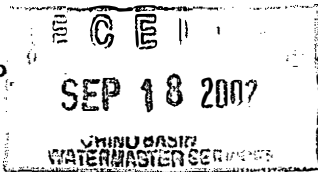


FEE EXEMPT



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6 SPECIAL REFEREE

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SUPERIOR COURT OF THE STATE OF CALIFORNIA

11

COUNTY OF SAN BERNARDINO, RANCHO CUCAMONGA DIVISION

12

11 CHINO BASIN MUNICIPAL WATER )  
12 DISTRICT, )

CASE NO. RCV 51010

13

Plaintiff, )

Judge: Honorable J. Michael Gunn

14

v. )

15

THE CITY OF CHINO, )

Date: Oct. 17, 2002

16

Defendants. )

Time: 1:30 p.m.

17

Dept: 8

18

19

20

SPECIAL REFEREE'S REPORT ON INTERIM PLAN WORKSHOP AND  
RECOMMENDATION CONCERNING SUBSIDENCE ISSUES

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DISTRICT, )

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15 THE CITY OF CHINO, )

16 Defendants. )

CASE NO. RCV 51010

Judge: Honorable J. Michael Gunn

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SUBSIDENCE ISSUES

Date: Oct. 17, 2002

Time: 1:30 p.m.

Dept: 8

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19 I.

20 INTRODUCTION

21 A workshop was held on August 29, 2002, "to present to the Court, through the Special  
22 Referee, the details of the Interim Plan." (Court Order Scheduling Workshop, etc., dated June 19,  
23 2002.)<sup>1</sup> The "Interim Plan"<sup>2</sup> is the "Watermaster Interim Plan for Management of Subsidence" for  
24 Management Zone 1 ("MZ1") in the Chino groundwater basin ("Chino Basin" or "Basin"), approved

25  
26 <sup>1</sup>All references to "Court" or "the Court" are to San Bernardino County Superior Court.

27 <sup>2</sup>Although the Interim Plan has been approved by each of the three Pool Committees, the  
28 Advisory Committee and the Board, the word "Proposed" remains in the document heading. For  
purposes of this Report, the word "Proposed" is not used in referring to the document.

1 by Watermaster,<sup>3</sup> on June 17, 2002. "The Interim Plan also includes various exhibits labeled "A"  
2 through "F." (Transmittal of Subsidence Interim Plan, etc., p. 1.) The scope of the workshop was  
3 limited to presenting: (1) a description of the subsidence problem, (2) an explanation of the details  
4 of the Interim Plan, including any constraints on the Interim Plan, and (3) a report on the  
5 implementation status of the Interim Plan. The presentation was made by Scott S. Slater of Hatch  
6 and Parent, Watermaster General Counsel, and Andy Malone of Wildermuth Environmental, Inc.,  
7 Watermaster Engineering Consultant. Following the presentation, Special Referee, Anne J.  
8 Schneider, and Technical Advisor, Joseph Scalmanini, posed questions related to the Interim Plan.  
9 In addition, the Cities of Chino and Chino Hills asked to be heard, and were permitted to ask  
10 questions and make statements relevant to the Interim Plan.

11 The Special Referee presents this report on the Interim Plan workshop which, pursuant to  
12 Court order, is to be filed and served no later than September 18, 2002. Comments or objections to  
13 this report are to be filed and served by September 30, 2002. Responses to objections are to be filed  
14 and served by October 10, 2002. Finally, any motion by Watermaster for a Court order instructing  
15 it to proceed in accordance with the Interim Plan must be filed and served by September 30, 2002.  
16 (Court Order Scheduling Workshop, etc., dated June 19, 2002.)

17 A Court hearing on the Interim Plan and this report is scheduled for October 17, 2002, at 1:30  
18 p.m. At the hearing the Court will determine whether to set a briefing schedule for the City of  
19 Chino's Motion under Paragraph 15 of the Judgment.<sup>4</sup>

## 20 II.

### 21 DISCUSSION

#### 22 A. Historical Perspective and Context of Interim Plan

23 To obtain a complete understanding of the Interim Plan, it is important to review the  
24

---

25 <sup>3</sup>All references to "Watermaster" are to the nine-member board serving as Chino Basin  
26 Watermaster, which was appointed for an interim term on February 19, 1998, and for a full five-year  
27 term on September 28, 2000.

28 <sup>4</sup> All references to "the Judgment" are to the 1978 Judgment in this action, including all  
amendments.

1 historical context of the plan, and how it came to be developed. The starting point is the Court's  
2 imposition of a Physical Solution and Watermaster's adoption of an Optimum Basin Management  
3 Program ("OBMP") for Chino Basin. It is also necessary to review the details of the OBMP Phase  
4 1 Report, including the goals of the OBMP and the OBMP Program Elements, which lead, in turn,  
5 to the adoption of the Interim Plan. Finally, it is necessary to review the Peace Agreement, the  
6 Implementation Plan, and Watermaster Rules and Regulations relevant to the Interim Plan.

7 **1. Chino Basin Adjudication and Adoption of OBMP**

8 **a. Chino Basin Adjudication**

9 The rights to produce and store water in Chino Basin were adjudicated by the Court in 1978,  
10 and a Physical Solution was imposed

11 to establish a legal and practical means for making the maximum reasonable  
12 beneficial use of the waters of Chino Basin by providing the optimum economic,  
13 long-term, conjunctive utilization of surface waters, ground waters and supplemental  
14 water, to meet the requirements of water users having rights in or dependent upon  
15 Chino Basin.

16 (Judgment, ¶ 39, p. 23, lns. 6-11.) It was foreseen to be

17 essential that this Physical Solution provide maximum flexibility and adaptability in  
18 order that Watermaster and the Court may be free to use existing and future  
19 technological, social, institutional and economic options, in order to maximize  
20 beneficial use of the waters of Chino Basin. To that end, the Court's retained  
21 jurisdiction will be utilized, where appropriate, to supplement the discretion herein  
22 granted to the Watermaster.

23 (Judgment, ¶ 40, p. 23.) "A fundamental premise of the Physical Solution is that all water users  
24 dependent upon Chino Basin will be allowed to pump sufficient waters from the Basin to meet their  
25 requirements." (Judgment, ¶ 42, p. 24.)

26 Watermaster was appointed under the Judgment "to administer and enforce the provisions  
27 of this Judgment and any subsequent instructions or orders of the Court hereunder." (Judgment, ¶  
28 16, p. 12.) In addition, "Watermaster, with the advice of the Advisory and Pool Committees, is  
granted discretionary powers in order to develop an optimum basin management program for Chino  
Basin, including both water quantity and quality considerations." (Judgment, ¶ 41, p. 23.)

Watermaster is to consider the following basin management parameters in implementing the  
Physical Solution:

1 **Pumping Patterns.** Chino Basin is a common supply for all persons and agencies  
2 utilizing its waters. It is an objective in management of the Basin's waters that no  
3 producer be deprived of access to said waters by reason of unreasonable pumping  
patterns, nor by regional or localized recharge of replenishment water, insofar as such  
result may be practically avoided. (Judgment, Exhibit I, ¶ 1(a), p. 79.)

4 **Water Quality.** Maintenance and improvement of water quality is a prime  
5 consideration and function of management decisions by Watermaster. (*Id.* at ¶ 1(b),  
p. 79.)

6 **Economic Considerations.** Financial feasibility, economic [*sic*] impact and the cost  
7 and optimum utilization of the Basin's resources and the physical facilities of the  
8 parties are objectives and concerns equal in importance to water quantity and quality  
parameters. (*Id.* at ¶ 1(c), p. 79.)

9 **b. Adoption of OBMP**

10 In February 1998, the Court determined that the completion of the OBMP is required. The  
11 Court directed Watermaster to develop the OBMP, including a plan for implementation of the  
12 OBMP. The OBMP was divided into two phases. First, Watermaster, with the approval of the  
13 Advisory Committee, adopted the Optimum Basin Management Program Phase 1 Report, dated  
14 August 19, 1999 ("OBMP Phase 1 Report"). Next, to achieve unanimous support for  
15 implementation of the OBMP Phase 1 Report, a series of intensive negotiations took place,  
16 facilitated by Watermaster. These negotiations led to the adoption and execution of a Peace  
17 Agreement for Chino Basin, dated June 29, 2000 ("Peace Agreement"), and the adoption of an  
18 Implementation Plan for the OBMP ("Implementation Plan"). Finally, Watermaster submitted the  
19 Peace Agreement and Implementation Plan to the Court for approval.

20 The Court determined that the Peace Agreement is consistent with the OBMP, which consists  
21 of the OBMP Phase 1 Report and Implementation Plan. The Court further determined that  
22 Watermaster's commitment to implement the OBMP is in furtherance of the Physical Solution in  
23 the Judgment and Article X, Section 2 of the California Constitution. The Court directed  
24 Watermaster to adopt the goals and plans of the Phase 1 Report and implement them through the  
25 Implementation Plan, proceeding in a manner consistent with the Peace Agreement. (Court Order  
26 Concerning Adoption of OBMP, dated July 13, 2000, p. 4.)

27 **2. The OBMP Phase 1 Report (August 1999)**

28 The OBMP Phase 1 Report, dated August 19, 1999, "documents the development of the

1 OBMP for the Chino Basin, pursuant to the Honorable J. Michael Gunn's February 19, 1998  
2 Ruling." (Phase 1 Report, p. 1-4.) The development process included establishing a set of goals for  
3 the OBMP. Development of the goals began with the preparation of a list of major issues defined  
4 by stakeholders in the OBMP process. (Phase 1 Report at p. 1-5.) The OBMP Phase 1 Report also  
5 includes a summary of "the state of the Basin in terms of historical groundwater levels, storage,  
6 production, water quality, and safe yield. Current and projected water demands and water supply  
7 plans are described. Problems in these areas are identified and potential solutions or solution  
8 processes are described." (Phase 1 Report, p. 1.5.) Finally, technical memoranda were produced  
9 to support the program elements and implementation process described in Section 4 of the Report.

10 **a. State of Basin**

11 In terms of groundwater level problems, the Phase 1 Report states that

12 [o]verall, groundwater levels have declined between 50 to 200 feet in the Chino  
13 Basin since the turn of the century. The western side of the Basin, notably  
14 Management Zones 1a and 1b, has experienced the greatest decline in groundwater  
15 levels. The City of Chino and CIM have recently experienced ground-surface  
16 fissures that are thought to be related to increased groundwater production in the  
vicinity of the City of Chino. Groundwater producers that affect groundwater levels  
in this area include the cities of Chino, Chino Hills, Ontario, Pomona, the Monte  
Vista Water District, CIM, and agricultural producers. The City of Chino Hills has  
reported loss of production at one well due to recently declining groundwater levels.

17 (Phase 1 Report, p. 2-36.)

18 The management steps identified to eliminate groundwater level problems in this area include  
19 conducting a ground level survey of the area in MZ1.

20 This would include a review of past surveys and new surveys. The survey results  
21 would be compared to historical surveys to determine the location, rate, and  
22 magnitude of subsidence in the Basin. Periodic surveys should be conducted  
afterwards to monitor for further subsidence.

23 (Phase 1 Report, p. 2-36.) Another step identified is the development and implementation of a  
24 groundwater level and quality monitoring program.

25 This program should be developed and implemented before groundwater  
26 recharge/production management plan is developed for Management Zone 1 in order  
27 to define local groundwater flow systems for better management of recharge and  
production.

28 (Phase 1 Report, p. 2-36.) A third step is to



1 [b]alance groundwater production with recharge in Management Zone 1, or if  
2 necessary, balance production and recharge more locally within Management Zone  
3 1. This may require temporarily reducing production below the level at which  
4 balance occurs to bring groundwater levels up to a safe level. A *safe* level needs to  
5 be determined. Recharge of local or native and imported water should be increased  
6 as much as practical. Given that recharge in the area is maximized, production may  
7 still have to be reduced in Management Zone 1 and replaced with either production  
8 from Management Zone 2 or some other source of water.

9 (Phase 1 Report, p. 2-36.)

#### 10 **b. Goals of the OBMP**

11 The stakeholders developed an OBMP mission statement and core values associated with the  
12 mission statement. (Phase 1 Report, p. 3-1.) The mission statement provides that “[t]he purpose  
13 of the [OBMP] is to develop a groundwater management program that enhances the safe yield and  
14 the water quality of the Basin, enabling all groundwater users to produce water from the Basin in a  
15 cost-effective manner.” (Phase 1 Report, p. 3-1.)

16 Four final goals are identified in Table 3-8 of the Phase 1 Report. The first goal is to enhance  
17 basin water supplies. Of interest to a discussion of the Interim Plan, one of the impediments to the  
18 first goal is: “Unless certain actions are taken, groundwater levels in Management Zone (MZ) 1 will  
19 continue to decline adding to the potential for additional subsidence and fissures, lost production  
20 capability, and water quality problems.” (Phase 1 Report, Table 3-8, p. 2.) The OBMP program  
21 element identified in connection with this impediment is Program Element 4, which is discussed  
22 more fully below.

23 The second final goal is to protect and enhance water quality. The impediments identified  
24 with the second goal are not implicated in the Interim Plan. The third final goal is to enhance  
25 management of the Basin. One of the stated impediments to the third goal is: “Existing production  
26 patterns are not balanced, cause losses, can cause local subsidence, and water quality problems.”  
27 (Phase 1 Report, Table 3-8, p. 6.) One of the goals initially identified in the Phase 1 Report is  
28 enhanced management of the Basin. One of the activities identified by the stakeholders as protecting  
and enhancing the basin is to “[d]evelop and/or encourage production patterns, well fields, treatment  
and water transmission facilities and alternative water supply sources to ensure maximum and  
equitable availability of groundwater and to minimize land subsidence.” (Phase 1 Report, p. 3-3.)

1 The OBMP program element identified in connection with this impediment is Program Element 1.  
2 Program Element 1 is the development of a comprehensive basin-wide ground level, groundwater  
3 level, quality, and production monitoring program. The development of a basin-wide ground level  
4 monitoring program is of particular note to the Interim Plan. It is set out verbatim below.

5 The fourth final goal is to equitably finance the OBMP. "The primary source of revenue to  
6 finance the implementation will be the consumers of the Chino Basin groundwater. The consumers  
7 in the Chino Basin must be treated equitably by passing the cost of the OBMP on a per acre-foot  
8 basis or by other methods, based on formulas to be determined." (Phase 1 Report, pp. 3-3, 3-4.) One  
9 of the stated impediments to the fourth goal is: "The equitable distribution of cost associated with  
10 the OBMP is not defined." (Phase 1 Report, Table 3-8, p. 7.) The OBMP program element  
11 identified in connection with this impediment is to: "Develop and Implement a financial plan to  
12 Implement the OBMP." (Phase 1 Report, Table 3-8, p. 7.) Development of a financial plan to  
13 implement the OBMP is discussed below.

#### 14 c. OBMP Program Elements Implicated in Interim Plan

15 "The scope of the program elements was developed by the Chino Basin stakeholders. Each  
16 program element contains a series of comprehensive actions and plans to implement those actions."  
17 "Implementation of all program elements is necessary to achieve the goals of the OBMP. . . . Task  
18 Memorandums were prepared for each program element during development of the OBMP Phase  
19 1 Report and are available from the Watermaster offices. They describe each program element in  
20 detail." (Phase 1 Report, p. 4-1.) The OBMP Phase 1 Report describes nine program elements to  
21 be implemented. The nine elements do not include the development of a financial plan to implement  
22 the OBMP, which must then be treated as a separate element. (See Phase 1 Report, Table 3-8.)  
23 Two of the nine elements are implicated in the Interim Plan, as well as the element to develop a  
24 financial plan to implement the OBMP.

#### 25 i. Program Element 4

26 Program Element 4 is the development and implementation of a comprehensive groundwater  
27 management plan for MZ1. (Phase 1 Report, p. 4.1.) As noted earlier, this program element  
28 implements the goal of enhancing Basin water supplies. As stated in Program Element 4, the

1 impediment to the OBMP goal of enhancing basin water supplies has been refined and expanded  
2 from the Table 3-8 description:

3 Unless certain actions are taken, piezometric levels in the deep aquifers of  
4 Management Zone 1 will continue to decline adding to the potential for additional  
5 subsidence and fissures, lost production capability and water quality problems. This  
6 impediment speaks to a localized subsidence and fissuring problem within the City  
7 of Chino and to a potentially larger and similar problem in the southern end of  
8 Management Zone 1 in the former artesian area. This part of the Basin contains a  
9 higher fraction of fine-grained materials that originated from sedimentary deposits  
10 in the Chino and Puente Hills. This area also consists of a multiple aquifer system.  
11 The upper aquifer(s) are moderately high in TDS and are often very high in nitrate.  
12 The City of Chino Hills has drilled a series of wells into the deeper aquifer(s) to  
13 obtain better quality water. The storage and hydraulic properties of the deeper  
14 aquifers are quite limited relative to the upper aquifer. The correlation of the recent  
15 groundwater production in the deep aquifers and the timing of the subsidence and  
16 fissuring, and a review of the hydrogeologic data from the area very strongly suggest  
17 that deep aquifer production is the likely cause of the subsidence.

18 (Phase 1 Report, p. 4-25.) The report notes that

19 [t]he *Program Element 4-Develop and Implement Comprehensive Groundwater*  
20 *Management Plan for Management Zone 1* task memorandum is on file and available  
21 from the Watermaster offices. It describes the subsidence problem in the  
22 Management Zone 1 area as it is currently understood in more detail.

23 (Phase 1 Report, p. 4-25.)<sup>5</sup>

24 Program Element 4 includes the action items listed in Table 3-8:

- 25 • Develop comprehensive ground level, groundwater level and quality monitoring  
26 program in MZ1.
- 27 • Develop groundwater management program for MZ1 consisting of:
  - 28 • Increase recharge of stormwater and supplemental water in MZ1.
  - 29 • Manage groundwater production in MZ1 to a sustainable level to minimize  
30 subsidence.
  - 31 • Increase direct use of supplemental water in MZ1 (including in lieu  
32 deliveries).

33 (Phase 1 Report, p. 4-25 and Table 3-8, p. 2.)

34 With respect to the development of a groundwater management plan for MZ1, the Phase 1  
35 Report calls for the development of an interim management plan as well as a long-term plan. Details  
36 of the interim plan also were proposed in the Phase 1 Report.

37 The continued occurrence of subsidence and fissuring in Management Zone 1 is not  
38 acceptable and must be reduced to tolerable levels or completely abated. However,

---

39 <sup>5</sup>This task memorandum is discussed in the Technical Analysis below.

1 there is some uncertainty as to the causes of subsidence and fissuring and more  
2 information is necessary to distinguish among potential causes. An interim  
management plan must be developed and implemented to:

- 3 • minimize subsidence and fissuring in the short-term;
- 4 • collect the information necessary to understand the extent and causes of  
subsidence and fissuring; and
- 5 • formulate an effective long-term management plan.

6 (Phase 1 Report, p. 4-25.)

7 The interim management plan would consist of the following activities:

- 8 • Voluntarily modify groundwater production patterns in Management Zone  
9 1 for a five-year period. For example, there is some indication that deep  
10 aquifer production beneath the City of Chino contributed to recent subsidence  
and fissuring in the area. Reduction or elimination of deep aquifer  
11 production beneath the area of subsidence and fissuring is a logical short-  
term mitigation strategy.
- 12 • Balance recharge and production in Management Zone 1. Based on  
13 preliminary engineering investigations with RAM tool, it appears that current  
levels of pumping and recharge are balanced. However, increases in  
pumping should be balanced with increases in recharge.
- 14 • Determine gaps in existing knowledge. Primarily, there is a lack of  
15 understanding of Management Zone 1 hydrogeology, of the nature and extent  
of subsidence and fissuring, and of the exact causes of subsidence and  
16 fissuring.
- 17 • Implement a process to fill the gaps in existing knowledge. This would  
18 include hydrogeologic, geophysical, and remote sensing investigations of  
Management Zone 1, as well as certain monitoring programs, such as  
19 piezometric, production, water quality, ground level and subsidence  
20 monitoring.
- 21 • Formulate a long-term management plan. The long-term management plan  
will include goals activities to achieve those goals, and a means to evaluate  
the success of the plan.

22 (Phase 1 Report, pp. 4-25 and 4-26.)

23 The Phase 1 Report describes the subsidence problem in MZ1 as follows:

24 The subsidence and fissuring problem appears to be currently focused in the City of  
25 Chino and the California Institution for Men (CIM). However, it is reasonable given  
the current knowledge, to expand the minimum area of concern to the entire former  
26 artesian area shown in Figure 4-3 and slightly beyond that area. . . . The producers  
in the area include the cities of Chino, Chino Hills, Ontario, Pomona and Upland, the  
27 Monte Vista Water District (MVWD), San Antonio Water Company (SAWC),  
Southern California Water Company (SCWC), the State of California (CIM),  
California Institution for Women (CIW), and SAWPA. Watermaster may need to  
28 have entities that increase their production to provide for the recharge of an

1 equivalent amount of water to maintain the balance of pumping and recharge.  
2 Watermaster will take the leadership role in the development and implementation of  
the Management Zone 1 management plan.

3 (Phase 1 Report, p. 4-26.)

4 Finally, a schedule for the first five years of implementation of Program Element 4 is  
5 recommended in the Phase 1 Report:

- 6 • Year 1 [1999] – Establish a Management Zone 1 committee and develop interim  
7 management plan.
- 8 • Years 2 to 5 [2000-2003] – Implement the interim management plan, including  
9 appropriate monitoring.
- 10 • Years 3 to 5 [2001-2003] – Annual assessment of data from monitoring programs,  
11 and modification of monitoring programs if necessary.
- 12 • Year 5 [2003] – Develop long-term management plan.

13 It is apparent that the OBMP Phase 1 Report precipitated Watermaster's development of an  
14 Interim Plan. It also precipitates Watermaster's development of a long-term management plan for  
15 MZ1.

#### 16 ii. Program Element 1

17 Program Element 1 is the development and implementation of a comprehensive basin-wide  
18 ground level, groundwater level, quality, and production monitoring program. (Phase 1 Report,  
19 Table 3-8, p. 1.) Of particular note in connection with the Interim Plan is the development of a  
20 ground level monitoring program:

21 Ground level surveys are proposed herein as an offshoot of the subsidence issues in  
22 Management Zone 1. The stakeholders are interested in *determining* if and how  
23 much subsidence has occurred in the Basin. Watermaster will conduct an analysis  
of historical ground level survey and remote sensing data to make this  
determination. The analysis consists of the following tasks:

- 24 • Historical survey data collected and/or on file by federal, state, and local  
25 agencies will be compiled, mapped, and reviewed to estimate total subsidence  
26 for as long a period as possible. Estimated cost to complete this review is  
about \$15,000.
- 27 • Synthetic aperture radar (SAR) imagery will be used to assess the time  
28 history of subsidence in the Basin for the period 1993 though [*sic*] 1999.  
Estimated cost to develop this time history is about \$20,000. It should be  
noted that the City of Chino has already conducted a similar investigation for

1 most of the Basin and that the effort described herein is to expand on the  
2 work already done by the City.

- 3 • Based on the above information, a network of ground elevation stations in  
4 subsidence-prone areas will be developed and periodic surveys of these  
5 stations will be done. The frequency of periodic surveys will be established  
6 for the Basin as a whole with more frequent surveys done for some of the  
7 Basin. The estimated cost of this effort is not certain. It should be noted that  
8 the City of Chino has already conducted a similar survey within the City of  
9 Chino and that the effort described herein is to expand on the surveys done  
10 by the City to the entire Basin.

11 (Phase 1 Report, p. 4-5.)

12 The report concludes that these tasks can be accomplished in the first year of implementation  
13 of the Program Element 1. The implementation status of ground level monitoring program is noted  
14 in the technical discussion of the Interim Plan.

### 15 **iii. Development of a Financial Plan**

16 The fourth final goal identified in the OBMP Phase 1 Report is to equitably finance the  
17 OBMP. As noted earlier, the impediment identified with that goal is that “[t]he equitable  
18 distribution of cost associated with the OBMP is not defined.” There are two action items associated  
19 with this impediment to the fourth goal:

20 Identify an equitable approach to spread the cost of OBMP Implementation either on  
21 a per acre-ft. basis or some other equitable means.

22 Identify ways to recover value from utilizing basin assets including storage and rising water  
23 leaving the basin. (Table 3-8, p. 7.)

24 In addition, the program element identified is the development and implementation of a financial  
25 plan to implement the OBMP.

26 While a separate financial plan for implementation of the OBMP was not included in the  
27 Implementation Plan, the two action items identified with the fourth goal are addressed to some  
28 degree in the Peace Agreement for Chino Basin, dated June 29, 2000 (“Peace Agreement”). The  
Peace Agreement and OBMP Implementation Plan adopted in connection with the Peace Agreement  
are discussed below.

### 3. Peace Agreement and OBMP Implementation Plan (June 2000)

#### a. Peace Agreement

The Peace Agreement was entered into to facilitate the implementation of the OBMP and to

1 resolve, by consent, disputes pertaining to

2 the power and authority of the Court and Watermaster under the Judgment, including  
3 but not limited to Watermaster power and authority regarding recharge, owning  
4 property, holding water rights, water Transfers, storage, yield management, land use  
conversion, assessments, benefits, procedures and the adoption and implementation  
of the OBMP.

5 (Peace Agreement, p. 2-3.) The parties covenant to not oppose Watermaster's adoption of the  
6 OBMP or the Implementation Plan, which is attached to the Peace Agreement as Exhibit B. This  
7 covenant, however, is not to be construed as precluding a party to the Judgment from seeking  
8 judicial review of Watermaster determinations, either pursuant to the Judgment or as provided in the  
9 Peace Agreement. (Peace Agreement, § 4.2, p. 15-16.) It can be seen, then, that the function of the  
10 Peace Agreement is to permit implementation of the OBMP by Watermaster without the inherent  
11 delays caused by disputes among various parties. At the same time, the right to judicial review of  
12 Watermaster determinations is protected.

13 There are two areas of the Peace Agreement to be reviewed in connection with the Interim  
14 Plan. The first is the section dealing with assessments, credits and reimbursements. This section  
15 of the Peace Agreement implicates the action item related to the fourth goal of the OBMP-- to  
16 equitably finance the OBMP.

17 Watermaster shall adopt reasonable procedures to evaluate requests for OBMP  
18 credits against future OBMP Assessments or for reimbursement. Any Producer or  
19 party to the Judgment, including but not limited to the State of California, may make  
20 application to Watermaster for reimbursement or credit against future OBMP  
21 Assessments for any capital or operations and maintenance expenses incurred in the  
22 implementation of any project or program, including the cost of relocating  
23 groundwater Production facilities, that carries out the purposes of the OBMP  
24 including but not limited to those facilities relating to the prevention of subsidence  
25 in the Basin, in advance of construction or that is prospectively dedicated to service  
of the stated goals of the OBMP. Watermaster shall exercise reasonable discretion  
in making its determination, considering the importance of the project or program to  
the successful completion of the OBMP, the available alternative funding sources,  
and the professional engineering and design standards as may be applicable under the  
circumstances. However, Watermaster shall not approve such a request for  
reimbursement or credit against future BMP [*sic*] Assessments under this section  
where the Producer or party to the Judgment was otherwise legally compelled to  
make the improvement.

26 (Peace Agreement, § 5.4(d), p. 37-38.)

27 Any Producer that Watermaster compels to move a groundwater Production facility  
28 that is in existence on the Date of Execution shall have the right to receive a credit  
against future Watermaster assessments or reimbursement up to the reasonable cost

1 of the replacement groundwater Production facility.

2 (Peace Agreement, § 5.4(e), p. 38.)

3 It appears that the parties intended that the cost of voluntary relocation of groundwater  
4 production facilities in furtherance of implementation of the OBMP is to be spread equitably among  
5 the producers, unless the relocation of facilities was “otherwise legally impelled.” Further, if  
6 relocation of production facilities is compelled by Watermaster, the cost of relocation is to be spread  
7 among the producers. It follows, then, that the cost of other remedies designed to prevent  
8 subsidence, such as the provision in the Interim Plan for securing substitute water, is intended to be  
9 spread among the producers. This is supported by the definition of Material Physical Injury, which  
10 includes injury attributable to land subsidence. (Peace Agreement, § 1.1(y).)

11 The second area to be reviewed is that portion of the Peace Agreement dealing with dispute  
12 resolution. Except in the event of an emergency, disputes among the parties that arise under the  
13 Peace Agreement are to be submitted to non-binding mediation. The non-binding mediation is to  
14 be conducted by Judicial Arbitration Mediation Services or an equivalent service. Any statute of  
15 limitations applicable to the disputed claim is tolled during the mediation process. (Peace  
16 Agreement, § 9.3, pp. 55-56.) It thus appears that a dispute among the parties as to the allocation  
17 of costs related to subsidence could be resolved through non-binding mediation. Conceivably, either  
18 Chino or Chino Hills could pursue this option under Article IX of the Peace Agreement.

19 **b. Implementation Plan**

20 The Implementation Plan, which was adopted in connection with the Peace Agreement and  
21 attached thereto as Exhibit B, includes the nine program elements developed during the OBMP  
22 Phase 1 Report process to meet the goals of the OBMP. (Implementation Plan, p. 1.) The  
23 Implementation Plan reiterates that the “scope of the program elements was developed by the Chino  
24 Basin stakeholders.” Further, “[e]ach program element contains a series of comprehensive actions  
25 and plans to implement those actions.” Of importance for purposes of the Interim Plan, “[t]he parties  
26 to the [Peace Agreement] support and consent to Watermaster proceeding with this Implementation  
27 Plan in a manner that is consistent with the Peace Agreement and the Judgment.” (Implementation  
28 Plan, p. 2.)



1 The Implementation Plan descriptions of Program Element 1E and Program Element 4 are  
2 of particular relevance to the Interim Plan. They are reviewed below.

3 **i. Program Element 1E – Ground Level Monitoring Program**

4 Program Element 1E of the Implementation Plan describes how the Ground Level  
5 Monitoring Program will be implemented. This description closely parallels that in the Phase 1  
6 Report.

7 Watermaster is interested in determining if and how much subsidence has occurred  
8 in the Basin. Watermaster will conduct an analysis of historical ground level surveys  
9 and remote sensing data to make this determination. The analysis consists of the  
10 following tasks:

- 11 • Historical survey data collected and/or on file by federal, state, and local  
12 agencies will be compiled, mapped, and reviewed to estimate total subsidence  
13 for as long a period as possible.
- 14 • Synthetic aperture radar (SAR) imagery was obtained by the City of Chino  
15 as part of its own subsidence investigations and was provided to Watermaster  
16 for its review and use. Watermaster converted this to maps to estimate recent  
17 subsidence (1993 to 1999) in the Management Zone 1.
- 18 • Based on the above information, a network of ground elevation stations in  
19 subsidence-prone areas will be developed and periodic surveys of these  
20 stations will be done. The frequency of periodic surveys will be established  
21 for the Basin as a whole with more frequent surveys done for some areas of  
22 the Basin. The estimated cost of this effort is not certain.
- 23 • Watermaster will summarize and distribute the ground level monitoring data  
24 through the normal Watermaster process.”

25 As to the estimated time needed for implementation of this program element, the  
26 Implementation Plan provides:

27 Watermaster has budgeted about \$36,000 for the above tasks in the fiscal year  
28 2000/01. These tasks will be accomplished in the current fiscal year. Watermaster  
will budget for additional ground level surveys in subsequent years based on the  
results of the current year efforts.

The implementation status of this program element is included in the technical discussion of the  
Interim Plan.

**ii. Program Element 4 – Develop and Implement Comprehensive  
Groundwater Management Plan for MZ1**

Program Element 4 of the Implementation Plan is the precursor to the Interim Plan. With

1 respect to this element the Implementation Plan provides:

2 The occurrence of subsidence and fissuring in Management Zone 1 is not acceptable  
3 and should be reduced to tolerable levels or abated. The OBMP calls for a  
4 management plan to reduce or abate the subsidence and fissuring problems to the  
5 extent that it may be caused by production in MZ1. There is some uncertainty as to  
6 the causes of subsidence and fissuring and more information is necessary to  
7 distinguish among potential causes. Therefore an interim management plan will be  
8 developed to minimize subsidence and fissuring while new information is collected  
9 to assess the causes and to develop an effective long-term management plan.

7 (Implementation Plan, p. 26.) This description of Program Element 4 closely parallels that in the  
8 OBMP Phase 1 Report. A noticeable difference, however, is that the goal of subsidence reduction  
9 is mandatory in the Phase 1 Report, but only preferred in the Implementation Plan. The  
10 Implementation Plan describes the interim management plan as consisting of the following actions:

- 11 • Voluntary modifications to groundwater production patterns in Management  
12 Zone 1. During fiscal year 1999/2000 the cities of Chino and Chino Hills as  
13 well as the State of California have voluntarily reduced their production in  
14 the vicinity of recent ground fissures.
- 15 • Monitor long term balance of recharge and production in Management  
16 Zone 1.
- 17 • Determine gaps in existing knowledge.
- 18 • Implement a process to fill the gaps in existing knowledge. This include(s)  
19 hydrogeologic, geophysical, and remote sensing investigations of  
20 Management Zone 1, as well as certain monitoring programs, including  
21 piezometric, production, water quality, ground level, and subsidence  
22 monitoring
- 23 • Formulate a long-term plan. The long-term management plan will include  
24 goals, activities to achieve those goals, and a means to evaluate the success  
25 of the plan.

19 (Implementation Plan, pp. 26-27.)

20 The Implementation Plan notes that with the approval of the Peace Agreement, there are  
21 other measures that will benefit conditions in MZ1, such as the provisions for recharge and  
22 replenishment. Regarding the implementation status of Program Element 4, the Implementation  
23 Plan provides:

24 Watermaster will develop the interim management plan during fiscal year 2000/2001.  
25 Watermaster's budget estimate for this effort in fiscal 2000/2001 is \$100,000.  
26 Monitoring and construction of extensometers for this effort is included in Program  
27 Element 1.

27 (Implementation Plan, p. 27.)

28 Development of the Interim Plan did not follow the schedule anticipated in the

1 Implementation Plan. The Interim Plan was only recently approved by Watermaster.  
2 (Extensometers are mentioned in Program Element 4 as being included in Program Element 1 of the  
3 Implementation Plan, but Program Element 1 does not include extensometers.)

4 **4. Chino Basin Watermaster Rules and Regulations (June 2001)**

5 Noteworthy in terms of the context of the Interim Plan, are several provisions of the Chino  
6 Basin Watermaster Rules and Regulations, dated June 2001, which were adopted by Watermaster  
7 subsequent to the Peace Agreement and Implementation Plan and approved by the Court on July 19,  
8 2001 (“Rules”).

9 First, the definitions reiterate that the OBMP “consists of the OBMP Phase 1 Report and the  
10 OBMP Implementation Plan, which shall be implemented consistent with the provisions of Article  
11 V of the Peace Agreement.” (Rules, § 1.1 (zz), p. 12.) Included in the Rules are provisions that  
12 authorize Watermaster to undertake the study described in the Interim Plan:

- 13 • “Watermaster will carry out the monitoring activities described under  
14 Program Element 1 of the OBMP and as described in the OBMP  
Implementation Plan...” (Rules, § 3.0, p. 25.)
- 15 • “Watermaster may, with the concurrence of the Advisory Committee or  
16 affected Pool Committee and in accordance with Paragraph 54(b) of the  
17 Judgment, undertake relevant studies of hydrologic conditions, both  
quantitative and qualitative, and operating aspects of implementation of the  
Chino Basin OBMP.” (Rules, § 2.22, p. 24.)
- 18 • “Each party . . . shall file with Watermaster . . . a quarterly report of the total  
19 water Production of that Producer during the preceding calendar quarter,  
together with such additional information as Watermaster and/or the affected  
20 Pool Committee may require. (Rules, § 3.2, p. 27.)

21 In addition, there are provisions in the Rules which facilitate implementation of the fourth  
22 final goal of the OBMP – to equitably finance the OBMP:

- 23 • Watermaster Assessments for implementation of the OBMP shall be considered a  
24 Watermaster Administrative Expense . . . pursuant to paragraph 54 of the Judgment.  
(Rules, § 4.2, p. 28)
- 25 • Any party to the Judgment may make Application for credits against OBMP  
26 assessments or for reimbursement by filing a timely Application pursuant to the  
provisions of this section and Article X of these Rules and Regulations. (Rules, §

1 4.5(a), p. 30.)<sup>6</sup>

- 2 • “A party to the Judgment is eligible to be considered for credits or reimbursement for  
3 those documented capital, operations and maintenance expenses, including the cost  
4 of shutting down and/or relocating Groundwater Production facilities, that are  
5 reasonably incurred in the implementation of any project or program that carries out  
6 the purposes of the OBMP upon approval of the request by Watermaster. [Citation.]  
7 The purposes of the OBMP shall be those goals set forth in the Phase 1 Report as  
8 implemented through the OBMP Implementation Plan in a manner consistent with  
9 the Peace Agreement including, but not limited to, the prevention of subsidence in  
10 the Basin.” [Citation.] (Rules, § 4.5(b), p. 30.)
- 11 • Watermaster shall exercise reasonable discretion in making its determination  
12 regarding credits against OBMP Assessments and reimbursement, considering the  
13 importance of the project or program to the successful completion of the OBMP, the  
14 available alternative funding sources, and the professional engineering and design  
15 standards as may be applicable under the circumstances. However, Watermaster shall  
16 not approve such a request for reimbursement or credit against future OBMP  
17 Assessments under this section where the Producer or party to the Judgment was  
18 otherwise legally compelled to make the improvement. [Citation to Peace  
19 Agreement.] (Rules, § 4.5, p. 30.)
- 20 • Any Producer that Watermaster compels to shut down and/or move a Groundwater  
21 Production facility that is in existence on August 1, 2000 shall have the right to  
22 receive a credit against future Watermaster assessments or reimbursement up to the  
23 reasonable cost of the replacement Groundwater Production facility, including the  
24 legal rate of interest on California Judgments. . . (Rules, § 4.5(c), p. 30.)

25 The Rules also contain procedures for processing requests by a person for, inter alia, a  
26 Complaint for redress arising from an alleged Material Physical Injury to a party to the Judgment  
27 or the Basin. (Rules, § 10.1, p. 58.) The Rules define “Material Physical Injury” to mean

28 material injury that is attributable to the Recharge, Transfer, Storage and Recovery,  
management, movement or Production of water, or implementation of the OBMP,  
including, but not limited to, degradation of water quality, liquefaction, land  
subsidence, increases in pump lift (lower water levels) and adverse impacts  
associated with rising Groundwater.

(Rules, § 1.1 (uu), p. 11.) Complaints for alleged Material Physical Injury in violation of the Rules,  
the Judgment, or the Peace Agreement, shall identify the name of the Complainant, the specific  
action or conduct that is causing or will cause Material Physical Injury, and any recommended

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<sup>6</sup>The Rules provide that Applications for Credits against OBMP Assessments or Reimbursements are to include (a) the identity of the party to the Judgment; (b) the specific purpose of the OBMP satisfied by the proposed project; (c) the time the project is proposed to be implemented and a schedule for completion; (d) the projected cumulative project costs; and (e) the specific capital or operations and maintenance expenses incurred in the implementation of any project or program, including the cost of relocating Groundwater Production facilities. (Rules, § 10.9, p. 63.)

1 mitigation measures or conditions that might avoid or reduce the alleged Material Physical Injury.  
2 (Rules, § 10.20 (a), p. 67.) The Rules further provide a thorough administrative process for  
3 Watermaster review and action on the Complaint. These include a hearing on the Complaint, review  
4 by the Pool Committees, the designation of a hearing officer and procedures to be followed at the  
5 hearing. (See Rules, §§ 10.20- 10.24, pp. -67-71.) The Rules also prescribe a method for  
6 Watermaster determinations with respect to Complaints. (See, Rules, §10.25, pp. 71-73.) Finally,  
7 the Rules provide for allocation of costs and expenses associated with a Complaint. (See Rules, §  
8 10.26, p. 73.)

9 The rules make it clear that “[t]he Complaint procedures set forth in this Article X are not  
10 intended to constitute an exclusive remedy or constitute a requirement that a party to the Judgment  
11 exhaust this discretionary remedy.” (Rules, § 10.2 (a), p. 58.)

12 Once a party to the Judgment elects to pursue redress under the provisions of this  
13 Article, it shall exhaust this process until conclusion unless there is a sudden,  
14 unexpected event or emergency that causes a need for immediate judicial review or  
15 in the event that the Watermaster has failed to take action on a longstanding request.  
16 Thus, other than in the event of an emergency or where Watermaster has engaged in  
17 undue delay, a party to the Judgment may not seek judicial review of a Watermaster  
18 action on a pending Application or Complaint until the Watermaster Board has taken  
19 final action under the provisions of this Article. However, the procedures described  
20 in this Article X shall not preclude any party from seeking judicial review of any  
21 action, decision or rule of Watermaster in accordance with paragraph 31 of the  
22 Judgment.

23 (Rules, § 10.2 (b), p. 58.)

#### 24 **B. Interim Plan (June 2002)**

25 This description of the Interim Plan is collected from the written Interim Plan filed with the  
26 Court on June 17, 2002, and from the representations made at the Interim Plan Workshop held on  
27 August 29, 2002.

28 The 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 also been presented to and  
approved by the Pool Committees, the Advisory Committee and the Watermaster Board.” (Interim  
Plan, Recital “I”, p. 2.) Watermaster intends that the Interim Plan “fairly and reasonably allocate  
expenses” among the parties to the Judgment. (Interim Plan, Recital “E”, p. 1.)

The Interim Plan was developed “[w]ithout prejudice to or limitation on (i) any party’s

1 position, (ii) the competing contentions that have been made or may be asserted regarding  
2 subsidence, and (iii) the rights or remedies referenced in the preceding recital or otherwise held” by  
3 any party to the Judgment. (Interim Plan, Recital “G”, p. 2.) The initial term of the Interim Plan is  
4 three years, after which it “shall be either extended, amended or replaced by a Long-Term Plan to  
5 abate or reduce subsidence and fissuring.” (Interim Plan, § 8, p. 9.) It is anticipated that October  
6 1, 2002, will be “Day One” of the plan. (Workshop Transcript, p. 29.)

7 **1. Technical Group**

8 A core element of the Interim Plan is the formation of a “Technical Group,” which “shall  
9 serve as a clearing house for scientific information, as well as the source for full professional  
10 discussion, input and peer review by its members, for the benefit of Watermaster.” “An important  
11 objective and work product of the Technical Group shall be its effort to serve in advisory capacity  
12 to assist Watermaster in its development of a Long-Term Plan.” The Technical Group also “shall  
13 provide comment where appropriate and assist Watermaster in Watermaster’s development of  
14 recommendations for consideration and potential action by Watermaster under the Interim Plan.”  
15 (Interim Plan, § 1(a), p. 3; Workshop Transcript, p. 17.) It is intended that the Interim Plan be  
16 adaptive and iterative (Workshop Transcript, p. 29) and there is “no limitation on the technical  
17 Group and what they decide to do” as to the scope of the plan (Workshop Transcript, p. 140).

18 “Discussion between and among the members of the Technical Group shall be considered  
19 as good faith settlement discussions and therefore privileged as an offer of compromise. This will  
20 ensure an environment of full and candid discussion among professionals.” (Interim Plan, § 1(c), p.  
21 3.) The subject of confidentiality among members of the Technical Group was explored in some  
22 detail in the workshop. (See Workshop Transcript, pp. 20-28.) A Stipulation Regarding  
23 Confidential Communications was proposed by Watermaster Counsel. The parties were asked if  
24 there were any objections to the proposed stipulations and no objections were heard. The stipulation  
25 provides that the following communications are privileged and confidential:

- 26 • Oral communications by and between members of the Technical Group or  
27 Watermaster Staff during meetings of the Technical Group
- 28 • Written communications by and between members of the Technical Group or to  
Watermaster Staff that are otherwise privileged as attorney-client or work product or

1 other applicable privilege but for disclosure to other members of the Technical  
2 Group. In other words, the disclosure of privileged material to the members of the  
3 Technical Group shall not waive any applicable privilege to the extent one exists.

- 4 • Other written or oral communications that the members of the Technical Group all  
5 agree should be protected. Such agreement must be reached in advance and  
6 confirmed by the minutes kept by Watermaster or otherwise documented in advance  
7 of the disclosure.

8 Each of the following producers is entitled to one representative in the Technical Group:  
9 Chino, Chino Hills, Ontario, Upland, Pomona, Monte Vista Water District, So. Cal. Water, CIM  
10 independently, and the Ag Pool. (Interim Plan, § 1(b), p. 3.) The Technical Group has been formed  
11 and the representatives have been nominated. A formation meeting was held, but at the time of the  
12 workshop no substantive meeting had been held. (Workshop Transcript, p. 58-59.)

## 13 **2. Goals**

14 The Interim Plan has three goals: (1) minimize subsidence and fissuring in the short term;  
15 (2) collect information necessary to understand the extent and causes of subsidence and fissuring;  
16 (3) formulate a long-term management plan. (Workshop Reporter's Transcript, p. 14.) To achieve  
17 these goals the Interim Plan includes the following components: (1) voluntary modifications to  
18 groundwater production patterns in MZ1; (2) monitoring the long-term balance of recharge and  
19 production within MZ1; (3) identification of data needs and the knowledge deficiency; (4) bridging  
20 gaps in knowledge base; (5) formulation of a long-term plan. (Interim Plan, Recital "E", p. 1.)

## 21 **3. Voluntary Modifications to Production**

22 To encourage voluntary reductions in production in MZ1, "Watermaster will arrange for the  
23 delivery of up to 3,000 acre-feet of water ("Substitute Water") from the Metropolitan Water District  
24 and the Inland Empire Utilities Agency via the Water Facilities Authority ("WFA") for each of the  
25 first three years that the Interim Plan is in effect." (Interim Plan, § 3, p. 5.) The water will be  
26 available at \$233 per acre-foot. (Workshop Transcript, p. 20.)

27 Each party to the Judgment within MZ1 may be eligible to receive this Substitute Water if  
28 it meets specified conditions. (Interim Plan, § 3(a), p. 5.) A party elects to participate by filing a  
"Notice of Forbearance" identifying the well from which reduction in production is to occur.  
(Interim Plan, § 3(b), p. 5; Interim Plan, Exhibit "D.") A proposed schedule for participation in the

1 voluntary program is attached to the Interim Plan as Exhibit "E." The schedule proposes that Chino  
2 and Chino Hills each reduce pumping in MZ1 by 1,500 acre- feet a year for a three-year period  
3 (2002-2005). "The fact that a party elects to include one or more wells in one year shall not obligate  
4 that party to include the same wells in subsequent years." In addition, "[e]ach party reserves  
5 complete discretion to revise the quantity of reduction from any well . . . in each year of the Interim  
6 Plan, so long as that party's cumulative reduction is not reduced below the initial cumulative  
7 quantity of 1,500 acre-feet per year." (Interim Plan, §3(b), pp. 5-6.)

8 As an alternative to making Substitute Water available to the Participating Producers  
9 . . . Watermaster, in its sole discretion, may elect to provide other potable water  
10 ("Alternative Water"). Any quantity of Alternative Water provided to a Participating  
11 Producer would be credited against Watermaster's obligation to arrange for up to  
12 3,000 acre-feet of Substitute Water.

13 (Interim Plan, § 4, pp. 6-7.)

14 [T]he cost incurred by Watermaster in arranging for the Alternative Water shall be  
15 a Watermaster expense. If the Participating Producer elects, in its sole discretion, to  
16 take delivery of the alternative supply the per acre-foot cost to the Participating  
17 Producer shall be at the same cost as the Substitute Water . . . unless Watermaster,  
18 in its sole discretion, elects to offer the Alternative Water at a lesser cost to the  
19 Participating Producer.

20 (Interim Plan, § 4(a), p. 7.)

21 Each acre-foot of Substitute Water or Alternative Water supplied by Watermaster to  
22 a Participating Producer shall be considered in-lieu storage under the Judgment. . .  
23 . If a party to the Judgment elects to purchase the stored water to offset all, or a  
24 portion of their annual overproduction, the cost of the Supplemental Water held as  
25 stored water made available for replenishment. . . The price will be subject to the  
26 usual 85% - 15% assessment procedure applicable to the purchase and sale of stored  
27 water under the Judgment.

28 (Interim Plan, § 3(e).)

Participation in the Substitute Water or Alternative Water Supply Plan is subject to several  
conditions. Production from the well(s) identified must be temporarily reduced below the historical  
amount of production for that well for a period of nine months in each year (commencing on October  
1 and concluding on June 30.) (Interim Plan, § 5(a), p. 7.) However, the obligation of the producer  
to reduce their extractions is subject to the continuing condition that Watermaster provide an  
equivalent quantity of Substitute Water or Alternative Water. (Interim Plan, § 5(b), p. 8.) The  
producer may resume production between July 1 and September 30, upon written notice to



1 Watermaster and the Technical Group. (Interim Plan, § 5(c), p. 8.)

2 Watermaster will monitor conditions in MZ1 throughout the year and may recommend  
3 varying periods for consideration by producers for each year the Interim Plan is in place. (Interim  
4 Plan, § 5(d), p. 8.) Finally, any producer voluntarily reducing its production pursuant to the Interim  
5 Plan is entitled to resume production in the event of an emergency, or Watermaster's failure to  
6 provide Substitute Water or Alternative Water. (Interim Plan, § 5(e), p. 8.)

7 Chino has accepted Watermaster's proposal and proposes to take 1,500 acre-feet of Substitute  
8 Water and reduce its production from wells identified by Watermaster for a period of three years.  
9 (Workshop Transcript, p. 19.) Chino supports the Interim Plan. (Workshop Transcript, p. 132.)  
10 Chino Hills has countered Watermaster's proposal. At the workshop, Chino Hills expressed a  
11 willingness to participate on a year-to-year basis (instead of a three-year commitment) provided:  
12 (1) it could choose the wells from which production would be modified, (2) if other parties in the  
13 Basin, such as Pomona and CIM, agree to participate (if not this year, then in the near future), and  
14 (3) Chino withdraws its Motion under Paragraph 15 of the Judgment. (Workshop Transcript, pp.  
15 125-130.)

16 A party's voluntary reduction of production pursuant to the Interim Plan is not to be  
17 construed as an admission of liability:

18 The parties to the Judgment agree to enter into this Interim Plan voluntarily and in  
19 exchange for the benefits provided, agree to abide by its terms. Except for their  
20 agreement to proceed in accordance with the provisions of this interim plan and the  
21 Judgment, all parties are expressly reserving all claims, rights and defenses as to all  
22 matters. The parties to the Judgment do not waive their respective rights regarding  
23 interpretation of the Judgment, the OBMP Implementation Plan, the Peace  
24 Agreement or other provision of law. No party to the Judgment may use the fact that  
25 any other party elected to voluntarily reduce production and receive Substitute Water  
26 [or Alternative Water] as evidence of any fact, in any legal or equitable proceeding  
27 of any kind.

28 (Interim Plan, § 7(a), pp. 8-9.)

Watermaster's proposals for Substitute Water or Alternative Water are not to be construed  
as the only voluntary measures in the Interim Plan. "[A]ll parties to the Judgment that own or operate  
wells [within MZ1] are encouraged to consider voluntary measures that may facilitate the goals of  
this Interim Plan." (Interim Plan, § 6, p. 8.) The concept of other "voluntary measures" was

1 discussed at the workshop. (See, e.g., Workshop Transcript, pp. 17-18, 94, 109, 139.) No specific  
2 examples were suggested.

#### 3 **4. Monitoring Long-Term Balance of Recharge and Production**

4 The written Interim Plan does not contain a discussion regarding the balance of recharge and  
5 production. At the workshop, it was pointed out that the OBMP recharge elements include an  
6 introduction of 6,500 acre-feet of wet water in MZ1 for a five-year period. (Workshop Transcript,  
7 p. 15.) However, neither the Interim Plan nor the workshop adequately addressed the concepts of  
8 achieving a balance of recharge and production, and the related provisions for the 6,500 acre-feet  
9 of recharge in MZ1.

#### 10 **5. Identification of Data Needs and Knowledge Deficiency**

11 “Watermaster will proceed with a comprehensive monitoring program for all of MZ1 in  
12 accordance with Program Element Four.” The monitoring plan includes (1) the installation of  
13 extensometers and piezometers; (2) the development of a list of wells to be studied; (3) regular  
14 review of technical data with periodic reports to the Technical Group (at least twice a year). (Interim  
15 Plan, § 2, p. 4-5.) The implementation status of the installation of extensometers and piezometers  
16 is covered in the technical discussion below.

17 Watermaster has compiled a list of wells to be studied (Exhibit “C,” attached to the Interim  
18 Plan). Other wells may be added to the study group “where supported by sound scientific data.”  
19 (Interim Plan § 2, p. 4.) In developing the list of wells included in Exhibit “C”, Watermaster took  
20 an expansive view and tried to list wells in an area for which it could seek a voluntary reduction and  
21 which also had the prospect of providing useful information. (Workshop Transcript, p. 86.)

22 Regarding the review of technical data and periodic reporting to the Technical Group, at the  
23 workshop it was explained that the development of a monitoring program is to be performed by  
24 Watermaster and then submitted to the Technical Group for advisory review. (Workshop Transcript,  
25 p. 59.) The Interim Plan provides “Watermaster will consider recommendations from the Technical  
26 Group but it reserves its discretion to determine what portion of its annual budget will be allocated  
27 for the monitoring program.” (Interim Plan § 2(c), p. 5.) At the workshop Watermaster indicated  
28 that it hoped to have a proposed program for study submitted to the Court by October 1, 2002.

1 (Workshop Transcript, p. 29.)

2 **6. Long-Term Plan Cost Allocation Concerns**

3 The components of a long-term plan are not identified in the Interim Plan. With regard to  
4 the formulation of a long-term plan, it is noteworthy that Watermaster's Interim Plan carefully limits  
5 the financial obligations undertaken as part of the Interim Plan. When Watermaster transmitted the  
6 Interim Plan to the Court on June 17, 2002, it attached its June 13/17, 2002, Staff Report on the  
7 Interim Plan. One of the issues addressed in that Staff Report was the concern of other producers  
8 outside of MZ1 who have asserted "... they are being asked to unfairly subsidize Watermaster  
9 efforts to implement the Interim Plan." Their specific concern reportedly related to "the financial  
10 burden of acquiring Substitute Water." The staff commented that the costs of substitute water for  
11 the Interim Plan were to be shared with parties outside of MZ1: "However, all parties to the  
12 Judgment benefit from a well-managed basin." The Watermaster went on to note:

13 Furthermore, the proposed Interim Plan has been amended to make it clear that the  
14 only costs that Watermaster is going to incur are those provided in the Interim Plan  
15 and as set forth in Exhibit F (See Paragraph 4c.) and that the matter is not precedent  
16 for further Watermaster action. (Recital "G".) The projected financial impact is also  
17 nominal. (Approximately 75 cents per acre-foot for each of the three years.) Staff  
18 recommends no change.

17 Recital G of the Interim Plan provides:

18 G. . . . The agreement or acquiescence by any party to the Judgment with regard to  
19 Watermaster's decision to implement the Interim Plan by securing Substitute Water  
20 for eligible parties shall not be considered a waiver of their right to object to or  
21 oppose future Watermaster actions or to further contest the propriety of proposed cost  
22 allocation among parties to the Judgment. . .

21 4(c) No Commitment. Nothing herein shall commit Watermaster or any party to the  
22 Judgment to fund water system improvements for the benefit of any party to the  
23 Judgment or to buy water made available by Watermaster instead of that provided  
24 pursuant to paragraph 3. Moreover, no party to the Judgment which extracts and uses  
25 water solely outside MZ1 shall be required to bear any expenses other than as  
26 expressly provided for in this Interim Plan, including but not limited to Exhibit "F"  
27 herein, for implementation of the Interim Plan, without its written consent or further  
28 Watermaster action in accordance with the Judgment.

26 [Exhibit F describes the calculation of the supplemental water cost.]

27 On June 29, 2002, Watermaster made further report on the progress of the Interim Plan  
28 "stakeholder process." In that report, Watermaster discussed the fact that the Interim Plan: "...

1 acknowledges that expenses associated with implementation of the Interim Plan must be fairly and  
2 reasonably allocated in accordance with the Judgment, the Peace Agreement and the OBMP.” (Page  
3 4, lines 12-14.) The Watermaster provided no further discussion of this issue at the workshop.

#### 4 **C. Technical Discussion and Analysis**

5 The Interim Plan for MZ1 has followed a generally similar format but has evolved to some  
6 degree from its initial description in the OBMP Phase 1 Report to the plan submitted to the Court  
7 in June, 2002 and presented at the workshop. For all practical purposes, the Interim Plan in the  
8 OBMP Phase 1 Report is identical to the original discussion of an Interim Plan in the Task  
9 Memorandum on OBMP Program Element 4 – Develop and Implement Comprehensive  
10 Groundwater Management Plan for Management Zone 1 (Wildermuth Environmental, April 1999).

11 Those descriptions of an Interim Plan included five activities:

- 12 • Voluntary modification of groundwater production patterns in MZ1 for a five year  
13 period. Because there was noted to be some indication that deep aquifer production  
14 beneath the City of Chino had contributed to (then) recent subsidence and fissuring,  
reduction or elimination of deep aquifer production was deemed to be a logical short-  
term mitigation strategy.
- 15 • Balance recharge and production in MZ1.
- 16 • Determine gaps in knowledge, most notably regarding the nature and extent of  
17 subsidence and fissuring, and the exact causes of subsidence and fissuring.
- 18 • Implement a process to fill the gaps in existing knowledge, including hydrogeologic,  
19 geophysical, and remote sensing investigations of MZ1, as well as monitoring such  
parameters as piezometric levels, groundwater production, water quality, ground  
levels, and subsidence.
- 20 • Formation of a long-term management plan which would include goals, activities to  
21 achieve those goals, and a means to evaluate the success of the plan.

22 Program Element 4 in the OBMP Implementation Plan includes basically the same five  
23 activities listed above. The only notable difference is that the voluntary modifications to  
24 groundwater production patterns are no longer noted to be for a five year period. It was also noted  
25 at that time that the cities of Chino and Chino Hills as well as the State of California had voluntarily  
26 reduced their production in the vicinity of recent ground fissures in fiscal year 1999/2000.  
27 Presumably, since no substitute water supply was available at that time, the voluntary reduction of  
28 pumpage near then-recent fissures was offset by increased pumping elsewhere (within or beyond

1 MZ1) in order for Chino, Chino Hills and the State to meet their respective water demands.  
2 Unfortunately, there has been no reporting or other discussion of the details of pumping reduction  
3 (or relocation) in 1999/2000, nor has there been any reporting or discussion of any ongoing or other  
4 pumping reductions or relocations in subsequent years (2000/2001 or 2001/2002).

5 The Watermaster Interim Plan for Management of Subsidence submitted to the Court (June,  
6 2002) contains four components: voluntary modifications to groundwater production patterns in  
7 MZ1; monitoring the long-term balance of recharge and production within MZ1; identification of  
8 data needs and knowledge deficiency; and an effort to bridge gaps in the knowledge base and lead  
9 to the proper formulation of a long-term plan. The goal of implementing those Interim Plan  
10 components is stated to be minimizing subsidence and fissuring, or reducing them to tolerable levels.

11 The submitted Interim Plan includes the following terms:

- 12 • Formation of a Technical Group of parties producing from MZ1, with one  
13 representative each from Chino, Chino Hills, Ontario, Upland, Pomona, Monte Vista  
14 Water District, Southern California Water Company, Chino Institute for Men, and  
15 the Agricultural Pool.
- 16 • Monitoring program that includes extensometers and piezometers, and a list of initial  
17 wells.
- 18 • Delivery of a substitute supply of water, in an amount up to 3,000 acre-feet, for each  
19 of the first three years that the Interim Plan is in effect; substitute water may be  
20 delivered to certain pumpers in MZ1 to replace pumpage from a number of their  
21 wells (forbearance of pumping).
- 22 • Conditions on participation that include reduction in production for a period of nine  
23 months each year (October 1 through June 30) and right to resume pumping during  
24 the remaining three months each year; contingency of pumping reductions on  
25 availability of substitute water supply; and continuation of monitoring in MZ1  
26 throughout the year.
- 27 • Other voluntary measures that may facilitate the goals of the Interim Plan, which are  
28 to minimize subsidence and fissuring, or reduce them to tolerable levels.
- No acknowledgment of liability or waiver of rights as regards causes and effects  
related to subsidence and fissuring.

25 The Interim Plan submitted to the Court has an initial term of three years, after which it is to be  
26 either extended, amended, or replaced by a Long-Term Plan to abate or reduce subsidence or  
27 fissuring. The term of the Interim Plan is not clear; testimony at the workshop indicated it might be  
28 three to five years, it is "short term," and that "it's definitely less than a ten- or twenty-year

1 program.” (Workshop Transcript, pp. 14, 101.)

2 As presented by Watermaster at the workshop, the Interim Plan has three goals (instead of  
3 the one goal in the written submittal) and is comprised of four components. The goals include  
4 minimizing subsidence and fissuring in the short term, collecting information necessary to  
5 understand the extent and causes of subsidence and fissuring, and formulating a long-term  
6 management plan. The components of the Interim Plan, as presented, include determination of gaps  
7 in knowledge, implementation of a process to fill those gaps, voluntary modifications in pumping,  
8 and other voluntary measures that Watermaster may recommend.

9 There was considerable discussion at the workshop regarding the “iterative” nature of the  
10 Interim Plan. The Interim Plan is to “provide a bridge to . . . [the] long-term plan.” (Workshop  
11 Transcript, p. 14.) The Interim Plan is: “an iterative interim plan. It’s not a long-term plan; it’s not  
12 the final interim plan. That’s the purpose of having a technical group, and it is only for the duration  
13 of three years. It can be rolled over and extended if necessary.” (Workshop Transcript, p. 81.) The  
14 Interim Plan

15 is an adaptive and iterative plan because this [technical] group is going to be meeting  
16 frequently and Watermaster is collecting data. And as it collects data and learns  
17 more, there may need to be new elements added or corrections . . . made and  
directions changed. And the [technical] group is very strong and they didn’t want to  
commit to an extensive five- or seven-year program now before they knew more.

18 (Workshop Transcript, p. 85.) The Interim Plan is “not intended to be the final word.” (Workshop  
19 Transcript, pp. 105-106.)

#### 20 1. Interim Plan Goals and Issues

21 As introduced above, the concept of an Interim Plan related to subsidence in MZ1 has  
22 followed a generally similar format since 1999. However, given the differences between the written  
23 goals and plan components submitted to the Court and the described goals and components presented  
24 at the workshop, it is not exactly clear what the goals and objectives of the Interim Plan are. For  
25 example, whether the monitoring of the long-term balance of recharge and production in MZ1 is part  
26 of the Interim Plan is unclear (included in the written descriptions but excluded from the Workshop  
27 presentation). Further, the goals of the Interim Plan are inconsistently stated, as illustrated in the  
28 following table:

<b>Interim Plan Goals and Components</b>		
	<b>As Submitted to Court (June 2002)</b>	<b>As Presented at Workshop (August 29, 2002)</b>
<b>Goals</b>	Minimize subsidence and fissuring, or reduce to tolerable levels	Minimize subsidence and fissuring in the short term.  Collect information to understand extent and causes of subsidence and fissuring.  Formulate long-term plan.
<b>Components</b>	Voluntary modifications of pumping patterns in MZ1.  Monitoring long-term balance of recharge and production in MZ1.  Identify data needs and knowledge deficiency.  Effort to bridge knowledge gaps and lead to formulation of long-term plan.	Voluntary modifications of pumping patterns in MZ1    Determination of gaps in knowledge.  Implementation of process to fill knowledge gaps.  Other voluntary measures.

Ironically, it would seem that some of the confusion arises from the fact that, ultimately, the primary goal of managing subsidence and fissuring, i.e. the Long-Term Plan, is most likely to be to minimize them, or reduce them to tolerable levels. Having the same goal for an Interim Plan prior to having a definition of the extent and causes of the problem begs questions about how an apparently arbitrary (and small) amount of pumping reduction in a very localized part of MZ1 can accomplish such a goal. To place the magnitude of pumping reduction in context, assuming that pumping is reduced as reflected in the Interim Plan submitted to the Court (it remains unclear whether Chino Hills will participate), the pumping reductions will be limited to one very local part of MZ1 and will equate to a reduction in pumpage equal to about 13 percent of the combined average daily water demand of Chino and Chino Hills only, for the nine month period of October through June. On an annual basis, the pumping restrictions would equate to about nine percent of the year-round combined water demand of Chino and Chino Hills. While it is possible that such a reduction could accomplish "minimizing subsidence and fissuring, or reducing them to tolerable

1 levels” (or “minimizing subsidence and fissuring in the short term”), there has been no technical  
2 analysis or even system-wide (MZ1) conceptualization to suggest that such will be the case.

### 3 **2. Workshop Technical Presentation**

4 The presentation of the Interim Plan at the workshop was divided into four parts:

- 5 • problem description and problem area
- 6 • Interim Plan components
- 7 • Interim Plan constraints
- 8 • Interim Plan implementation status

9 Of those four parts, the great majority of the presentation was devoted to the description of the  
10 subsidence problem and its areal extent, including discussion of the general hydrogeology of MZ1  
11 and the development of a focused subsidence investigation (“monitoring program”). With regard  
12 to the other two parts of the presentation, Interim Plan components and constraints, the primary  
13 focus was on formation of a Technical Group and voluntary pumping reductions with substitute  
14 water supply.

#### 15 **a. Technical Group**

16 The formation of a Technical Group is considered to be a key element of the Interim Plan  
17 as it provides a forum, for all pumpers in MZ1, where scientific information, technical input, and  
18 peer review can be exchanged, ultimately for the benefit of Watermaster, without compromising  
19 confidentiality.

20 The task of the Technical Group is to assist Watermaster in the development of  
21 recommendations for consideration and potential action by Watermaster under the Interim Plan. The  
22 Technical Group also has the task of providing assistance to Watermaster in the development of a  
23 long-term subsidence plan. The respective roles of Watermaster and the Technical Group were  
24 clarified at the workshop, particularly the point that the Technical Group’s role is advisory to the  
25 Watermaster, and that the Technical Group has no veto power over actions to be taken. (Workshop  
26 Transcript, pp. 63-65.)

#### 27 **b. Voluntary Pumping Reductions and Constraints**

28 A substitute water supply, in an amount up to 3,000 acre-feet, has been secured from the



1 Metropolitan Water District of Southern California and Inland Empire Utilities Agency via the Water  
2 Facilities Authority (WFA). The substitute water supply is intended to be made available to pumpers  
3 in MZ1 who volunteer to forbear pumping when the substitute water supply is available. In this  
4 case, due to limitations in WFA pipeline capacity, the substitute water is only available between  
5 October 1 and June 30. Another indicated constraint was that potential forbearance participants  
6 needed access to their wells during the peak demand months, e.g. July through September, and that  
7 was the reason for a nine-month forbearance period per year. Ultimately, however, Watermaster  
8 identified that its analysis of WFA pipeline capacity was the limiting constraint in terms of delivery  
9 of substitute water; Watermaster determined that there is no surplus pipeline capacity during July  
10 through September for conveyance of substitute water to forbearance participants.

11 As of the date of the Workshop, the City of Chino had volunteered to forbear a total of 1,500  
12 acre-feet of pumpage from three of its wells (Wells 4, 6, and 12) for a three-year period. This  
13 represents about a 50 percent decrease in pumping from those three wells (when compared to  
14 average pumping from them over the last seven years).

15 It is unclear whether any other forbearance of pumping will be implemented under the  
16 Interim Plan. The Court submittal indicated that 1,500 acre-feet of forbearance by Chino Hills, from  
17 some combination of nine of its wells, was also to be part of the Interim Plan for a three-year period.  
18 As presented at the Workshop, Chino Hills indicated a willingness to participate for one year, but  
19 expressed concerns about ambiguity in the Interim Plan, that the area of subsidence study is too  
20 small, and that a broader range of other voluntary measures is needed. Chino Hills also indicated  
21 a willingness to participate on certain conditions, including that it have annual discretion regarding  
22 participation and selection of wells to be operated. However, whether Chino Hills will be forbearing  
23 any pumping and taking substitute water remains an open question.

24 **c. Problem Description and Problem Area**

25 As presented by Watermaster, the principal problem in the MZ1 area is a combination of land  
26 surface subsidence and ground surface fissuring. The problem has been identified by a combination  
27 of ground level surveying, observation of fissures, and mapping of Interferometric Synthetic  
28 Aperture Radar (InSAR) images. Based on those indicators from 1987 to 2001, Watermaster has

1 identified a primary area of subsidence generally bounded by Riverside Drive and Chino Hills  
2 Parkway on the north and south, respectively, and by Ramona Avenue and Central or Benson  
3 Avenue on the west and east, respectively. It appears that the great majority of the focus of  
4 investigating subsidence, as discussed below, is in that small area of MZ1.

5 For its identified primary area of subsidence, Watermaster has chosen the time period 1987  
6 to 2001 to illustrate the magnitude and rate of subsidence. In the approximate center of  
7 Watermaster's primary area, total subsidence has been about 2.5 feet since 1987. The rate of  
8 subsidence in that area has declined with time: again in the approximate center of Watermaster's  
9 primary area, subsidence was about one foot from 1987 to 1993, another foot from 1993 to 1995,  
10 and about 6 inches between 1995 and 2001 (including almost no change between spring 2000 and  
11 fall 2001). Ultimately, through detailed monitoring described below, Watermaster is investigating  
12 and intends to more precisely define the rate and magnitude of subsidence, the vertical components  
13 of total subsidence (i.e. which layer(s) are consolidating, how much, and at what rate), and what it  
14 calls the "forcing functions" that drive subsidence, i.e. the physical factors that cause subsidence.

#### 15 d. Hydrogeology of MZ1

16 In Watermaster's description of MZ1, it is characterized by a large amount of saturated, fine-  
17 grained sediments that form multiple aquifers: generally a shallow unconfined aquifer and a deeper  
18 confined aquifer. Unconfined aquifer conditions occur above a depth of about 250 feet, below which  
19 is a major fine-grained confining bed, about 150 to 250 feet thick, that confines a deeper aquifer to  
20 depths below 1,000 feet. The overall area is also characterized by a predominance of fine-grained  
21 sediments in the upper 100 feet of the subsurface.

22 Groundwater levels in MZ1 today have declined well below the uppermost fine-grained  
23 materials, resulting in the currently unconfined nature of the shallow aquifer. Historically (early  
24 1900's), however, a large part of the MZ1 area was reported to be "artesian", with groundwater  
25 levels at or above the ground surface. The latter suggests that the entire subsurface horizon was  
26 saturated at that time. Prior to the Judgment, shallow groundwater levels had declined to about 150  
27 feet below the surface in Watermaster's primary area of subsidence; they may have declined even  
28 more in other parts of MZ1. Since the Judgment, groundwater levels in Watermaster's primary area

1 of subsidence have increased slightly, and are now in a general range of about 100 to 130 feet below  
2 the surface.

3 The history of groundwater levels in the deeper aquifer is not as well documented as for the  
4 shallower aquifer. Limited data presented by Watermaster show substantial fluctuations, in one deep  
5 well in the primary subsidence area, in the very large range between about 80 and about 350 feet  
6 below the ground surface since 1989.

7 The above-described hydrogeologic conditions lead to Watermaster's current "working  
8 hypothesis" that there is a relationship among groundwater production, groundwater levels, and  
9 subsidence. In turn, it is that working hypothesis that leads to the voluntary pumping reduction  
10 component of the Interim Plan: if subsidence results from groundwater level changes associated with  
11 pumping, then some amount of pumping reduction (forbearance) could contribute to a decrease or  
12 stabilization of subsidence while the overall subsidence phenomenon is further studied and a long-  
13 term plan for management and control of subsidence is formulated.

14 **e. Subsidence Investigation and Monitoring**

15 A constant theme throughout the evolution of the Interim Plan has been that there remain  
16 some gaps in knowledge about the nature and extent of subsidence and fissuring in MZ1, and about  
17 the exact causes of subsidence and fissuring. In response to that concern, a similarly consistent  
18 theme has been an intent to implement a process to fill those gaps via further detailed investigation  
19 of MZ1, including the monitoring of such parameters as piezometric levels (groundwater levels),  
20 groundwater production (pumping), groundwater quality, ground surface levels, and subsidence, all  
21 intended to provide a better understanding of subsidence and its forcing functions.

22 Watermaster has begun an expanded and more detailed program of monitoring and analysis  
23 in its area of primary subsidence. Watermaster has also indicated that its expanded and more  
24 detailed monitoring program is a component of its Interim Plan; however, there is no clear nexus  
25 between the monitoring program and the other notable component of the Interim Plan, voluntary  
26 pumping reductions. Simply summarized, Watermaster has commenced an extensive and detailed  
27 monitoring program in part of MZ1, as described below; it appears that the monitoring program will  
28 capture (observe) whatever physical conditions otherwise occur in the immediate vicinity of

1 Watermaster's area of primary subsidence, whether there are voluntary pumping reductions or not.  
2 While the monitoring program will coincide with Interim Plan actions such as voluntary pumping  
3 reductions, the monitoring program is fundamentally focused on determining the nature, extent,  
4 causes, rate, and potential control of subsidence and fissuring; it is also intended to ultimately  
5 monitor the performance of whatever long-term plan is implemented. The voluntary pumping  
6 reductions are neither part of nor essential for the extensive and detailed monitoring program.

7 The investigation and monitoring of subsidence in MZ1 is comprised of several parts:  
8 installation of piezometers and extensometers, to be followed by data collection from them; ground  
9 surface surveys; InSAR mapping (remote sensing of ground surface deformation) over the entire  
10 basin; collection of water level and pumping data; detailed aquifer testing; and analysis and  
11 interpretation by Watermaster, apparently with advisory participation by the Technical Committee.

12 Some details regarding these various parts are summarized as follows:

- 13 • The piezometers are two multiple completion monitoring well installations in Ayala  
14 Park, in Chino. Each of the two installations is intended to have five or six  
15 individual small diameter (two inch) wells completed (perforated) opposite selected  
16 aquifer (generally, coarser grained, water bearing) or aquitard (generally, fine-  
17 grained, non-water bearing) materials. The intent of the multiple completions is to  
18 allow measurement of water levels (and water level differences) in a lengthy range  
19 of individual subsurface materials throughout the entire horizon from which ground  
20 water is pumped (or could be pumped), including aquitards within or between the  
21 aquifers, down to the base of aquifer materials (to bedrock) at about 1,200 feet below  
22 the ground surface. The utility of the piezometers is that data collected from them  
23 will allow interpretation and understanding of how the fine-grained materials slowly  
24 drain to the coarser grained aquifer materials in response to more rapid pumping  
25 impacts on water levels in those coarser grained aquifers where the production wells  
26 are completed.
- 27 • The extensometers will also be two well-like installations, in close proximity to the  
28 piezometers in Ayala Park. Each of the extensometers will be anchored in the  
ground, at different depths, to measure the amount of total ground displacement  
above its embedded anchor point. The resultant measurements, continuously  
recorded, can be interpreted in combination with the piezometer data, to determine  
the relationships between pore pressures (water levels in the finer-grained materials)  
and deformation (subsidence) of the overall aquifer/aquitard system.
- Ground surface surveys, in combination with observations of ground fissures, have  
historically been the primary means for detecting the locations and magnitude of land  
subsidence and fissuring. Continuation of ground surface surveys, organized at  
benchmarks along selected profiles (lines) across subsided or subsiding areas, will  
be used to determine both vertical and horizontal ground surface deformation.
- InSAR mapping is produced from remote (satellite) imaging of the ground surface;  
interpretation of multiple images over selected time periods allows interpretation of

1 the amount and rate of subsidence (or uplift) of the ground surface over those  
2 periods. Watermaster currently plans to expand its mapping and interpretation of  
InSAR data to cover the entire basin.

- 3 • Groundwater level and production data are being collected throughout the basin as  
4 part of OBMP Program Element 1. In MZ1, and particularly within Watermaster's  
5 primary area of subsidence, an increase in the frequency of data collection is intended  
6 to be coupled with detailed water level data from the piezometers, ultimately coupled  
7 with the detailed ground deformation data from the extensometers, to tie regional  
8 water levels and pumping impacts to the site-specific and detailed response at the  
9 piezometers and extensometers.
- 10 • Aquifer testing (controlled pumping test of one or more production wells) is planned  
11 during the initial intensive data collection effort after piezometer construction, and  
12 possibly after the extensometers are installed. The intent of the initial testing will be  
13 to determine the water level responses to pumping at the various piezometer  
14 completion depths, all as input to the design of the extensometers. The initial testing  
15 will also be interpreted as a basis for designing possible longer-term testing after the  
16 extensometers are in place. Watermaster is developing details of its desired aquifer  
17 testing, which will apparently be partially contingent on cooperation by nearby  
18 pumpers.
- 19 • Watermaster staff is to both implement all the preceding parts of the investigation  
20 and monitoring of subsidence, and is also to regularly review the technical data and  
21 make periodic reports to the Technical Group (at least semiannually). It appears that  
22 the Technical Group is to then provide feedback and direction. Watermaster is also  
23 to develop a long-term management plan for MZ1 as provided in OBMP Program  
24 Element 4. The Technical Group is to assist and advise in the development of the  
25 long-term plan; it is also supposed to prepare some form of "work product" in that  
26 regard, but the nature of that work product is not specified.

#### 17 f. Status of Monitoring

18 As described above, monitoring related to subsidence in MZ1 is comprised of several parts:  
19 installation of piezometers and extensometers, followed by data collection from ground-surface  
20 surveys; InSAR mapping (remote sensing of ground surface deformation) over the entire basin;  
21 collection of water level and pumping data; and some detailed aquifer testing (pumped well testing).

22 The status of each can be summarized as follows:

- 23 • In the Interim Plan submitted to the Court, the piezometers and extensometers were  
24 to be installed by September, 2002. Actually, the piezometers, which are currently  
25 under construction, are scheduled to be completed in September, with data collection  
26 (primarily water levels) to commence immediately thereafter. The final design of the  
27 extensometers is to be based on initial data collected from the piezometers, indicated  
28 to be three months of intensive monitoring; as a result, the extensometers are  
expected to be installed about four to six months after the piezometers.
- Watermaster is in the process of delineating lines (profiles) along which regular  
ground surveys will be made, along with coordinated surveying of selected  
benchmarks.

- 1 • InSAR (remote sensing) mapping is an ongoing effort.
- 2
- 3 • Watermaster will be asking pumpers in its area of primary subsidence for cooperation
- 4 in the collection of pumping and water level data, initially during its period of intense
- 5 piezometer monitoring, and subsequently during its integrated collection of water
- 6 level (piezometer) and subsidence (extensometer) data; details of monitoring
- 7 (frequency of water levels, pumping capacities, pumping cycles, etc.) are being
- 8 developed; Watermaster is hopeful of cooperation by the pumpers.
- 9
- 10 • Watermaster also hopes that it can conduct some specific aquifer testing (pumped
- 11 well testing) at production wells near the piezometers during the initial three-month
- 12 data collection period immediately following piezometer construction; such tests are
- 13 expected to each extend for about a week. Watermaster would like pumpers to
- 14 cooperate in the operation of selected wells for testing purposes (ideally, the pumper
- 15 can adjust operations to take the discharge from the “tested” well into its water
- 16 storage and distribution system in such a way that it continues with regular water
- 17 supply, and “testing” is simply a detailed measurement effort during pumping; there
- 18 is then no need to discharge water from the system and no requirement for substitute
- 19 water during the “test”. Alternatively, the testing can be done during periods of non-
- 20 peak water demand when any given “tested” well is not critical to meeting water
- 21 demand for the period of the test.
- 22

### 23 3. Conclusions

24 From a technical perspective, a number of conclusions can be drawn about Watermaster’s

25 Interim Plan, and about its broader investigation of subsidence and ground fissuring. Attempts to

26 reconcile OBMP Program Element 4 with Watermaster’s Interim Plan for MZ1 suggest that there

27 are some questions regarding causes of subsidence and ground fissuring in MZ1. Despite apparent

28 conflict and debate as a result of those questions, Watermaster has developed and is pursuing a

29 detailed investigation to test its “working hypothesis” that there is a cause-and-effect relationship

30 among groundwater levels, groundwater pumping, and subsidence/fissuring.

31 Watermaster’s detailed investigation of subsidence is focusing on an area described as the

32 primary area of subsidence within MZ1. That investigation is centered around the installation and

33 monitoring of a set of piezometers to measure groundwater levels and pore pressures in various

34 aquifer and aquitard materials throughout the subsurface, and the installation and monitoring of two

35 extensometers to measure elastic and inelastic ground deformation. The piezometer and

36 extensometer data will be combined with ground surveys, remote sensing of the ground surface,

37 collection of water level and pumping data from production wells, and dedicated aquifer testing, to

38 better define causes of land subsidence and ground fissuring. The ultimate objective of

1 Watermaster's MZ1 subsidence investigation is to develop a long-term management plan for MZ1  
2 that will control subsidence.

3 Watermaster's detailed investigation of land subsidence and ground fissuring in MZ1 does  
4 not include any reduction of pumping that is integral to the investigation. Although packaged with  
5 the detailed investigation of land subsidence and ground fissuring in its Interim Plan, the planned  
6 forbearance of some pumping in MZ1 is an arbitrary, negotiated action that is not really part of the  
7 detailed study of subsidence. Strictly speaking, while it is consistent with Watermaster's current  
8 working hypothesis that there is a cause-and-effect relationship among pumping, groundwater levels,  
9 and subsidence/fissuring, there is no quantitative analysis to support whether the proposed  
10 forbearance (up to 3,000 acre-feet per year for three years) will accomplish its stated goal to  
11 minimize subsidence and fissuring in the short term, or reduce them to tolerable levels. Rather, the  
12 concept of forbearance appears to be a carry-over from the early development of OBMP Program  
13 Element 4, and from a continuation of PE 4 through the OBMP Implementation Plan, that there is  
14 some relationship between pumping and subsidence, and that there should thus be some reduction  
15 in pumpage to improve subsidence-related conditions while a more complete understanding of the  
16 subsidence issue is developed. The quantity of pumping forbearance in the Interim Plan is  
17 apparently the result of water availability and pipeline conveyance capacity, but not the result of any  
18 quantitative analysis associated with accomplishing the stated goal of the Interim Plan.

19 The concept of forbearing some pumpage and importing a substitute water supply as an  
20 interim action, and potentially even as part of what might develop as a long-term plan, is consistent  
21 with the type of action most likely required to control subsidence in light of the geologic setting,  
22 historic groundwater conditions, and experienced subsidence in MZ1. In that regard, forbearance  
23 of some pumping is consistent with Watermaster's current "working hypothesis." Stated another  
24 way, Watermaster's current "working hypothesis" is consistent with, and supported by, the current  
25 level of knowledge, data and knowledge gaps notwithstanding, of the geologic setting, groundwater  
26 conditions, and experienced subsidence and ground fissuring in MZ1.

27 In light of the preceding, the forbearance of some pumping and the utilization of an imported  
28 substitute water supply in part of MZ1 is likely to contribute toward some reduction or stabilization

1 of subsidence and ground fissuring. Unfortunately, there is no estimated or quantified expectation  
2 in terms of results. Given the small, localized, and intermittent reduction in pumping in the Interim  
3 Plan, it is difficult to envision a substantial effect and associated beneficial result. For the same  
4 reasons, it seems that it will be fortuitous rather than by design if the Interim Plan's forbearance  
5 accomplishes its goal of minimizing subsidence and fissuring.

6 As packaged and presented, the Interim Plan is really more of a collection of independent but  
7 generally related actions, or tracks, than it is a plan. The detailed monitoring and analysis track is  
8 an important action toward ultimately understanding the subsidence phenomenon better, and as a key  
9 input to the ultimate design of a long-term management program. Continuation of the monitoring  
10 work will be invaluable in then assessing the performance of the long-term management plan. The  
11 forbearance track, on the other hand, is not essential to the monitoring track. However, since it is  
12 both consistent with Watermaster's "working hypothesis" of subsidence cause-and-effect, and a  
13 logical piece of what could become a long-term management plan to control subsidence, it is likely  
14 a worthwhile action despite the question as to whether it can accomplish its stated goal.

15 Finally, the formation of a Technical Committee as part of the monitoring track is a good  
16 approach to convening and considering a cross-section of expertise on the investigation and ultimate  
17 control of subsidence. In its description of the subsidence problem and the problem area,  
18 Watermaster describes a hydrogeologic setting and conditions throughout MZ1 that are conducive  
19 to historical, and potentially ongoing subsidence comparable to what has occurred in its area of  
20 primary subsidence. In light of that description, it is possible, perhaps even logical, to suspect that  
21 the monitoring and analysis effort may be too localized in focus to be able to conclude a long-term  
22 plan for the entire MZ1, which is the scope of OBMP Program Element 4. As a result, a logical  
23 early task for the Technical Committee ought to be to assess whether the current monitoring and  
24 analysis effort can be extrapolated throughout MZ1, or whether the focal area of Watermaster's  
25 monitoring and analysis should be expanded.

26 **D. Pending Motions (Pleading History)**

27 **1. Procedural History**

28 In early December 2001, the City of Chino Hills ("Chino Hills") filed with the Court a



1 petition for writ of mandate against the City of Chino (“Chino”), and requested the matter be  
2 specially assigned to Judge Gunn in Department 8, who has been assigned to hear all matters in the  
3 instant action. The Supervising Civil Judge determined that the petition for writ of mandate  
4 “presents two separate and distinct claims, one of which arises under Article IV, paragraph 15 of the  
5 Judgment, the issue of Chino Hills’ right to produce water to meet its water supply needs, as  
6 described in the Judgment...” and a statutory claim unrelated to the Judgment. The claim arising  
7 under the Judgment was assigned to Judge Gunn. (Court Order on Request for Special Assignment,  
8 dated December 19, 2001.) Judge Gunn ordered the parties to appear on February 28, 2002, “to  
9 report on the status of the technical work performed to date by Watermaster and others concerning  
10 subsidence and related issues.” (Court Order Setting Hearing on Chino Hills’ Motion, dated  
11 December 19, 2001.)

12 In response to Judge Gunn’s Order, and before the hearing on February 28, 2002, the  
13 following pleadings were filed:

- 14 • Watermaster Report of Activities and Request for Further Finding and Order.
- 15 • Chino’s Response and Motion Pursuant to Paragraph 15 of the Judgment.
- 16 • Monte Vista Water District’s Motion to Strike Portions of Chino’s Motion.
- 17 • Chino Hills’ Objection to Chino’s Motion.
- 18 • Chino’s Response to Monte Vista’s Motion to Strike.
- 19 • Watermaster’s Motion for Continuance.

20 Watermaster’s Motion for Continuance requested the Court to defer ruling on the pleadings,  
21 because the parties, including Chino and Chino Hills, had reached a consensus to convene a regularly  
22 scheduled stakeholder process to better define all elements of the Program Element 4 of the OBMP,  
23 including an interim management plan for subsidence. (Court Order Continuing Hearing on  
24 Subsidence, dated February 28, 2002.)

25 In granting the continuance, the Court recognized “that if the parties reach agreement on an  
26 interim management plan for subsidence, some, or perhaps all, of the motions before the Court will  
27 be withdrawn.” Watermaster was ordered to convene the stakeholder process and report back to the  
28 Court by May 1, 2002, “on any consensus that has been achieved on how best to further implement

1 OBMP Program Element 4. In addition, the parties that have filed pleadings in connection with the  
2 hearing on subsidence ...” were to file supplemental pleadings by May 16, 2002, updating the Court  
3 on the issues that have been resolved and those that remain unresolved. A hearing was set for June  
4 19, 2002, to set a briefing schedule and a new hearing date for any motions which have not been  
5 withdrawn. (Court Order Continuing Hearing on Subsidence, dated February 28, 2002.)

6 Prior to the hearing on June 19, 2002, Watermaster filed a Report on Progress of Interim Plan  
7 Stakeholder Process. Chino filed a Response to Watermaster’s Report. Watermaster also filed a  
8 Transmittal of Subsidence Interim Plan and Motion to Schedule Workshop, proposing that the Court  
9 order a workshop be held to present to the Court through the Special Referee, the Interim Plan for  
10 Management of Subsidence approved by the various Pool Committees, Advisory Committee and  
11 Watermaster Board. The Court granted Watermaster’s Motion to Schedule a Workshop, ordering  
12 it to be held on August 29, 2002, and directing the Special Referee to file this report. The Court  
13 further ordered that a hearing on the Interim Plan and the Special Referee’s Report will be held at  
14 1:30 p.m. on October 17, 2002. At the hearing the Court also will determine whether to set a  
15 briefing schedule for the City of Chino’s Motion under Paragraph 15 of the Judgment, and any  
16 related motions, or whether to take some or all of the motions off calendar. (Court Order Scheduling  
17 Workshop, etc., dated June 19, 2002.)

## 18 2. Chino Hills’ Petition for Writ of Mandate

19 Chino Hills’ petition for writ of mandate asserts jurisdiction in the Superior Court under  
20 Public Utilities Code section 10101 et seq., and venue in San Bernardino County--specifically in  
21 Dept. 8 of San Bernardino County Superior Court-- since that Court has been designated

22 to hear all disputes among water producers relating to the Chino Basin, pursuant to  
23 the Article IV, paragraph 15 of the final judgment in the case entitled *Chino Basin*  
24 *Municipal Water District vs. City of Chino, et al., San Bernardino Superior Court*  
25 *Case No. 164327, now designated No. RCV 51010 ... and further pursuant to Article*  
26 *X of the Rules and Regulations which is the implementing document ... to a binding*  
*agreement know as the Chino Basin Peace Agreement ... entered into to further carry*  
*out the intent of the Judgment and the Chino Basin Optimum Basin Management*  
*Program....*

27 (Petition, p. 3.) For purposes of the hearing on the Interim Plan scheduled for October 17, 2002,  
28 it is important to note that Chino Hills has filed no separate pleading in this action related to its

1 dispute with Chino concerning its water rights under the Judgment.

2 In the venue portion of the petition, Chino Hills asserts that it “seeks to enforce its right as  
3 a water producer against Chino to produce both the quantity and quality of water to meet its water  
4 supply needs, as covenanted and protected by the Judgment, Rules and the Peace Agreement.”  
5 (Petition, p. 4.) In the prayer for relief, Chino Hills requests (1) a judicial declaration related to  
6 Chino’s encroachment permit process, (2) a peremptory writ requiring Chino to permit Chino Hills  
7 to enter its right of ways to allow completion of a pipeline project known as “Monte Vista  
8 Interconnect Transmission Main” (3) invalidation of Chino’s Urgency Ordinance 2001-08 and  
9 Regular Ordinance 2001-09 related to Chino’s encroachment permit process. (Petition, pp. 26-28.)  
10 For purpose of the October 17 hearing, there is no pending request for relief from the Court in this  
11 action by Chino Hills.

12 **3. Chino’s Motion pursuant to Paragraph 15 of the Judgment**

13 In response to Judge Gunn’s Order “to report on the status of the technical work performed  
14 to date by Watermaster and others concerning subsidence and related issues” Chino filed a Response  
15 and Motion pursuant to Paragraph 15 of the Judgment stating there is “an immediate problem that  
16 cries out for relief.” (Chino’s Response and Motion, p. 1.) Chino asserts that an area consisting of  
17 approximately 200 acres has sunk more than two feet since 1987, which it refers to as the “Area of  
18 Subsidence.” Chino states there is a dispute concerning the cause of the subsidence: Watermaster  
19 and Chino Hills contend that further study is necessary before the cause of the subsidence can be  
20 stated with reasonable certainty; Chino contends that there is sufficient existing data showing that  
21 the cause of the subsidence is deep water pumping by Chino Hills. The evidence filed by Chino in  
22 support of its contention is the City of Chino Subsidence Study, dated January 2002, prepared by  
23 GeoPentech (“GeoPentech Report”). The evidence filed by Watermaster to show that further study  
24 is necessary is the Declaration of Mark Wildermuth, dated January 30, 2002 (“Wildermuth  
25 Declaration”).

26 Chino asserts that “[a]s the studies and discussions about the cause of sinking in the Area of  
27 Subsidence continue, so do the risks of subsidence in that Area.” Chino contends that “[w]hile no  
28 one can predict when the sinking in the Area of Subsidence will cause actual physical damage, it is

1 reasonable to assume that it will occur if the subsidence continues.” Accordingly, Chino requests that  
2 the Court “assume jurisdiction over the land subsidence in the Area of Subsidence within the City  
3 of Chino.” (Chino’s Response and Motion, p. 2.)

4 Chino seeks to have the following issues resolved by the Court:

- 5 (1) Whether the City of Chino Hills’ production of water from the deep aquifers  
6 within the City of Chino is causing land subsidence in an area approximately  
7 200 acres in size that is located along Central Avenue from Schaefer Avenue  
8 on the north to Eucalyptus Avenue on the south; and if so, to fashion a  
9 remedy to abate the land subsidence. (Chino’s Response and Motion, p. 4.)
- 10 (2) Whether Chino Hills [*sic*] proposed purchase of ground water from the  
11 Monte Vista Water District will have the potential to degrade the quantity or  
12 quality of water that Chino now extracts from its northerly wells; and, if so,  
13 to fashion a remedy that will avoid set [*sic*] impacts. (Chino’s Response and  
14 Motion, p. 5.)<sup>7</sup>

11 Chino asserts that it

12 is willing to submit itself to any reasonable process suggested by the Court.  
13 However, Chino is concerned that any process involving Watermaster may not be  
14 viable, because Chino believes the appropriators may be required to finance some  
15 portion of the ultimate remedy. Chino contends that under paragraph 5.4(d) of the  
16 Peace Agreement, a producer such as Chino Hills is entitled to apply “to Watermaster  
17 for reimbursement or credit against future OBMP Assessments for any capital or  
18 operations and maintenance expenses incurred in the implementation of any project  
19 or program, including the costs of relocating ground water production facilities, that  
20 carries out the purposes of the OBMP including but not limited to those facilities  
21 relating to the prevention of subsidence in the basin.” [¶] The City of Chino  
22 welcomes the Court’s resolution of these disputes directly, but understands that the  
23 Court can delegate some aspects of the resolution process to Watermaster or the  
24 special referee. In such an event, Chino will cooperate with any such process but  
25 requests that such a process be reviewed de novo by the Court as required by  
26 paragraph 15 of the Judgment.

20 (Chino’s Response and Motion, p. 5.) In this regard, it is important to note that Chino has not  
21 submitted to Watermaster a formal complaint under Article X section 10.20 of Watermaster Rules  
22 and Regulations. However, Chino did request an opinion as to the availability of such remedies.  
23 Watermaster General Counsel responded that the nine-member board supports a consensus-based  
24 solution. To that end, the Interim Plan was developed and adopted by Watermaster.

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28 <sup>7</sup>Chino withdrew this issue from its motion at the Court hearing held on February 28, 2002.  
(Reporter’s Transcript, p. 6, lines 10.)

1 | **E. Jurisdiction Discussion**

2 | **1. Jurisdiction Questions**

3 | The extent of this Court’s jurisdiction pursuant to Paragraph 15 of the Judgment over  
4 | subsidence within the Chino Basin and, specifically, over subsidence and fissuring that is occurring  
5 | within a 200-acre area of the City of Chino has not been addressed. It is not clear whether it was  
6 | originally intended that every dispute related to groundwater pumping would implicate maintenance  
7 | of the basin’s safe yield, furtherance of the physical solution, and implementation of optimum basin  
8 | management, and therefore would come before this Court under its continuing jurisdiction.

9 | Paragraph 15 provides: “Full jurisdiction, power and authority are retained and reserved to  
10 | the Court as to all matters contained in this Judgment” with several exceptions related to  
11 | redetermination and allocation of safe yield. “The Physical Solution is the heart of the Judgment.”  
12 | (Post-Trial Memorandum at 4.) “A fundamental premise of the Physical Solution is that all water  
13 | users dependent upon Chino Basin will be allowed to pump sufficient waters from the Basin to meet  
14 | their requirements.” (Judgment at ¶ 42.) Limitations on pumping were not imposed because the  
15 | Watermaster was expected to replace any overproduction.

16 | Being able to “pump sufficient waters from the Basin to meet their requirements” was  
17 | distinguished in the Judgment, however, from pumping which might interfere with another pumper’s  
18 | pumping or deprive another pumper of access to water:

19 | 62. Scope of Judgment. Nothing in this Judgment shall be deemed to preclude or  
20 | limit any party in the assertion against a neighboring party of any cause of action  
21 | now existing or hereafter arising based upon injury, damage or depletion of water  
22 | supply available to such party, proximately caused by nearby pumping which  
23 | constitutes an unreasonable interference with such complaining party’s ability to  
24 | extract ground water.

23 | (Judgment at ¶ 62.)

24 | [1.] (a) Pumping Patterns. Chino Basin is a common supply for all persons and  
25 | agencies utilizing its waters. It is an objective in management of the Basin’s water  
26 | that no producer be deprived of access to said waters by reason of unreasonable  
27 | pumping patterns, nor by regional or localized recharge of replenishment water,  
28 | insofar as such result may be practically avoided.

27 | (Judgment Exhibit “T” Engineering Appendix at 79.)

28 | The Post-Trial Memorandum also drew a distinction as to what is and is not precluded by

1 the Judgment:

2 10. Unlawful Pumping Practices. The Judgment does not preclude the prosecution  
3 of any cause of action which may arise with relation to the location on [sic] the extent  
4 of pumping between neighboring well owners which may constitute a wrongful  
5 interfer [sic]. The subject matter of the Judgment is the determination and allocation  
6 of rights in the gross quantity of water representing the safe yield of the ground water  
7 basin.

8 Although it is not stated in a very clear fashion, a distinction is drawn between the “fundamental  
9 premise of the Physical Solution” that water users can pump to meet their requirements without  
10 limitation, and the recognition that the basin is a common supply and pumping should not be allowed  
11 unreasonably to interfere with other pumpers or to create “unreasonable pumping patterns.”  
12 Basically, the Judgment recognizes that a pumper can pump as much water as needed with the  
13 exception that pumping must not unreasonably interfere with other pumpers or create unreasonable  
14 pumping patterns.

15 It is not clear whether the Paragraph 62 distinction and the Engineering Appendix provision  
16 are consistent. On the one hand, Paragraph 62 and the Post-Trial Memorandum indicate a concern  
17 with “well interference,” where two wells might be so close together that the pumping from one  
18 interferes with the pumping from the other. These provisions do not address the potential for  
19 pumping to create other types of damage, such as subsidence. The Judgment intended that at least  
20 some of these one-on-one issues could be addressed through civil actions outside of the Court’s  
21 continuing jurisdiction, but not which ones.

22 On the other hand, the provision on “unreasonable pumping patterns” in the Exhibit “I”  
23 Engineering Appendix of the Judgment implies that Watermaster, as “an objective in management  
24 of the Basin’s waters” would include in its management role such actions as might be necessary to  
25 ensure that “no producer be deprived of access to said waters by reason of unreasonable pumping  
26 patterns. . .” The Watermaster’s role to manage the basin, including managing to avoid  
27 “unreasonable pumping patterns,” suggests that these issues are within the Court’s (and  
28 Watermaster’s) jurisdiction.

Watermaster and at least one party have asserted that the Judgment should be characterized  
as a contract for purposes of interpretation, that principles of contract interpretation apply to the

1 Judgment, and that subsequent conduct of the parties can be relied upon to interpret the Judgment  
2 (presumably only where the meaning of the Judgment is indefinite). Subsequent conduct that would  
3 be relevant includes the OBMP Phase 1 Report, OBMP Implementation Plan, Peace Agreement,  
4 Rules and Regulations, and Interim Plan. All of these contemplate that Watermaster will address  
5 subsidence issues in MZ1. Also contemplated is the concept that groundwater production facilities  
6 may have to be relocated.

7 Watermaster and the parties should address the issue of whether the localized subsidence and  
8 fissuring problem within the City of Chino could be viewed as a Paragraph 62 type of question or  
9 should be addressed by motion under Paragraph 15 as a general basin or OBMP issue. Assuming  
10 subsequent conduct of the parties can be used to interpret the meaning of the Judgment, discussion  
11 of the subsequent documents should be included.

## 12 2. Well Relocation and Cost Allocation Questions

13 There are at least four different cost allocation outcomes if it is determined, whether by a  
14 pumper, Watermaster, or by this Court, that pumping is creating a subsidence problem:

- 15 1. If the pumper voluntarily relocates wells, and by doing so is carrying out a purpose  
16 of the OBMP, the Watermaster pays the cost of relocation.
- 17 2. If the Watermaster compels the party to relocate wells, the Watermaster pays the cost  
18 of relocation.
- 19 3. If a party is “otherwise legally compelled” to relocate wells, the Watermaster does  
20 not pay the cost of relocation.
- 21 4. If there is no relocation of wells, rather there is a replacement or “substitute supply”  
22 of comparable cost and quality, such as the approach taken in the Interim Plan, the  
23 pumper pays an equivalent cost (equivalent to pumping) for substitute water, and  
24 there is no cost of relocation.

25 Is it possible for a party to be “otherwise legally compelled” to relocate wells, where the  
26 parties, when they agreed to the Peace Agreement, Implementation Plan, Rules and Regulations, and  
27 Interim Plan, clearly anticipated the need to relocate wells? The specific issue of subsidence and  
28 fissuring in the limited area within the City of Chino was specifically identified as an OBMP issue.

1 Except with the phrase “otherwise legally compelled,” none of the recent actions have expressed the  
2 intention that the localized area of subsidence and fissuring be treated more in the nature of a well  
3 interference issue than as a basin management and OBMP issue. Is there any other conceivable  
4 situation in which a party might be “otherwise legally compelled” to relocate wells (with the result  
5 that that cost would not be shared)?

6 The question of whether the Watermaster or the Court can order relocation of production  
7 facilities appears to be a different question than whether the Watermaster or the Court can order a  
8 pumper to stop pumping groundwater. The Judgment is clear that it is not the intention of either the  
9 Judgment or its Physical Solution to restrict a pumper from pumping sufficient waters to meet the  
10 pumper’s requirements. Can the Watermaster or the Court require the relocation of facilities in order  
11 to avoid well interference, and possibly to avoid subsidence? Can the Watermaster or the Court  
12 require a pumper to stop pumping if substitute supply is provided to the pumper – the rationale  
13 behind the Interim Plan?

14 The Watermaster’s Interim Plan leaves unanswered the ultimate cost allocation question.  
15 This simply postpones the debate. There are parties who are concerned that Watermaster may want  
16 to take actions which would result in their having to share in well relocation costs (or in the costs  
17 of a substitute supply). Given this tension, the cost allocation issue could impede or overwhelm the  
18 Watermaster’s efforts even to monitor and study subsidence issues, let alone to reach any meaningful  
19 conclusions. For example, the Interim Plan includes pumping reduction as a component of  
20 stabilizing or reducing (to acceptable levels) subsidence and fissuring. Notwithstanding the issues  
21 and questions discussed above about the probability of Interim Plan success, it is difficult at this time  
22 to envision a long-term plan that abandons any pumping reduction and groundwater level  
23 management in MZ1, particularly in light of Watermaster’s current working hypothesis; will such  
24 long-term actions be blocked if cost allocation issues are not resolved?

### 25 III.

### 26 CONCLUSION AND RECOMMENDATION

27 Pursuant to Court Order, the Special Referee held a workshop to allow Watermaster to  
28 present to the Court, through the Special Referee, the details of the “Proposed Watermaster Interim



1 Plan for Management of Subsidence.” This Report and Recommendation includes not only a  
2 technical discussion of the Interim Plan, but discussion of the history leading up to the Interim Plan  
3 and the information obtained at the workshop, in order to provide both historical perspective and an  
4 overall context to the Interim Plan. The Interim Plan, as it now stands, is more in the nature of an  
5 “action” than a “plan,” since it deals with one limited aspect of the overall efforts to address  
6 subsidence issues in the Chino Basin. The Interim Plan would have certain pumpers voluntarily  
7 forbear pumping and instead use a substitute supply of water for a limited period of time, with the  
8 goal of minimizing subsidence and fissuring in MZ1 while a comprehensive program and a long-  
9 term monitoring plan can be prepared and carried out. This forbearance action is distinguishable  
10 from the monitoring plan and ultimate long-term subsidence plan which must be developed.

11 From the engineering perspective, it appears that related issues have been “mixed up” to a  
12 considerable extent. The fact that there is a localized fissuring problem in the City of Chino area is  
13 the impetus for developing the forbearance action in the Interim Plan. At the same time, the ongoing  
14 work to implement an overall monitoring plan and develop a long-term management plan to address  
15 subsidence is largely focusing on the same localized City of Chino area. In other words, the  
16 localized fissuring problem appears to be driving the Watermaster’s approach to subsidence, even  
17 though subsidence may have occurred and be occurring in a larger portion of MZ1. The localized  
18 fissuring problem should not define or limit the overall efforts of Watermaster to address subsidence.

19 One question raised at the workshop was whether the Interim Plan needs to be changed or  
20 amplified in some way in order to be adequate. It is not clear that revising the Interim Plan is the  
21 solution. The record, for example, does not support a conclusion that full implementation of the  
22 Interim Plan, as it now stands, would minimize subsidence and fissuring. There were representations  
23 made at the workshop that “other voluntary measures” might be added to the Interim Plan, but no  
24 examples were offered. Watermaster characterized the Interim Plan as iterative, adaptive, and likely  
25 to be changed over time.

26 The record does not indicate how much pumping would have to be reduced in order to  
27 minimize the subsidence and fissuring. We do not know whether even the full 3,000 acre-feet of  
28 forbearance provided for in the Interim Plan would accomplish that objective. It is clear from the

1 record that 3,000 acre-feet is not a technically derived quantity designed to stop the problem from  
2 getting worse, but is instead equivalent to the quantity of substitute supply that Watermaster can  
3 obtain at this time at a price the parties are willing to pay. If the quantity of forbearance in the  
4 Interim Plan is dictated solely by the amount of available substitute supply and its cost, that leaves  
5 unanswered the technical question of how much forbearance would actually minimize the problem.

6 This concern is not one that can readily be addressed by simply revising the Interim Plan.  
7 If the Interim Plan does not “minimize” subsidence and fissuring in the localized area of the City of  
8 Chino, the parties should be able to obtain relief from this or some other court to “minimize” the  
9 problem while awaiting conclusions of the monitoring work that is being and will be done and  
10 development of the ultimate long-term plan.

11 The overall conclusion, in the view of the Special Referee, is that it is not possible at this  
12 time to say that the Interim Plan is adequate to accomplish all of its stated goals. It is not possible  
13 to say that the Interim Plan will provide relief of any significant magnitude in the localized fissuring  
14 area. It is essential to proceed with preparation of the comprehensive Monitoring Program, to  
15 develop and implement an adequate long-term plan, and to report regularly to the Court on the status  
16 of those efforts.

17 During the workshop, the Watermaster provided reassurance that the Technical Group would  
18 be underway immediately to begin to address subsidence questions, and would be providing advice  
19 and assistance in the preparation of the comprehensive Monitoring Plan and in preparation of the  
20 long-term plan for MZ1. In fact, there was discussion that the Monitoring Plan could be completed  
21 by October 1.

22 If Watermaster and the Technical Group address the issue of what would be required to  
23 “minimize subsidence and fissuring,” that work could be the basis for revising the Interim Plan  
24 forbearance program to actually be able to meet that goal. There has been no question, throughout  
25 four years of discussion, that the participation in such an interim forbearance program was to be  
26 voluntary, but a firm technical basis for identifying an optimal voluntary program would be a  
27 significant improvement over the current Interim Plan.

28 The City of Chino Paragraph 15 Motion argues that there is a “risk of no action,” that the risk

1 of subsidence in the localized City of Chino area continues as the Watermaster studies the cause of  
2 the problem:

3       The greatest risk is to do nothing. Watermaster may well believe that the cause  
4       should be studied further; but the City of Chino believes that the cause is clear and  
5       that the time is now to focus on a solution.

6 (Chino’s Response and Motion, p. 2.) As Watermaster explained at the workshop, Watermaster is  
7 engaged in an intensive effort to begin studying subsidence and fissuring within the City of Chino  
8 localized area. Watermaster is not doing “nothing.”

9       However, even though Watermaster is working on its subsidence and fissuring monitoring  
10 and planning program, it cannot be said that its Interim Plan – even with full participation – will  
11 accomplish its goal to “minimize subsidence and fissuring or reduce them to tolerable levels.” This  
12 is an important question that should be addressed both by Watermaster and the Technical Group.

13       It is foreseeable, without being able to conclude that the Interim Plan can accomplish its  
14 goals, that one or more parties may seek court intervention, as the City of Chino has done, through  
15 Paragraph 15 motions to this Court. If the City of Chino pursues its Paragraph 15 Motion or if other  
16 motions are filed, there are two areas of concern that involve the extent of the Court’s jurisdiction.

17       One is whether subsidence is included in the concepts of safe yield, physical solution, and  
18 optimum basin management. The word “subsidence” does not appear in the Judgment. Was it  
19 intended that the Judgment’s “flexibility and adaptability” encompass issues related to subsidence?  
20 Do the subsequent agreements of the parties (Phase I Report, Peace Agreement, Implementation  
21 Plan, Rules and Regulations, Interim Plan) constitute subsequent actions of the parties that play a  
22 role in determining the meaning of the Judgment and even the extent of the Court’s jurisdiction  
23 under the Judgment?

24       The second area of concern related to the issue of the Court’s jurisdiction is whether  
25 subsidence and fissuring within the City of Chino is properly addressed as a basin-wide problem  
26 within the ambit of the Optimum Basin Management Program or as a separate, “localized” problem.  
27 If the problem is appropriately characterized as being a basin-wide problem, then the question  
28 becomes: (1) whether the various options (mediation, Article X complaint, OBMP application for  
credit against assessments, or either a Paragraph 15 or Paragraph 31 motion under the Judgment) are

1 available; and (2) what remedies are available under either a Paragraph 15 or 31 motion.

2 The parties have consistently included the subsidence and fissuring problems in MZ1 as  
3 problems to be addressed in the context of the OBMP. However, the City of Chino Paragraph 15  
4 motion focuses only on the localized City of Chino area: “The first step is for the Court to assume  
5 jurisdiction over the land subsidence in the Area of Subsidence within the City of Chino.” (Chino’s  
6 Response and Motion, p. 2.)

7 If the problem were to be characterized as a “localized” problem, then the question becomes  
8 what options are available to the parties to seek relief. Do those options include mediation, Article  
9 X complaint, and OBMP application for assessment reimbursement or credit as well as a separate  
10 court action such as contemplated by Paragraph 62 of the Judgment? If it is possible to pursue a  
11 remedy to the “localized” problem by separate court action, would that action be taken up by this  
12 Court or by some other court? If taken up by this Court, what causes of action can be raised, if any?  
13 Could such a separate action to address the “localized” issue be pursued concurrently with a  
14 Paragraph 15 motion?

15 The distinction drawn in the Judgment between a Paragraph 15 motion and an action  
16 contemplated by Paragraph 62 is not altogether clear. As discussed, above, the Judgment did not  
17 “preclude or limit” actions from being pursued outside of a Judgment Paragraph 15 motion for  
18 disputes between neighboring well owners. Presumably, the concept that appears in the Peace  
19 Agreement (Section 5.4(d)) and the Rules and Regulations (Section 4.5, p. 30) that Watermaster  
20 shall not approve a request for reimbursement or credit against future OBMP assessments for the  
21 cost of relocating groundwater production facilities where the requesting party is “otherwise legally  
22 compelled to make the improvement” is consistent with the distinction drawn in Judgment Paragraph  
23 62. What else can be intended by the “otherwise legally compelled” exception to the parties sharing  
24 the cost of well relocation?

25 If the Watermaster’s Interim Plan were able to succeed in meeting the goal of minimizing  
26 subsidence and fissuring for a period of time that is long enough to allow the Monitoring Plan to be  
27 carried out and the long-term plan enacted, there would not be an urgent need to address these  
28 questions. However, there simply must be a means available to the parties to the Judgment to obtain

1 relief in a timely fashion, whether the issue is characterized as a “localized” issue or as part of a  
2 basin-wide problem. Conceptually, if the elements that have been set forth repeatedly in the OBMP  
3 Phase I Report, Peace Agreement, Implementation Plan, Rules and Regulations, and Interim Plan  
4 could accomplish the goal of minimizing the subsidence and fissuring problem while the longer-term  
5 work is carried out, all would be well. The Watermaster clearly set out to accomplish just that, but  
6 it is not at all certain that the Interim Plan is up to the task.

7 The Special Referee recommends that the Court direct Watermaster to:

- 8 • Implement the monitoring program which Watermaster has outlined in its Interim  
9 Plan and the workshop, including all work related to the installation and monitoring  
10 of piezometers and extensometers, ground level monitoring, aquifer testing, and all  
11 such other actions required to study, analyze, and interpret subsidence and fissuring  
12 phenomena in MZ1, and to determine causes in sufficient detail that they can be  
13 managed through a long-term plan.
- 14 • Commence immediately to form and work with the Technical Group to obtain  
15 comments and recommendations on the scope, area of investigation, and approach  
16 to the monitoring program.
- 17 • Begin work with the Technical Group to develop a long-term management plan for  
18 MZ1 that is based on the findings of the monitoring program.
- 19 • Report to the Court on the implementation of forbearance, initially by the Court  
20 hearing scheduled for October 17, 2002, and periodically thereafter in accordance  
21 with the following reporting requirements, to document the volunteer participation,  
22 amount of forbearance, expected or observed impacts, and any other noteworthy  
23 details that pertain to the goal of forbearance to minimize subsidence and fissuring.
- 24 • Submit reports to the Court on all interim and long-term efforts to address subsidence  
25 and fissuring problems in MZ1 by June 30 and December 31 of each year.

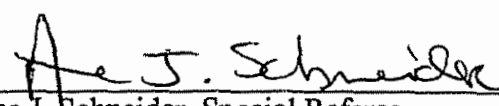
26 The Special Referee further recommends that the Special Referee conduct a follow-up  
27 workshop in January 2003 to assess the status of Watermaster’s efforts.

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Finally, the Special Referee recommends that the Court set a briefing schedule to address the jurisdiction, cost allocation, and other legal issues raised in this Report and Recommendation.

Dated: September 17, 2002

  
Anne J. Schneider, Special Referee

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

**PROOF OF SERVICE**

I declare that:

I am employed in the County of San Bernardino, California. I am over the age of 18 years and not a party to the within action. My business address is Chino Basin Watermaster, 8632 Archibald Avenue, Suite 109, Rancho Cucamonga, California 91730; telephone (909) 484-3888.

On September 18, 2002 I served the attached:

**HEARING DATE: October 17, 2002**

SPECIAL REFEREE'S REPORT ON INTERIM PLAN WORKSHOP AND  
RECOMMENDATION CONCERNING SUBSIDENCE ISSUES

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

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

Executed on September 18, 2002 in Rancho Cucamonga, California.

  
\_\_\_\_\_  
Michelle Lauffer, Water Resources Specialist

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