**PROGRAM ELEMENT 5 –
DEVELOP AND IMPLEMENT REGIONAL SUPPLEMENTAL WATER PROGRAM**

These program elements focus on the shift of production in the southern end of the Basin away from agricultural uses and toward urban uses. Without the OBMP, this land use conversion would result in a decrease in production in the southern end of the Basin, ultimately leading to rising water levels. If groundwater levels in the southern end of the Basin rise too high, then water may "spill" out of the Basin into the Santa Ana River. Such uncontrolled spillage caps the overall Safe Yield of the Basin. The Basin can be managed to avoid this possibility.

Directly tied to the threat of rising water levels in the southern area is the diminished desire of appropriators to pump water because of impaired water quality. The ability to balance the loss of agricultural production with increased appropriative production is inhibited because of these water quality concerns. Greater appropriative production in this area therefore requires water treatment, an issue addressed through the construction of desalter facilities.

The Chino I/II Desalters

The Chino I Desalter was originally constructed by SAWPA to provide 8.1 million gallons per day (MGD) of product water using reverse osmosis treatment. The project also included extraction wells, raw water pipeline, and product water pipelines and pump stations.

BACK-
GROUND

Chino I Expansion/Chino II Desalter. This expansion includes the construction of an additional 4.9 MGD of parallel treatment capacity (nitrate removal via ion exchange) at Chino I and 10 MGD of similar ion exchange at the Chino II Desalter. A construction contract was signed and construction is underway with completion scheduled for December 2005. Watermaster staff reviewed the proposed well construction for the new wells for Desalter II and determined that the location and construction were consistent with the OBMP Implementation Plan

THIS
PERIOD



Chino I Desalter Other Improvements. Other facilities either under design or construction include three new extraction wells (construction completed), a raw water pipeline (construction completed), a Chino Hills pump station (construction 75% complete) and product water pipeline (construction 95% completed), and a volatile organic compound (VOC) treatment system (construction 70% completed) ahead of the ion exchange treatment (construction 46% complete).

Chino II Desalter Other Improvements. Other facilities either under design or construction include eight new extraction wells (six under construction, two wells completed), three raw water pipeline packages (one in early construction, one in design, one in bid), two product water pipelines (one completed construction, one completed design), and site improvements (construction 87% completed)

All the projects underway to expand the Chino I/II Desalters should be completed by December 2005. Application has been made for Prop. 50 funds (\$1,600,000) to add 8 mgd of ion exchange capacity to the Chino II Desalter.

**PROGRAM ELEMENT 4 – DEVELOP AND IMPLEMENT COMPREHENSIVE
GROUNDWATER MANAGEMENT PLAN FOR MANAGEMENT ZONE 1**

Program Element 4 details the steps undertaken by Watermaster to reduce or abate subsidence and fissuring in Management Zone 1.

The MZ1 Technical Committee Meeting – December 8, 2004. Committee representatives were informed of the status of the various efforts to implement the monitoring program (see Land Surface Monitoring of Program Element 1). The meeting focused on the pumping test results, the Associated Engineers (AE) semi annual survey of the Ayala Park Array of benchmarks, the progress on the Vexcel InSAR studies, and the analysis of piezometric and extensometer data.

Voluntary Forbearance. The City of Chino and the City of Chino Hills submitted certifications documenting their respective voluntary participation in forbearance of groundwater production. Through the end of December 2004, the City of Chino submitted documentation of pumping reductions of 695.1 acre-feet toward its forbearance goal of 1,500 acre-feet for 2004/2005. The City of Chino Hills submitted documentation of forbearance of 500 acre-feet through December 2004.

Agency	Forbearance through December 2004	Forbearance Goal 2004/2005
City Of Chino	695.1 acre-feet	1,500 acre-feet
City Of Chino Hills	500.0 acre-feet	1,500 acre-feet



Pending Legal Actions Regarding Subsidence. In its October 17, 2002 Order, the Court ordered Watermaster to keep the Court apprised of any legal actions that could question the Court's jurisdiction over subsidence. Watermaster is not aware at this time of any such actions. The hearing regarding the City of Chino's Paragraph 15 Motion concerning subsidence was continued by the court until September, 2005.

**PROGRAM ELEMENT 6 –
DEVELOP AND IMPLEMENT COOPERATIVE PROGRAMS WITH THE REGIONAL WATER
QUALITY CONTROL BOARD, SANTA ANA REGION (REGIONAL BOARD) AND OTHER
AGENCIES TO IMPROVE BASIN MANAGEMENT; AND**

**PROGRAM ELEMENT 7 –
DEVELOP AND IMPLEMENT SALT MANAGEMENT PROGRAM**

The "water quality committee" as envisioned in the OBMP Implementation Plan has been formally constituted. Since the development of the OBMP, Watermaster has worked closely with the Regional Water Quality Control Board, the Department of Toxic Substances Control, and others to define water quality challenges and to refine the water quality management criteria in the Chino Basin. Watermaster continues to review water quality conditions in the Basin and to consider future water quality management activities beyond the Chino Basin desalting program.

BACK-
GROUND

Water Quality Management. In response to the results of RWQCB and Watermaster's groundwater quality monitoring programs (Program Element 1) Watermaster has refined its water quality monitoring to focus on the following key areas:

- Watermaster is identifying and characterizing water quality anomalies, such as the VOC anomaly south of the Ontario International Airport (OIA). Status Reports on each of the anomalies were developed by Watermaster and were presented to the Water Quality Committee for their review.
- Watermaster staff receives and reviews all reports that are produced by dischargers that are conducting investigations under order by the RWQCB and the Department of Toxic Substances Control (DTSC).
- Watermaster staff assisted the RWQCB with research, monitoring, and the crafting of investigative, and cleanup and abatement orders for potential dischargers involved with the OIA.
- Watermaster staff continues to participate in the process of developing TMDLs for Reach 3 of the Santa Ana River and other water bodies in the lower Chino Basin. No progress has been made during the last quarter because of the State budget crisis and staffing issues at the RWQCB.

Water Quality Committee

BACK-
GROUND

Watermaster staff and consultants continue to update our understanding of the contaminants of concern in the various plumes, and the extent of their migration and remediation. In addition, Wildermuth Environmental continued their analysis of the environmental records search performed by EDR. This consisted of a query of state and federal databases of known users



and dischargers of potentially hazardous chemicals. Watermaster is analyzing the relationship of potential sources of perchlorate with down gradient impacted production wells. On March 30, 2004, Black & Veatch delivered their "Draft Technical Memorandum –Treatment Technology Review" which analyses current and emerging treatment technologies for specific contaminants of concern in the Chino Basin; including nitrates, perchlorate, arsenic, and specific VOCs.

With respect to the VOC plume at OIA, Wildermuth Environmental completed their data gathering effort at the RWQCB and prepared five draft Letters of Notification/Cleanup and Abatement Orders for review by the RWQCB prior to their mailing to identified potential dischargers. At the Chino Airport VOC plume, Watermaster obtained permission from private well owners to release VOC water quality data to the RWQCB. Tetra Tech, a consulting engineering firm performing quarterly groundwater monitoring of the VOC plume immediately southwest of the airport property in turn obtained these data from the RWQCB to assist in their efforts to model plume movement.

Tetra Tech is under contract to the County of San Bernardino, Department of Architecture and Engineering, the owner and operator of Chino Airport, and is attempting to determine the sources of the VOC plume. Tetra Tech is currently negotiating to install five additional groundwater monitoring wells, and to perform additional soil gas surveys, in order to locate the VOC sources. Watermaster's water level and water quality monitoring programs over the last several years have resulted in a robust database that is being used by Watermaster and other stakeholders in the basin to help answer these kinds of questions.

With respect to perchlorate in MZ-3, a number of wells in the Fontana area of Chino Basin have been impacted and shut down because of relatively low levels of perchlorate (but above the State Action Level of 6 µg/l). Some parties in the basin believe that significant perchlorate sources near the Mid-Valley Landfill (Goodrich, Aerojet, Quickset, Emhart Industries, Denova Environmental, Pyro Spectacular, Rialto Ammunition Storage Point, et al.) in the Rialto-Colton basin may also be sources of perchlorate in Chino Basin. The proposed transport pathway is leakage across the Rialto-Colton Fault. Members of the WQC proposed that Watermaster perform a hydrogeologic investigation of that area to better understand cross basin transport. The investigation may be prohibitively expensive, given the complexity of the fault system and aquifer heterogeneity.

In a related study, the RWQCB has done an extensive historical perchlorate usage literature review and has produced a sizable volume of circumstantial evidence that large quantities of Chilean fertilizer may have been used for citrus in the Fontana area.

Neil Sturchio, Professor and Head of the Earth and Environmental Sciences at the University of Illinois at Chicago, has developed a technique for using stable isotope ratios of oxygen and chloride to distinguish the origin of perchlorate (man-made or Chilean fertilizer). Natural perchlorate carries a unique ¹⁸O and ³⁷Cl signature – very robust parameters that can be used to distinguish between man-made and natural sources of perchlorate. Professor Sturchio has tested several samples of leachate from fertilizer nitrogen (from the Atacama Desert in Chile) and rocket fuel sources. One of the innovations that Professor Sturchio has developed is the use of a flow-through column with an bifunctional anion-exchange resin. This is required to concentrate the typically low levels of perchlorate in groundwater so that the perchlorate can be analyzed isotopically.

Watermaster intends to utilize this isotopic perchlorate analysis to determine if source of the perchlorate in groundwater MZ-3 is anthropogenic or from Chilean fertilizer.

TO
CONT



Watermaster and Regional Board Propose TDS and Nitrogen Objectives to Promote Maximum Benefit of Waters Available to the Chino Basin

BACK-
GROUND

Watermaster staff worked with the Total Dissolved Solids (TDS)/ Nitrogen (N) Task Force to revise the sub-basin boundaries, and the TDS and N objectives for the Chino Basin to promote maximum beneficial use of waters in the Basin (as opposed to the Regional Board's current, more rigid anti-degradation based objectives). The maximum beneficial use approach will increase water supplies and lower costs over time while meeting water quality requirements. In December 2002, Watermaster proposed specific water-quality management zone boundaries, and N and TDS objectives for the Chino Basin to the RWQCB. The TDS/N Task Force and the RWQCB incorporated Watermaster recommendations in the TDS/N Basin Plan Amendment dated November 21, 2003.

The Basin Plan Amendment incorporating the sub-basin boundaries and maximum beneficial use concept was adopted by the RWQCB on January 24, 2004 (RWQCB Basin Plan Amendment, and Attachment to Resolution No. R8-2004-001). Watermaster staff immediately developed and submitted surface water and groundwater monitoring programs to the RWQCB on February 21, 2004. These monitoring programs measure the progress of CBWM and IEUA in achieving the "maximum benefit" goal for TDS/N in the Chino and Cucamonga Basins. The Basin Plan amendment was reviewed and approved by the State Water Resources Control Board (SWRCB) on September 8, 2004. It is currently under review by the Office of Administrative Law (OAL) and U.S. Environmental Protection Agency (USEPA).

BACK-
GROUND

Cooperative Effort to Determine State of Hydraulic Control. One remaining issue regarding the Basin Plan changes was to develop a monitoring plan to evaluate the state of hydraulic control in the southern end of the Basin. Hydraulic control is one tool that can be used to maximize the safe yield of the Basin. Watermaster staff developed a monitoring program for OBMP purposes and described this effort in the Initial State of the Basin Report (October 2002). The execution of this monitoring program is included in Program Element 1. Watermaster and IEUA have collaborated with OCWD and the RWQCB to select existing wells and to site nine new multi-piezometer wells that will be used to monitor and assess the state of hydraulic control.

In addition to being a core element of the OBMP, hydraulic control is a requirement of the Basin Plan Amendment. Watermaster, OCWD, and RWQCB staffs developed a conceptual monitoring program in June 2003 to assess the state of hydraulic control and to provide information to Watermaster to manage future production and recharge. The final work plan for the Hydraulic Control Monitoring Program was completed in May 2004, and implementation is now occurring. This program will change over time as new information is developed and will last for several years. The coordination and review of the hydraulic control monitoring data and the development of management programs to maintain hydraulic control have been added to Program Elements 6 and 7.

Watermaster, IEUA, OCWD, and the Regional Board have agreed to construct nine new monitoring wells as part of the piezometric monitoring element of the HCMP. These monitoring wells are necessary because existing well locations and well construction are not sufficient to measure the extent of hydraulic control in the vicinity of the Desalter well fields and because of the loss of monitoring use of agricultural wells as these wells are destroyed in the land



conversion from agricultural to urban uses. These new wells will document the creation of a regional depression in the piezometric surface, for both the shallow and deep aquifer systems, as a result of Desalter pumping. These wells are being installed during fiscal year 2004/05.

Funding for the construction of the nine monitoring wells will come from Watermaster, IEUA, and other sources. These other sources include \$250,000 from the Local Groundwater Assistance Fund, sponsored by the California Department of Water Resources (DWR) and about \$400,000 from the U.S. Bureau of Reclamation (USBR). The DWR funding will support the construction of two of the nine piezometric monitoring wells; the USBR funding will support construction of three of the nine piezometric monitoring wells.

THIS PERIOD

The following tasks were performed during September-December 2004 for the nine HCMP wells:

- Completed site acquisition efforts
- IEUA and USBR awarded separate contracts to drilling contractor
- Completed drilling, installation, and development on MW-2/-5/-8/-9

TO COME

The following tasks are projected to be performed during January-March 2005 for the 9 HCMP wells:

- Complete drilling, installation, and development on MW-1/-3/-4/-6/-7
- Complete well heads on all wells (in coordination with property owners who are currently developing the land)
- Equip wells with water level transducers

Salt Budget Tool To Establish TDS Objectives

COMPLETED

Watermaster has developed a salt budget tool to estimate the current and future salt loads to the Basin and the salt benefits of the OBMP. This tool was used to establish TDS objectives for the northern part of the Basin based on maximum beneficial use of water available to the region. These projections were based on the water supply plan in the Implementation Plan and include alternative recycled water and State Project water recharge scenarios. Watermaster consultants prepared a letter report (February 20, 2004) describing the salt budget and the Chino Basin Maximum Benefit Commitment. The commitments require Watermaster and IEUA to take specific actions triggered by ambient water quality and other time-certain conditions. An implementation schedule is specified, with the RWQCB responsible for overseeing compliance.

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PROGRAM ELEMENT 8 – DEVELOP AND IMPLEMENT GROUNDWATER STORAGE MANAGEMENT PROGRAM; AND



PROGRAM ELEMENT 9 – DEVELOP AND IMPLEMENT STORAGE AND RECOVERY PROGRAM

This section summarizes the work accomplished to date and the work planned over the next few months for the Chino Basin Dry Year Yield (DYY) and Storage and Recovery Programs. The DYY Program is a conjunctive use program between the Metropolitan Water District of Southern California (MWDSC) and several Basin appropriators, which would develop a maximum of 100,000 acre-feet of storage. These Programs also explore the potential for using up to 500,000 acre-feet of storage capacity.

BACK-
GROUND

Completed Preliminary Design Report. The first draft of the DYY Preliminary Design Report was completed in July 2003 and submitted to Watermaster. The DYY Program documentation is organized into four volumes: Volumes I and II, prepared by Black & Veatch, comprise the Preliminary Design Report (PDR). Volume I describes the background information and design objectives of the Program, while Volume II describes the facilities to be designed to help the agencies meet their shift obligation. Volume III presents the groundwater modeling report developed by Wildermuth Environmental, Inc., and Volume IV contains the CEQA Findings of Consistency environmental documentation prepared by Tom Dodson and Associates.

ON
GOING

DYY Shift Obligation. Participants in the DYY Program will be required to reduce (shift) their imported water usage by a predetermined amount during a dry year. Each participating agency will have a specific shift obligation that, when added together, will provide MWDSC with 33,000 acre-feet of dry year yield. The shift obligations were determined through meetings and correspondence among IEUA, Watermaster, Black & Veatch, and representatives from each participating agency.

The eight participating agencies are as follows:

• City of Chino	• Monte Vista Water District (MVWD)
• City of Chino Hills	• City of Ontario
• Cucamonga Valley Water District (CVWD)	• City of Pomona
• Jurupa Community Services District (JCSD)	• City of Upland

Facility Requirements and Site Selection. A preliminary screening of potential sites identified the most feasible locations for the DYY Program facilities. The information was presented to the agencies and a final selection was made. The Program facilities consist of five new ion exchange (IX) facilities, expansion of two existing IX facilities, construction of seven new non-water quality impaired wells, and two new perchlorate wellhead treatment facilities. The new wellhead IX facilities would contribute approximately 18,000 acre-feet of dry year yield, while the new well facilities would contribute approximately 15,000 acre-feet of additional yield. The total capital cost for the facilities is estimated to be \$38 million. MWDSC will contribute approximately \$27 million. The Groundwater Storage Program Funding Agreement between MWDSC, IEUA, Three Valleys Municipal Water District (TVMWD), and Watermaster was signed in July 2003.



ON
GOING

Design of PDR Facilities. While some of the designs for the facilities outlined in the PDR are underway (Upland IX design completed, MVWD ASR well design completed, Pomona JCSD Teagarden IX expansion design underway); others such as the IX designs for Chino, Chino Hills, Ontario, and CVWD have yet to be started. These later designs should be completed in 2006.

BACK-
GROUND

Final Approval of DYY Storage Account. Pursuant to Article X of Watermaster's Rules and Regulations, IEUA submitted an Application to enter into a Storage and Recovery Program Storage Agreement. This Application was approved unanimously by all Pools and received unanimous approval from the Advisory Committee and Board on October 23, 2003. Watermaster and IEUA developed a storage agreement pursuant to the Application and processed that agreement through the Watermaster approval process in March 2004. The agreement was submitted to the Court for approval. Prior to Court approval, MWDC is utilizing its existing Trust Storage Account with the intention of transferring its water stored in the Trust Account into the DYY account upon approval of the Storage Agreement.

BACK-
GROUND

Groundwater Modeling. The Chino Basin groundwater model was completed and the draft modeling report was submitted to Watermaster in July 2003. In addition to evaluating the effects of the DYY program on the Basin, the model was used to:

- Develop draft future replenishment and wet water recharge criteria based on requirements described in the Section 7.1b of the Watermaster Rules and Regulations regarding the balance of recharge and discharge. (See Wildermuth, Analysis of Supplemental Water Recharge Pursuant to the Peace Agreement. To be filed with the Court.)
- Evaluate the cumulative effects of transfers among the Parties as described in Section 9.3 of the Watermaster Rules and Regulations. (See Wildermuth, Evaluation of the Cumulative Effects of Transfers Pursuant to the Peace Agreement. To be filed with the Court.)
- Describe pumping patterns in Management Zone 1 that will not reduce piezometric levels below current conditions.

These management criteria were incorporated into the DYY program. The results of this work were presented to the Pool Committees, Advisory Committee, and the Watermaster Board in June and August 2003, and the final report was submitted in September 2003.

BACK-
GROUND

Engineering Review and Determination of the Operational Storage Requirement and Safe Storage. The Operational Storage Requirement was defined in the Peace Agreement as part of the storage in the Chino Basin "necessary to maintain the safe yield" of the Basin (Peace Agreement, Exhibit B – Implementation Plan, page 37). Safe storage is the maximum storage in the Basin that can occur without significant water quality and high groundwater related problems. The draft results of this work were presented to the Pool Committees, Advisory Committee, and the Watermaster Board in August 2003.

ON-
GOING

Other Uses of the Groundwater Model in the OBMP Implementation. The groundwater model is currently being used to investigate alternative management strategies including reduced storage in the eastern part of the basin, expanded storage and recovery programs, and



assessing hydraulic control with various appropriator proposed pumping alternatives in the southern Chino Basin. A draft report documenting the modeling effort and related investigations will be submitted to Watermaster during the next reporting period.

CONCLUSION

THIS
PERIOD

This has been an active reporting period for Watermaster, with major activities on a number of issues:

- Construction on Bid Packages 3 is substantially complete, but construction on Bid Packages 4-7 are delayed approximately 60 days by winter rains. Demonstration projects for recharge in College Heights, Montclair, Brooks, Turner and Lower Day Basins were undertaken.
- The groundwater level and quality monitoring programs have been reorganized to better support new initiatives, such as MZ1, HCMP, Nitrogen Loss, and Desalter Expansion. Selected wells are being equipped with automatic measuring and recording devices to continually collect water level data at wells at frequent intervals. Field sampling and laboratory analyses used in FY 2003/04 have transitioned to the new monitoring program for FY 2004/2005.
- Construction of nine new HCMP monitoring wells has begun.
- Data from the Ayala Park Extensometer indicated that deformation within the aquifer system sediments has been primarily elastic compression and expansion during the 2004 pumping season. A pumping test in October 2004 is being evaluated to determine the limits of pumping the deep aquifer to provide elastic compression and expansion.
- Cleanup and Abatement Orders (CAOs) were prepared for five industrial firms which appear to have discharged volatile organic compounds from their activities at Ontario Airport. These orders are being completed by the RWQCB.



CHINO BASIN WATERMASTER

IV. INFORMATION

3. Newspaper Articles



Judge grants money for clean up of Army facility

12:10 AM PST on Tuesday, March 15, 2005

By CHRIS RICHARD / The Press-Enterprise

LOS ANGELES - A federal judge approved a consent decree Monday that grants San Bernardino officials \$69 million to clean up water contamination caused by an Army tent-cleaning facility during World War II.

San Bernardino will receive the money in about 90 days. The consent decree dictates how city officials will spend a one-time payout, which comes from a Justice Department fund used to pay legal claims against the government, over the next 50 years.

Judge Mariana R. Pfaelzer granted an approval after a 10-minute hearing in her Los Angeles courtroom, ending a decade of legal maneuvering.

"This has been a very long road," said Stacey Aldstadt, deputy general manager of San Bernardino's city water department, after the hearing. "We're just grateful to be here, although there's still a long road ahead."

Decades-Old Problem

The contamination dates from World War II, when the Army operated a tent-cleaning facility at Camp Ono, near what is now Cal State San Bernardino. Workers used the solvents tetrachloroethylene and trichloroethylene to clean tents and to oil roads. Health agencies have classified both substances as probable carcinogens.

The decree gives San Bernardino money to pay for and operate a water-cleaning system in the Bunker Hill basin, which lies beneath the city and provides water for hundreds of thousands of people. Later this month, city officials will dedicate the last portion of the system -- five new water-extraction wells along 13th and 14th streets on either side of Interstate 215.

Those pumps join six others that have been operating since 1998 east of the Shandin Hills. They draw contaminated water from the soil and pass it through filtration plants before the water enters city pipelines.

Protecting Interests

The consent decree removes legal and financial obstacles that could have kept attorneys wrangling for decades over how to clean up the mess.

But before it could be approved, neighboring water agencies and companies that pump from the aquifer had to be notified, and several have been maneuvering to protect their interests.

CLEANUP

A federal judge has approved a consent decree for a project to clean up San Bernardino's drinking water, contaminated by an Army camp during World War II.

What's Next: The U.S. Justice Department will hand over \$69 million within the next 90 days. The money will pay for water-cleaning wells and filtration plants that already have been built and to run the program for the next half-century.

One was Lockheed Martin, which has several extraction wells of its own in the area to remove perchlorate, a salt used in manufacturing rocket fuel, and trichloroethylene from drinking water. Company officials were concerned that the "management zone," an area where pumping is restricted under the consent decree, might include their wells.

The zone stretches from the city's northern border to Mill Street on the south, and from the San Jacinto earthquake fault on the west to Harrison Canyon on the east, said Bernie Kersey, general manager of the city water department. He said Lockheed Martin's wells are outside the area.

"We believe our concerns have been resolved," Gail Rymer, Lockheed Martin's director of environmental communications, said Monday. "There's no reason for us to pursue this further."

Robert Reiter, general manager of the San Bernardino Valley Municipal Water District, also said he was reassured.

Reiter's district oversees groundwater storage in a 325-square-mile area extending from Bloomington to Yucaipa. The district is responsible for pumping groundwater out of the Bunker Hill area if it rises too high.

Water has at times risen to within 10 feet of the ground's surface at the basin's southern end, posing a risk of soil liquefaction during an earthquake.

Reiter said his staff has met with Kersey several times, and he's confident that the district can continue to fulfill its mandate under the consent decree.

"We're pleased that everyone is working together," he said.

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Online at: http://www.pe.com/localnews/sanbernardino/stories/PE_News_Local_B_bhearing15.5810f.html

Inland Valley Daily Bulletin

Biggest crack in dam is its failure to satisfy thirst

Sunday, March 20, 2005 - After one of the wettest winters on record, one might expect the Seven Oaks Dam to be holding back an abundance of crystal pure water, ready to drink.

But the imposing dam spanning the Santa Ana River is showing its cracks. We're not just talking about the 30-foot section of concrete inside a dam tunnel that started eroding when the dam was tested earlier this month.

The most serious crack is in the logic of restricting the purpose of the \$460 million earthen dam. This is the fissure the U.S. Army Corps of Engineers and Congress have to answer for.

The 550-foot-high dam, to public dismay, fronts a vast expanse of coagulated mud and silt. None of it drinkable.

The wasted pool of contaminated water, some 43,000 acre-feet worth up to \$8 million if it were not corrupted, cannot even be used for irrigation. There is simply too much silt to treat, local water companies say. And it stands to taint the rest of the otherwise pristine snowmelt that will flow into the debris pool behind the dam.

Not that it should come as much of a surprise. After the monster flood of 1938 wreaked havoc in the river's floodplain, decades were spent debating what to do with the water flowing 75 miles from the mountains to the sea. The dam came to be built strictly for flood control.

Even though it would be in a region that desperately needs water.

Why would a dam built to protect millions ignore their thirst?

For years, area water districts and Rep. Jerry Lewis, R-Redlands, exhorted officials to consider water conservation as a primary function of the dam, but to no avail.

Lewis, who has been an ardent backer of the dam's capabilities for augmenting local water supplies, now asks how things could have gone so wrong.

Perhaps, as chairman of the House Appropriations Committee, he'll get some answers. Certainly, Congress should have realized the dual needs of flood prevention and water conservation before now.

The U.S. Army Corps of Engineers, which built the dam, now supports expanding its purpose to water conservation. The corps has asked Congress for

\$3.6 million to study the contamination problem.

It would be a costly proposition to alter the dam after the fact so that it could provide potable water. But surely the price tag in the long run would be less than that for importing an equivalent amount of

water from Northern California, year after year.

Something must be done. California, especially Southern California, doesn't have enough drinking water to let a potential supply this big get away.

As G. Louis Fletcher, former general manager of the San Bernardino Valley Municipal Water District, said years ago, "If we don't do it, we're going to look dumb."

And abysmally shortsighted. Every time water districts are forced to buy more water from up north, the additional cost is passed on to customers. It's a charge we don't want to end up paying.



Guck at dam taints water

REDLANDS: The city is asking the federal government \$3.6 million to find an answer.

07:24 AM PST on Friday, March 18, 2005

By ROBERTO HERNANDEZ / The Press-Enterprise

REDLANDS - Redlands officials say the Seven Oaks Dam is muddying up a major source of drinking water for the area and is asking the federal government to pay \$3.6 million for a solution.

"It's important to note that this wasn't anticipated by anybody but that doesn't mean the federal government isn't responsible for it. They are," Doug Headrick, Redlands' chief of water resources, said Thursday. "They built the dam and they are causing our water to be contaminated to the point where we can't use it."

The U.S. Army Corps of Engineers is aware of the problem and is working with local officials to study the contamination.

Redlands this week sought help from U.S. Rep. Jerry Lewis, R-Redlands, a congressman with a long track record of helping the city.

The problem, Headrick said, stems from the amount of sediment-filled water from recent rainstorms that has accumulated behind the dam. The water contains logs, clay, silt and other debris. Clean snowmelt is flowing into and mixing with the pooled sediment, Headrick said.

The city cannot treat the water and has turned to State Project Water, a more expensive source, Headrick said. Using state water has cost the city up to \$4,600 a day, he said.

MUDDIED WATERS

Redlands says sediment trapped behind the Seven Oaks Dam is contaminating clean snowmelt and making Santa Ana River water unusable.

The river provides up to 30 percent of city's water supply.

An alternate water source costs the city up to \$4,600 a day.

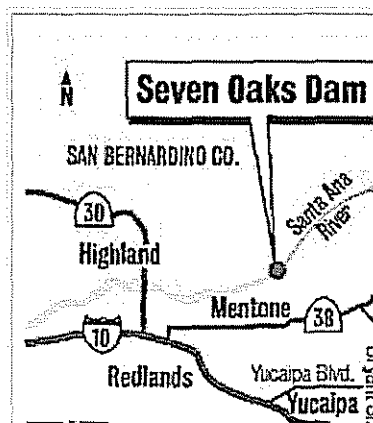
The city is seeking \$3.6 million in federal funds to study issue.

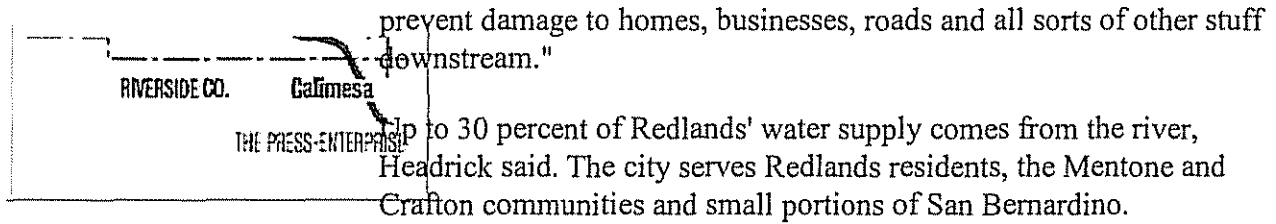
Areas affected include Redlands, Mentone, Crafton and part of San Bernardino.

The sediment normally would be released from the dam, allowing snowmelt to flow uncontaminated. But the corps has delayed major releases from the dam so that it can make repairs and accommodate work at Prado Dam in Corona, said Greg Fuderer, a Corps spokesman.

The Army Corps is sympathetic to the problem, he said.

"We're trying to take a look at what it is we can do to provide more clean, quality water to the people that need it," Fuderer said. "But we cannot let that negatively impact the purpose of the dam, which is to





Redlands officials this week authorized sending a letter to Lewis seeking help securing \$3.6 million to have the Army Corps study the water-quality issues. In the past, Lewis has secured money for the Redlands Bowl Mission Gable House, a fire station renovation and other projects.

Reach Roberto Hernandez at (909) 806-3060 or rhernandez@pe.com

Online at: http://www.pe.com/localnews/sanbernardino/stories/PE_News_Local_B_bwater18.5878f.html

Water battle back in court

Judges say county has rights to Colonies for flood control

By Edward Barrera
Staff Writer

UPLAND — The county never abandoned its original easement rights for flood control on the Colonies development, but twice as much acreage is now needed to accommodate runoff from the 20th Street storm drain, according to a tentative opinion issued by the state appellate court.

The decision, handed down by the 4th Appellate District court two weeks ago, overturns an earlier ruling that San Bernardino County's limited property rights to the 19th Street Basin were no longer in effect.

Colonies Partners, developers of the commercial and residential property in northeast Upland, sued the county's flood-control district three years ago, saying it had no legal rights to use the land to control water entering the property from the 20th Street storm drain.

"We reverse the judgment and remand for a limited purpose," the judges wrote. "The trial court must decide what is permitted for current flood control purposes under the original easements."

An easement is the right of a property owner to make use of land owned by another for a limited purpose, such as right of passage.

County officials declined to comment. Lorraine Le Clear, a Colonies spokeswoman, said the company was pleased with the tentative decision.

"It ratifies our basic argument that the county government took our property without providing just compensation," she said. "Having said that, we have been and are willing to again try to reach an out-of-court settlement with the county and put an end to the litigation that has already cost our company and the taxpayers of San Bernardino County millions of dollars."

Some 67 acres of Colonies property is used to route water from the storm drain, which collects water from parts of Upland and San Antonio Heights north of the 210 Freeway.

Runoff from the freeway is also

See COLONIES / page A6

and flood-control improvements, but also want the fair market value for the land needed for the necessary flood-control facilities. The cost of that land could reach \$200 million, according to a previous estimate by Colonies managing partner Jeff Burum.

The tentative opinion sends the case back to the trial court to decide how much land the flood-control district may use. The trial court also must decide if changes in surface acreage and underground storage capacity are infringing on the Colonies' property.

"The burden on the Colonies' property is far more significant than slight," the appellate judges wrote. No date has been set for a final hearing.

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

Colonies

continued from page A1

diverted to the property.

If the county had valid easements, it would have the right to use the property for flood control in any way it saw fit.

It's unclear how the ruling will affect a related lawsuit between the Colonies and the county.

The developers filed a lawsuit asking for damages caused by the storm drain on the property that is now called the Colonies at San Antonio, which is a master-planned community.

Company officials have said they not only want to recover the estimated \$25 million cost for the land

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Water

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district, the Monte Vista Water District, Fontana Water Co. and the San Antonio Water Co., has been trying to take advantage of the wet winter and heavy rains.

The district's catch basins can hold roughly 50 million gallons of rainwater. The captured water percolates down into underground aquifers and is pumped out by water providers.

"We have captured more water than we have in the last 25 years with these winter storms," said Inland Empire Utilities general manager Richard Atwater.

The wintry weather has another benefit: the snow that's still on the mountains.

"We love it when it snows," Chino Basin Watermaster CEO Ken Manning said.

As the snow melts, virtually all of the runoff can be captured in catch basins and spreading grounds across the valley, he said.

While most of Inland Empire Utilities' water comes from the underground aquifers, about 30 percent is imported. Imported water costs more. This season's rains could lessen the need for costlier imported water, and that could affect rates.

"Rates won't go down. They just won't go up as much," Atwater said.

Of course, an especially hot summer and a subsequently high water demand could work against the winter savings, he added.

The Metropolitan Water District, which supplies imported surface water from Northern

California and the Colorado River, imposed a 3 percent rate hike in January and plans another 3 percent increase next year, said Richard Hansen, general manager of Three Valleys Municipal Water District.

Three Valleys, one of the 26 agencies that make up the Metropolitan Water District, supplies wholesale water to Pomona, San Dimas, La Verne, Claremont, Glendora, Covina, West Covina, the Walnut Valley Water District and Rowland Heights.

Some of its cities, such as La Verne, rely heavily on MWD water, Hansen said. Walnut

and Rowland Heights rely completely on imported sources.

For cities with access to more groundwater, should that additional groundwater prove usable, water rate increases could be affected, Hansen said.

"They may not need to go up as rapidly," he said.

Still, others say the heavy rains will do little to make up for years of drought and shrink underground supplies.

"It will take awhile to impact the water levels in the wells," said Bernard Kersey, general manager for the city of San Bernardino's Municipal Water Department.

The valley could use another four or five years of winters like this one to bring its underground water levels up, said Robert DeLoach of Cucamonga Valley Water District.

With customers using substantially less water, water company revenues are down. However, that shouldn't in itself prompt the need for higher rates, because costs are down as well, DeLoach noted. "It kind of balances itself out."

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Rain cools water demand

Wet season could slow rate increases

By L.C. Greene
Staff Writer

With all the rain coming from the sky, less water has been coming out of Chuck and Patricia Hale's tap.

The Ontario couple has seen their water bill plummet to about half what it was a year ago.

"We didn't have to water anything," Chuck said. They also didn't have to keep refilling their swimming pool.

The Hales' latest monthly water bill, for mid-January to mid-February, was \$10.26 for 6,732 gallons of water.

For the same period last year, they used 14,212 gallons at a cost of \$20.15.

While an abundance of rain can reduce water usage in the short term, it can potentially affect water rates in the long term, depending on where you live.

The Inland Empire Utilities Agency, which provides water to Ontario, Upland, Montclair, Chino, Chino Hills, the Cucamonga Valley Water Dis-

FORECAST

- **Today:** Light rain, high of 56
- **Sunday:** 30 percent chance of showers, high of 60
- **Monday:** Slight chance of rain, high of 67
- **Tuesday:** 30 percent chance of rain, high of 67
- **Wednesday:** 30 percent chance of rain, high of 67

SOURCE: NATIONAL WEATHER SERVICE

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50-Year Renewal Project Planned for River

A \$626-million program will restore wildlife and habitat to the lower Colorado. But some conservationists call it mere window dressing.

By Bettina Boxall
Times Staff Writer

April 3, 2005

Interior Secretary Gale Norton will launch a half-century effort Monday to return native trees, fish and wildlife to a lower Colorado River system profoundly altered by man's thirst.

Environmental groups are skeptical, however, that the transformation can stick without fundamental changes in the river's flow.

By the time the mythic Colorado of Western imagination flows past the baking scrub and farmland of California's southeastern corner, it has been tamed and used many times over and is known more for its fatal speedboat accidents than for its natural splendor.

But the beleaguered native fish and wildlife of the lower Colorado will get help when Norton signs final documents adopting a 50-year, \$626-million program to offset some of the environmental damage done by dams and pumping that supply river water to millions of residents of Southern California, Nevada and Arizona.

About 8,130 acres of habitat will be created and maintained along portions of a 400-mile leg of the Colorado running from Lake Mead to the Mexican border.

Native endangered fish will be reared in hatcheries and ponds and then stocked in the river. Cottonwoods, willows and mesquite will be planted along the banks to provide migrating birds with nesting and feeding grounds. Backwater pools and marshes will be enhanced.

Federal officials and water managers say no other project in the West has attempted habitat improvements along so extensive a river course.

"It's a major, major accomplishment," said Dennis B. Underwood, who on Friday was promoted to chief executive officer and general manager of the Metropolitan Water District of Southern California, which is picking up \$88 million of the project's tab.

But conservationists condemn the effort, saying it is little more than extravagant window dressing that does nothing to restore the lower Colorado's shattered natural rhythms.

"It's certainly expensive, but I'm just not sure they're getting very good returns on their investment," said Jennifer Pitt of Environmental Defense. "Their intention is to raise native fish in a hatchery and every year dump them in the river with no expectation that they have done anything to make the river a viable habitat."

Glen Canyon and Hoover, the Colorado's two big dams, didn't just create huge reservoirs, they radically altered the river's character. Instead of a warm, muddy current that swung to extremes, flooding with snowmelt in the spring and shrinking to stream size in late summer, the Colorado runs steady, cold and clear, playing havoc with fish and plants that over millions of years had adapted to a turbulent environment.

Farmers chopped down the native cottonwood and willow groves to plant crops. Engineers forced the river into channels to make sure it behaved itself. Government agencies stocked the river with sport fish that feasted on the unglamorous native species.

All that has resulted in the collapse of native wildlife populations. The once abundant bonytail, humpback chub and razorback sucker fish are on the endangered species list. Only 5% of the lower river corridor's cottonwood-willow groves are left. The Southwestern willow flycatcher also is endangered, along with the Yuma clapper rail.

In 1997 the U.S. Fish and Wildlife Service ruled that the U.S. Bureau of Reclamation's dam and water diversion operations on the Colorado threatened the existence of the flycatcher, bonytail and sucker, requiring the bureau to take action to offset the environmental harm. That prompted development of the conservation plan Norton is to sign at a ceremony at Hoover Dam.

By improving habitat for 26 species, many of them birds, the program is designed to keep reclamation and regional water agencies from running afoul of environmental laws that could interfere with, or even shut down, their operations.

The federal government will pay half the \$626-million cost of the program, with water users in California, Nevada and Arizona paying the rest.

The price tag includes fish stocking, purchase of private land to convert to cottonwood groves and purchase of water to irrigate the groves. Without nature's floods, the trees will need watering, which will also create moist conditions favored by insects the birds can eat.

"It's kind of like the Disneyland version," complained Pitt.

Instead of creating habitat that has to be artificially maintained, Environmental Defense and other groups urged reclamation to modify its dam operations to periodically mimic nature, creating small controlled floods.

But water managers rejected that approach as impractical.

Federal biologists say wildlife will be better off under the program than under existing conditions.

"I think the [project] is going to establish this acreage of restored riparian habitat that isn't available today," said Sam Spiller, lower Colorado River coordinator for the U.S. Fish and Wildlife Service.

"It's going to increase the ability to move birds through the area successfully.... It's going to provide the capability to manage fish and release them. And that's more than is being done today,"

he added.

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CALIFORNIA

Behind Dam, a Property Battle

In a hot market, five landowners fight O.C. in its push for a Prado Dam basin expansion. The owners call the county's offers too low.

By Jean O. Pasco
Times Staff Writer

March 28, 2005

Southern California's sizzling real estate market has thrown into court the question of how much money five property owners should receive for land around Chino and Corona that flood control engineers say is critical to complete expansion of Prado Dam.

The Orange County Flood Control District needs the property because, with a higher dam, more land behind it would be inundated by floodwaters backing up behind the structure. Engineers say that, by raising the earthen dam 28 feet, to 594 feet, about 3,500 more acres would be covered by the reservoir in case of flooding on a scale expected only every 200 years.

The dam controls the flow of water from a sprawling Inland Empire watershed down the Santa Ana River through Orange County and to the ocean along Huntington Beach's southern border. Dam improvements costing \$422 million are needed, officials say, to protect Orange County from torrential rain that engineers refer to as a 200-year flood.

County officials and property owners were at loggerheads over sale of the land for nine months before the Orange County Board of Supervisors voted in January to condemn the properties under its powers of eminent domain, and attorneys for the county have sued the landowners to resolve how much the owners should be paid.

The five holdout families are among nearly three dozen property owners with whom the county has negotiated since 1993. Some 380 acres already have been purchased through voluntary sales of homes, small ranches and dairies in the reservoir area, at a cost of about \$40 million.

In a process to take several more years, officials seek 1,660 acres from 280 landowners, including those already purchased. Total land costs have been estimated at \$206 million, but that is expected to grow because of the market-value disputes. The county and the Army Corps of Engineers will share the cost, with the county hoping to get most of its share covered by the state.

The county has offered \$44 million for 275 acres owned by the five holdout property owners, but that doesn't approach the prices sought by the owners. In the biggest gap between buyer and seller,

the county offered \$1.83 million to the Koning family for 37.5 acres in Chino that the family said was worth \$10 million. The property includes two homes and a horse ranch.

The other three Chino properties are commercial dairies. The fifth, in Corona, is home to a paintball park. All of the owners have argued that their properties are worth far more than the county has offered, particularly given the area's transformation from dairy land to lucrative home sites, a process only recently begun and expected to take five years.

Some 10,000 homes are planned for an area rezoned residential and bordered by the Chino Valley Freeway, the Riverside Freeway and Norco. The rapidly rising real estate market and new residential zoning are expected to trigger a bidding war by developers in the next several years, and property owners expect to cash in.

Real estate broker Bernard Bidart, representing the Mendiondo dairy family, declined to comment Friday on his negotiations because of the litigation. Other landowners couldn't be reached for comment.

Longtime dairy owner Sybrand Vander Dussen is also a real estate broker negotiating on behalf of three of the five holdouts, and his property is in the next round of those sought by Orange County. He said county officials drove the issue into court by refusing to compete with market prices.

He said county appraisers offered \$213,000 an acre in August for one of the holdouts, also a dairy, only to more recently increase the appraisal to \$379,000 because of other recent sales. By comparison, an unrelated land sale in the area, expected to be \$487,000 an acre, is set to close in October, he said.

The holdout landowners, he said, would accept \$400,000 an acre from the county.

"The county has simply refused to negotiate beyond their offer," he said. "We're all willing to settle. We recognize the property is needed. We just want a fair price."

Because of the chasm between the county and property owners, supervisors want a judge to decide, said Bill Campbell, chairman of the Board of Supervisors. Court intervention may also speed the process, now 2 years old, and could be completed in 18 months — or not for three more years — depending on when the land can be bought.

"We were getting nowhere, and we need to keep this project on track," Campbell said.

"Now a judge will say what the law is, and there will be a [purchase amount]. No one wants to condemn property, but we felt this was best."

The land is where dikes and berms are needed to protect structures, including two state prisons, that can't be moved from rising waters, said Herb Nakasone, the county's director of public works. The plan for the dikes also helped the county cut the project cost by reducing the amount of land behind the dam that it needed to buy.

All five of the contested properties sit on land partially included within the dam's existing flood plain, Nakasone added, meaning that owners already are restricted in what they can put there. All of the properties would be under water after the dam was raised, in the event of a 200-year flood.

County attorneys say they are legally bound to pay prices comparable to those paid for similar

properties, and not what the land would be worth in a few years at the height of the new-home boom, as the property owners want. The county also cannot consider the value of options on some dairies, which are based on the maximum number of homes that would later be allowed on the land.

It also will take time to consolidate enough parcels to create master-planned housing tracts because there is no single, large-property owner. Instead, hundreds of lifelong farmers, most of them third-generation Dutch, Portuguese and Basque immigrant families, have considered, or are considering, selling because of the inevitable relocations of their dairies.

This is the third time the region's dairy farmers will be on the move because of creeping urbanization. After World War II, they were pushed out of Paramount and Bellflower by demand for housing. They moved to Cerritos, then called Dairy Valley, and to La Palma, known as the Dairyland. In the 1970s, they were then pushed into the Chino basin.

As the land fight continues, Nakasone said he is worried that the county will run out of money. The Board of Supervisors set aside \$75 million in 1994 — just before the county's disastrous bankruptcy — and has been hard-pressed to find more money since then. And even though the state agreed to cover 70% of the county's land costs, he said, the money has only trickled in. Officials have been warned not to expect additional repayments for at least two years.

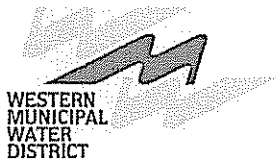
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FIVE EMPLOYEES SET THE PACE AT WESTERN MUNICIPAL WATER DISTRICT

RIVERSIDE, CA – March 4, 2005 - Western Municipal Water District recognized five outstanding employees with its PACE (Pride Achievement Creativity Enthusiasm) Award for the 2004 work year. The PACE Award provides formal recognition to individual employees who go above and beyond in the performance of his or her job duties demonstrating teamwork, professionalism and creativity while also contributing to the enhancement of Western's image.

Ed Acosta, Son Bui, Fernando Garcia, Scott McAnally and Jean Perry were chosen by their supervisors for the PACE Award.

Ed Acosta, a senior operations technician who is responsible for operations and maintenance of the Santa Ana Regional Interceptor (SARI) line for the District and the Santa Ana Watershed Project Authority, was chosen for dedication to his job. "This past year he has dedicated most Saturdays and some Sundays to maintain the integrity of the SARI system," says Western's operations superintendent John Shipley. Acosta joined Western in 1989 and has a Grade II in collection systems certification. He has been married for 34 years with three children and six grandchildren. He resides in San Jacinto.

An engineering technician for the District since 2002, **Son Bui** of Corona was honored for the creation of effective District publications and presentations. "Son works to present a professional, competent face to the public every day. He makes sure that the printed and electronic face the District presents to the public reflects a professional organization," says Western's public information officer Melodie Johnson. Bui attended Cerritos Junior College and the Joe Kubert School of Cartoon and Graphic Arts in New Jersey.

Fernando Garcia, a field service technician who joined Western in 2002, was selected for his efficiency and professionalism. "He has become so efficient at his work that his efforts often go unnoticed and taken for granted," says Western's operations assistant Superintendent Lonnie Clabaugh. Clabaugh explained that part of Garcia's responsibilities is maintaining the cleanliness of the Operation Center facilities. Garcia has been married for 20 years and has four children. He resides in Riverside.

Scott McAnally, an operations technician who joined Western in 2003, was recognized for his take-charge attitude and problem solving work at the Arlington Desalter, a water treatment plant that reclaims brackish groundwater. "While other technicians were unavailable, Scott handled the operational part of the plant single-handedly, working long hours and doing whatever it took to get the job done," says Clabaugh. Married with two children, McAnally received water treatment certification from Mt. San Jacinto College. He resides in Chino.

(more)



An accounting technician who joined Western in 2001, **Jean Perry** of Riverside was chosen for a variety of reasons. "Payroll is an exacting work by nature and Jean takes pride in getting it right...she has a 'can-do' attitude and makes everyone around her want to do a better job," says Western's chief financial officer Jeff Minkler. Perry's background includes customer service work for McDonnell Douglass, United Airlines and State Farm Insurance. She has been married for 25 years and has three children.

Western Municipal Water District provides water supply, wastewater disposal and water resource management to the public in a safe, reliable, environmentally-sensitive and financially-responsible manner.

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INLAND VALLEY

 SPECIAL EVENT
Inland Empire Auto Show

The Inland Empire Auto Show runs from noon to 9 p.m. today and runs through Sunday at Fairplex 4, 5, 6, 7, 8 and on Pepper and Sycamore streets, 1101 W. McKinley Ave., Pomona. Information: (909) 623-3111 or www.inlandempireautoshow.com.

Thursday, March 31, 2005

★★★★ A3

Hurdles await city manager

Robb Quincey is ready to take helm of Upland on Monday

By Edward Barrera
Staff Writer

UPLAND — Employee-contract negotiations, tussles about commercial development and overcoming reservations about how the last city manager left are just a few of the challenges facing Robb Quincey when he starts work Monday.

Quincey, hired March 16 as the top executive for Upland, said he plans to quickly learn more about the city's staff and the community, though, as a 12-year member of the Monte Vista Water District board, he is familiar with both.

"I want people to know these relationships are long term, not short term, and the best way I can do that is by meeting them,"



Quincey

since 2000, bolstered their belief that he would be the perfect candidate for Upland.

Quincey, who lives in Chino, helped turn around Hesperia's financial troubles, especially those of the fire district and water district, and leaves the city with a healthy general-fund forecast, officials said.

Quincey said. "It won't happen overnight."

City officials said Quincey's success in Hesperia, where he served as city manager

The 45-year-old also has more than 20 years' experience with water issues. He worked at the Inland Pacific Company and Yorba Linda Water District and was general manager at the Inland Empires Utilities Agency.

Since 1993, Quincey has been on the Monte Vista Water District board of directors and has been president since 1995.

City officials and Quincey agreed he would not have to step down from the board as long as he recuses himself from any item that would create a conflict of interest.

While he brings positive reviews from Hesperia, Quincey will leave the starting gate in Upland already facing some existing hurdles.

Contracts for city employees expired at the end of last year, and staff agreed to extend the previous agreements while officials negotiate a new contract.

In addition, while the city has

attempted to increase its sales-tax revenue by attracting commercial development, some of the locations and proposed retailers have residents outraged.

A proposal for a Wal-Mart Supercenter in northwest Upland died amid community outcry, and the city and developers are proposing new alternatives.

Quincey comes in more than a month after former City Manager G. Michael Milhiser resigned to accept a consultant agreement with the city.

Critics said the move was engineered by Mayor John Pomieriski after Milhiser clashed once too often with the council.

Councilman Ray Musser, who initially balked at hiring Quincey so quickly, said he was not only won over by the new city manager's personality but by his acumen in attracting funding from state and federal sources, pointing to the millions

of dollars Hesperia received.

"It's a multiprong and multi-year advocacy," Quincey said. "When you develop a project, define it for what it is and go out looking for federal and state appropriations to try to match the project with funding."

It's the breadth of his experience and education that set him apart from other candidates, said Councilman Tom Thomas.

Quincey has a doctorate in public administration from the University of La Verne. He also serves as an adjunct professor at the university.

Quincey said he realizes the city's success hinges on the relationship among community members, staff and the City Council.

"For me, it's about preserving the relationship between the council and the staff, and I would like to strengthen the relationship between the council and the community," he said.

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