

**MAMMOTH COMMUNITY WATER DISTRICT**

**FINAL**

**ENVIRONMENTAL IMPACT REPORT**



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**MAMMOTH CREEK FISHERY  
BYPASS FLOW REQUIREMENTS,  
WATERSHED OPERATION CONSTRAINTS,  
POINT OF MEASUREMENT, AND PLACE OF USE**

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SCH# 1997032082



May 2011

**FINAL ENVIRONMENTAL IMPACT REPORT**

**SCH# 1997032082**

**May 2011**

**Title of Project:** Mammoth Creek Fishery Bypass Flow Requirements,  
Watershed Operation Constraints, Point of Measurement,  
and Place of Use

**Location of Project:** Mammoth Lakes, Mono County, California

**Contacts:**

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# Mammoth Creek Fishery Bypass Flow Requirements, Watershed Operations Constraints, Point of Measurement, and Place of Use

## Final Environmental Impact Report

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# CHAPTER 1

## INTRODUCTION

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### 1.1 PURPOSE OF THE FINAL EIR

The Mammoth Community Water District, as the Lead Agency under the California Environmental Quality Act (CEQA), has prepared this Final Environmental Impact Report (Final EIR) for the Mammoth Creek fishery bypass flow requirements, watershed operation constraints, point of measurement, and place of use. The project is located in the Mammoth Lakes Basin, on the eastern slope of the Sierra Nevada, encompassing Lake Mary and the Mammoth Creek watercourse, downstream to the United States Geological Survey flume gage on Hot Creek, the length of Bodle Ditch from Lake Mary to the head of Mammoth Meadows.

The Draft EIR, comments received on the Draft EIR, responses to these comments, and certain changes and additions collectively comprise the Final EIR. As described in Sections 15089, 15090 and 15132 of the CEQA Guidelines, the Lead Agency must prepare and consider the information contained in a Final EIR before approving a project. The purpose of a Final EIR is to incorporate into the EIR: a) comments and recommendations on the Draft EIR; b) a list of persons, organizations, and public agencies commenting on the Draft EIR; c) the Lead Agency responses to comments made by the public and agencies; and d) other information added by the Lead Agency.

### 1.2 ORGANIZATION OF THE FINAL EIR

The Final EIR consists of the following four chapters:

**Chapter 1.0 Introduction.** This chapter describes the purpose of the Final EIR, summarizes the Final EIR public review process, and presents the contents of this document.

**Chapter 2.0 Comments and Responses.** This chapter presents all comments received by the District during the 45-day public review period of the Draft EIR (September 20, 2010 through November 3, 2010). Comments received after the close of the public review period are also responded to in this section.

**Chapter 3.0 Corrections and Additions to the Draft EIR.** This chapter includes revisions to the Draft EIR that represent minor changes or additions in part as a response to some of the comments received on the Draft EIR and includes certain additional information which provides clarification of matters in the Draft EIR and addresses a minor change to the proposed project description. Changes to the Draft EIR are shown with strikethrough text for deletions and underline text for additions. These changes do not add significant new information that would affect the analysis or conclusions presented in the Draft EIR.



### **1.3 OVERVIEW OF THE PUBLIC REVIEW PROCESS FOR THE DRAFT EIR**

In accordance with CEQA Guidelines Section 15085, upon completion of the Draft EIR, a Notice of Completion (NOC) and a Notice of Availability (NOA) as well as CD copies of the Draft EIR were submitted to the State Clearinghouse, Governor's Office of Planning and Research for distribution to State Agencies. The Draft EIR was circulated for a 45-day public review on September 20, 2010 through November 3, 2010. As required under Section 15086 of the CEQA Guidelines, a NOA requesting comments on the Draft EIR and CDs of the Draft EIR were sent to approximately 40 public agencies and other interested parties. In compliance with CEQA Guidelines, Section 15087 the NOA was published in The Sheet and the Mammoth Times newspapers and posted with the Mono County Clerk on September 22, 2010. Copies of the Draft EIR were also placed at the Mammoth Public Library. The Draft EIR was also available for review on the internet at: <http://www.mcwd.dst.ca.us>.

## **CHAPTER 2**

### **COMMENTS AND RESPONSES**

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CEQA Guidelines Section 15088(a) states that “The Lead Agency shall evaluate comments on environmental issues received from persons who reviewed the Draft EIR and shall prepare a written response. The Lead Agency shall respond to comments that were received during the noticed comment period.” In accordance with these requirements, this chapter of the Final EIR provides responses to each of the written comments received during and after the formal public comment period on the Draft EIR regarding the proposed Mammoth Creek project.

Table 2-1, which starts on page 2-2, provides a list of the agencies, organizations, and individuals commenting on the Draft EIR and the corresponding environmental issues raised by the respective commenter. Comments received after the formal public comment period was over were also responded to. Issues identified in the matrix as “Other Comments” relate to non-CEQA issues or issues that do not address the content of the Draft EIR, such as comments regarding water rights issues.

Section 2.A, Responses to Individual Comments presents comments submitted during the public comment period for the Draft EIR from Federal, State, County and local agencies, as well as from private organizations and individuals as listed on Table 2-1. The individual letters are each assigned a letter and number based on the date of the comment letter and the affiliation, if any, of the commenter. Each comment that requires a response within the letters is also assigned a letter and number. For example, the first State agency (Letter A) to provide comments was the Native American Heritage Commission and therefore this is Letter Number A1. The first comment contained in the Native American Heritage Commission comment letter would be Comment A1-1, and the fourth comment in Letter Number A1 would be Comment A1-4. The responses to each comment are then correspondingly numbered, (i.e., Response A1-1 and Response A1-4). The comment letter is presented first followed by the responses to the comments included in the letter. Comments received after the close of the formal public review period on the Draft EIR are also responded to in this section. Responses to these comments are provided in the same manner as responses to individual comments. Comments that have resulted in changes to the Draft EIR are identified in Table 2-1.

**Table 2-1. Summary of Comments on the Draft EIR**

Letter No. and Date	Commenter	1. Introduction	2. Proposed Project and Alternatives	3. Overview of Analytical Approach	4. Hydrology	5. Water Quality	6. Fisheries and Aquatic Resources	7. Wildlife and Botanical Resources	8. Recreational Resources	9. Visual Resources	10. Other CEQA Considerations	11. Climate Change Considerations	Other Comments	Changes to Draft EIR
<b>A. State Agencies</b>														
A1 9/22/10	Native American Heritage Commission Dave Singleton, Program Analyst 915 Capitol Mall, Room 364 Sacramento, CA			X										
A2 10/29/10	California Regional Water Quality Control Board Lahontan Region Mary Dellavalle, Environmental Scientist 14440 Civic Drive, Suite 200 Victorville, CA 92392	X			X	X	X	X	X	X	X			Yes Section 1.7.3
A3 11/5/10	California Department of Fish and Game Inland Deserts Region Brad Henderson, Senior Environmental Scientist 407 West Line Street Bishop, CA 93514				X		X	X						Yes New figure 7-3a Section 7.1.5.6 Section 7.3.3.2 Section 7.3.3.3-7
<b>B. Regional and Local Agencies</b>														
B1 11/3/10	Dept. of Water and Power, City of Los Angeles Martin L. Adams, Water Operations Division 111 North Hope Street Box 51111 Los Angeles, CA 90051-5700		X	X	X	X	X						X	
<b>C. Private Individuals and Organizations</b>														
C1 11/2/10	Best Best & Krieger, LLP William J. Thomas 400 Capitol Mall, Suite 1650 Sacramento, CA 95814				X								X	
C2 1/6/11	California Trout, Eastern Sierra Program Mark Drew, Program Manager					X							X	Yes New section 1.3.13

## COMMENTS AND RESPONSES

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**NATIVE AMERICAN HERITAGE COMMISSION**

915 CAPITOL MALL, ROOM 364  
SACRAMENTO, CA 95814  
(916) 653-6251  
Fax (916) 657-5390  
Web Site [www.nahc.ca.gov](http://www.nahc.ca.gov)  
e-mail: [ds\\_nahc@pacbell.net](mailto:ds_nahc@pacbell.net)



September 22, 2010

Ms. Irene Yamashita and Greg Norby  
**MAMMOTH COMMUNITY WATER DISTRICT**  
1315 Meridian Boulevard; P.O. Box 597  
Mammoth Lakes, CA 93546

Re: SCH#1997032082 CEQA Notice of Completion: draft Environmental Impact Report (DEIR) for the Mammoth Creek Fishery Bypass Flow Requirements, Watershed Operation Constraints, Point of Measurement, and Place of Use Project located in the Mammoth Lakes Area, Mono County, California.

Dear Ms. Yamashita and Mr. Norby:

The Native American Heritage Commission (NAHC) is the state 'trustee agency' pursuant to Public Resources Code §21070 for the protection and preservation of California's Native American Cultural Resources. (Also see *Environmental Protection Information Center v. Johnson* (1985) 170 Cal App. 3<sup>rd</sup> 604). The California Environmental Quality Act (CEQA - CA Public Resources Code §21000-21177, amendment effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the California Code of Regulations §15064.5(b)(c )(f) CEQA guidelines). Section 15382 of the CEQA Guidelines defines a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ... objects of historic or aesthetic significance. The lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. State law also addresses Native American Religious Expression in Public Resources Code §5097.9.

A1-1

The Native American Heritage Commission did perform a Sacred Lands File (SLF) search in the NAHC SLF Inventory, established by the Legislature pursuant to Public Resources Code §5097.94(a) and **Native American Cultural Resources were identified** within one-half mile radius of the 'area of potential effect (APE)'. Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Enclosed are the names of the culturally affiliated tribes and interested Native American individuals that the NAHC recommends as 'consulting parties,' for this purpose, that may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). A Native American Tribe or Tribal Elder may be the only source of information about a cultural resource.. Also, the NAHC recommends that a Native American Monitor or Native American culturally knowledgeable person be employed whenever a professional archaeologist is employed during the 'Initial Study' and in other phases of the environmental planning processes.

A1-2

Furthermore the NAHC recommends that you contact the California Historic Resources Information System (CHRIS) of the Office of Historic Preservation (OHP), for archaeological data. (916) 653-7278.

A1-3

Consultation with tribes and interested Native American tribes and interested Native American individuals, as consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA (42 U.S.C. 4321-43351) and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 [f] *et seq.*), 36 CFR Part 800.3, the President's Council on Environmental Quality (CSQ; 42 U.S.C. 4371 *et seq.*) and NAGPRA (25 U.S.C. 3001-3013), as appropriate. The 1992 *Secretary of the Interior's Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including *cultural landscapes*. Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e).

A1-4

Lead agencies should consider avoidance, as defined in Section 15370 of the California Environmental Quality Act (CEQA) when significant cultural resources could be affected by a project. Also, Public Resources Code Section 5097.98 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery'. Discussion of these should be included in your environmental documents, as appropriate.

A1-5

The authority for the SLF record search of the NAHC Sacred Lands Inventory, established by the California Legislature, is California Public Resources Code §5097.94(a) and is exempt from the CA Public Records Act (c.f. California Government Code §6254.10). The results of the SLF search are confidential. However, Native Americans on the attached contact list are not prohibited from and may wish to reveal the nature of identified cultural resources/historic properties. Confidentiality of 'historic properties of religious and cultural significance' may also be protected under Section 304 of the NHPA or at the Secretary of the Interior's discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C. 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APE and possibly threatened by proposed project activity.

A1-6

CEQA Guidelines, Section 15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American, identified by the NAHC, to assure the appropriate and dignified treatment of Native American human remains and any associated grave liens. Although tribal consultation under the California Environmental Quality Act (CEQA; CA Public Resources Code Section 21000 – 21177) is 'advisory' rather than mandated, the NAHC does request 'lead agencies' to work with tribes and interested Native American individuals as 'consulting parties,' on the list provided by the NAHC in order that cultural resources will be protected. However, the 2006 SB 1059 the state enabling legislation to the Federal Energy Policy Act of 2005, does mandate tribal consultation for the 'electric transmission corridors. This is codified in the California Public Resources Code, Chapter 4.3, and §25330 to Division 15, requires consultation with California Native American tribes, and identifies both federally recognized and non-federally recognized on a list maintained by the NAHC

A1-7

Health and Safety Code §7050.5, Public Resources Code §5097.98 and Sec. §15064.5 (d) of the California Code of Regulations (CEQA Guidelines) mandate procedures to be followed, including that construction or excavation be stopped in the event of an accidental discovery of

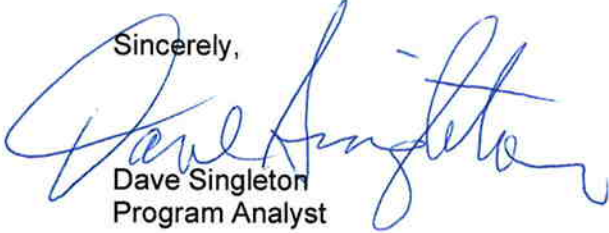
A1-8

any human remains in a location other than a dedicated cemetery until the county coroner or medical examiner can determine whether the remains are those of a Native American. . Note that §7052 of the Health & Safety Code states that disturbance of Native American cemeteries is a felony.

A1-8

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "Dave Singleton". The signature is fluid and cursive, with a large initial "D" and "S".

Dave Singleton  
Program Analyst

Attachment: List of Culturally Affiliated Native American Contacts

Cc: State Clearinghouse

Native American Contacts  
Mono County  
September 22, 2010

Benton Paiute Reservation  
Mike Keller, Chairperson  
Star Route 4, Box 56-A      Paiute  
Benton      , CA 93512  
**numic@qnet.com**  
(760) 933-2321  
(760)933-2412

Big Pine Band of Owens Valley THPO  
Bill Hellmer, Tribal Historic Preservation Officer  
P.O. Box 700      Paiute  
Big Pine      , CA 93513  
**amargosa@aol.com**  
(760) 938-2003  
(760) 938-2942 fax

Big Pine Band of Owens Valley  
David Moose, Chairperson  
P. O. Box 700      Owens Valley Paiute  
Big Pine      , CA 93513  
**bigpinetribaladmin@earthl**  
(760) 938-2003  
(760) 938-2942-FAX

Bishop Paiute Tribe THPO  
Theresa Stone-Yanez  
50 Tu Su Lane      Paiute - Shoshone  
Bishop      , CA 93514  
**theresa.**  
(760) 873-3584, Ext 250  
(760) 937-0351 -cell  
(760) 873-4143 - FAX

Bridgeport Paiute Indian Colony  
Joseph Art Sam, Chairperson  
P.O. Box 37      Paiute  
Bridgeport      , CA 93517  
**bicgovadm@yahoo.com**  
(760) 932-7083  
(760) 932-7846 Fax

KutzadikaA Indian Community Cultural Presv.  
Raymond Andrews, Chairman  
P.O. Box 591      Paiute  
Bishop      , CA 93515  
(760) 920-0357

Mono Lake Indian Community  
Charlotte Lange, Chairperson  
P.O. Box 117      Mono  
Big Pine      , CA 93513      Northern Paiute  
**clange2008@hotmail.com**  
(760) 938-1190

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code. Also, federal National Environmental Policy Act (NEPA), National Historic Preservation Act, Section 106 and federal NAGPRA. And 36 CFR Part 800.

This list is only applicable for contacting local Native Americans for consultation purposes with regard to cultural resources impact by the proposed SCH#1997032082; CEQA Notice of Completion; draft Environmental Impact Report (DEIR) for the Mammoth Creek Fishery Bypass Flow Requirements, Watershed Operation Constraints, Point of Measurement, and Place of Use (Mammoth Community Water District); Mammoth Lakes region; Mono County



**Letter No. A1**

Dave Singleton  
Native American Heritage Commission  
915 Capitol Mall, Room 364  
Sacramento, CA 95814

Response to comment A1 - 1

The Draft EIR describes the proposed project in Section 2.1.1 at pages 2-1 through 2-11. The proposed project components to establish long-term fishery bypass flow requirements, change the point of measurement for the fishery bypass flow compliance, change the place of use for diverted flows, and to revise certain watershed operation constraints do not involve any construction activities or other physical changes to the environment that could impact historical resources. Section 3.2 of the Draft EIR at page 3-2 explains why cultural resources would not be impacted by the proposed project and thus was omitted from further evaluation. Staff from the Mammoth Community Water District contacted Mr. Singleton on October 21, 2010, to discuss the proposed project description and seek advice on pursuing the recommended direction provided in the letter. Mr. Singleton indicated that the lack of physical changes to the environment as described in Chapter 2 of the Draft EIR would eliminate the need to perform the consultations requested in his letter.

Response to comment A1 - 2

See response to comment A1 - 1 regarding lack of any physical changes impacting historical resources and consultation with Native American tribes in our area.

Response to comment A1 - 3

See response to comment A1 - 1 regarding lack of any physical changes impacting historical resources and consultation with the California Historic Resources Information System of the Office of Historic Preservation.

Response to comment A1 - 4

See response to comment A1 - 1 regarding lack of any physical changes impacting historical resources and consultation with interested Native American tribes, communities and individuals.

Response to comment A1 - 5

The Draft EIR did not identify any potential impacts to cultural resources as a result of implementing the proposed project. See also response to comment A1 - 1.

Response to comment A1 - 6

The comment is noted. This is not a comment on the contents or adequacy of the Draft EIR; and therefore no further response is required.

Response to comment A1 - 7

See response to comment A1-1. No ground disturbance will occur as a result of implementing the proposed project.

Response to comment A1 - 8

The proposed project does not involve any construction or excavation. See also response to comment A1 - 7.

**California Regional Water Quality Control Board  
Lahontan Region**



Linda S. Adams  
Secretary for  
Environmental Protection

**Victorville Office**

14440 Civic Drive, Suite 200, Victorville, California 92392  
(760) 241-6583 • Fax (760) 241-7308  
<http://www.waterboards.ca.gov/lahontan>



Arnold Schwarzenegger  
Governor

October 29, 2010

File: Environmental Doc Review  
Mono County

Irene Yamashita, Public Affairs/Environmental Specialist  
Mammoth Community Water District  
Post Office Box 597  
Mammoth Lakes, CA 93546

**COMMENTS ON DRAFT ENVIRONMENTAL IMPACT REPORT FOR MAMMOTH CREEK FISHERY BYPASS FLOW REQUIREMENTS, WATERSHED OPERATION CONSTRAINTS, POINT OF MEASUREMENT, AND PLAN OF USE PROJECT, MONO COUNTY, STATE CLEARINGHOUSE NO. 1997032082**

Please refer to the items checked for staff comments on the above-referenced project:

[X] The project may require a Federal Clean Water Act Section 401 Water Quality Certification from the Regional Board. Application forms can be found at our web site homepage (<http://www.waterboards.ca.gov/lahontan>).

A2-1

[X] The proposal does not provide specific information on how impacts to surface waters of the State and/or waters of the U.S. will be mitigated. These surface waters include, but are not limited to drainages, streams, washes, ponds, pools, playas, or wetlands. Waters of the State include waters determined to be isolated or otherwise non-jurisdictional by the Army Corps of Engineers. The Environmental Document needs: to quantify these impacts, and to discuss the following: the purpose of the project, the need for surface disturbance, and alternatives (avoidance, minimization, of disturbances, and mitigation). Mitigation must be identified in the environmental document and include the timing of construction.

A2-2

Mitigation must replace the functions and values of waters lost. For more information see the Lahontan Region Basin Plan  
[http://www.waterboards.ca.gov/lahontan/water\\_issues/programs/basin\\_plan/references.shtml](http://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/references.shtml)

[X] Other

- We are concerned by the narrow perception of the jurisdiction of Water Quality Control Boards expressed in the EIR for the Mammoth Bypass Project. "Waters of the State" means any surface water or groundwater, including saline waters, within the boundaries of the state. "Surface waters"

A2-3

are bodies of water or geographical features, not just aqueous solutions contained within those features. These surface waters include, but are not limited to drainages, streams, washes, ponds, pools, playas, or wetlands. Waters of the State include waters determined to be isolated or otherwise non-jurisdictional by the Army Corps of Engineers. "Quality of the water" refers to chemical, physical, biological, bacteriological, radiological, and other properties and characteristics of water which affect its use. "Beneficial uses" of the waters of the State that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. In addition to regulating alterations to waters of the State by addition of constituents that may impair the beneficial uses of aqueous solutions within waters of the State, we also regulate alterations to waters of the State which may impair the beneficial uses of the water body itself. For example physical characteristic of waters of the State may include, but are not limited to, the quality of: substrate, banks, channel structure, morphology, water depth, sediment load, temperature or other physical characteristics that may affect beneficial use of the water by humans or wildlife. Alteration of flow regime may impair these characteristics of water bodies and their beneficial uses.

A2-3

- We are concerned that the proposed project may impair the quality of the waters of the State within the Mammoth Creek watershed. We need assurance that the quality of water will be protected not only for beneficial use by humans and brown trout, but for all organisms within the ecosystem.
- We request that the project include a post implementation monitoring and adaptive management plan for potential impacts to waters of the State that may be caused by the proposed project. The monitoring and adaptive management plan should include the following:
  - Monitoring protocols consistent with SWAMP and CRAM protocols adopted by Water Boards that include measurement of physical, macroinvertebrate, periphyton, and vegetative parameters;
  - Standard Operating Procedures;
  - Quality Assurance and Quality Control Protocols;
  - Corrective Measures Protocols; and
  - Triggers for adaptive management

A2-4

A2-5

Please note that obtaining a permit and conducting monitoring does not constitute adequate mitigation. Development and implementation of acceptable mitigation is required.

A2-6

Thank you for the opportunity to comment on your project. If you have any questions regarding this letter, please contact me at (760) 241-7365 ([mdellavalle@waterboards.ca.gov](mailto:mdellavalle@waterboards.ca.gov)) or Patrice Copeland, Senior Engineering Geologist, at (760) 241-7404 ([pcopeland@waterboards.ca.gov](mailto:pcopeland@waterboards.ca.gov)).

Sincerely,



Mary Dellavalle  
Environmental Scientist

cc: State Clearinghouse (SCH# 1997032082)  
Gerardo Salas, U.S. Army Corps of Engineers  
Brad Henderson, California Department of Fish and Game  
Tonya Moore, Department of Fish and Game  
Inyo County, Department of Environmental Health Services  
Jorine Campopiano, Wetlands Regulatory Office, WUEPA, Region 9  
United States Fish and Wildlife Service  
Tobi Tyler Lahontan Water Boards 401 WQ Cert Program Area  
Jan Zimmerman Lahontan Water Boards 401 WQ Cert Program Area

MD/rc/MammothBypass.doc

**Letter A2**

Mary Dellavalle  
California Regional Water Quality Control Board  
Lahontan Region  
14440 Civic Drive, Suite 200  
Victorville, CA 92392

Response to comment A2 - 1

The Draft EIR addressed the applicability of the Federal Clean Water Act and the Section 401 water quality certification. Please refer to Chapter 7, Section 7.1.4, page 7-29, of the Draft EIR. The proposed project does not involve a discharge to waters of the State or a dredging of material respecting such waters.

Response to comment A2 - 2

The proposed project does not involve any construction activity or surface disturbance of any nature. The Draft EIR concluded that there would be no significant impacts to Mammoth Creek or the biological and botanical resources associated with it. These conclusions were reached based on the analyses described in Chapters 4 - 10 of the Draft EIR. The purpose of the proposed project is described in Section 1.1 of Chapter 1 of the Draft EIR at page 1-1. It is to establish long-term fishery bypass flow requirements, the compliance measuring points, add water users that are outside of the District's authorized place of use for surface water appropriative rights, and revise watershed operating constraints that were developed in 1977. The fishery bypass flow requirements evaluated in the Draft EIR have been in place since at least 1997 with the addition of a 4 cfs fishery bypass flow requirement measured at a gage located near Highway 395 (OLD395).

Response to comment A2 - 3

Thank you for the description of waters of the State and the clarification regarding your regulatory authority. The Draft EIR, section 1.7.3, page 1-19 will be revised to include additional descriptions of your agency's regulatory authority. The following revised text is included in the Final EIR, Chapter 3, Corrections and Additions to the Draft EIR.

***1.7.3 LAHONTAN REGIONAL WATER QUALITY CONTROL BOARD***

*The SWRCB is responsible for both the appropriation of surface water, and through the Regional Water Quality Control Boards, for ensuring compliance with State and Federal water quality laws, including the Porter-Cologne Act and the Clean Water Act. For the Project Area, the Lahontan Regional Water Quality Control Board (Lahontan RWQCB) serves as a responsible agency. Regional Water Quality Control Boards protect surface water and groundwater bodies or geographical features within the boundaries of the state. Quality of the water refers to chemical, physical, biological, bacteriological, radiological, and other properties and characteristics of water which affect its use. Beneficial uses of the waters of the State that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.*

The District will complete any required notifications and permits as applicable to the proposed project.

Response to comment A2 - 4

The Draft EIR provided substantial discussions regarding potential environmental impacts to Mammoth Creek and Bodle Ditch. Chapter 4 describes that the proposed project provides flows in Mammoth Creek that are equal to, or higher than, those that occur during the Existing Condition. Results presented and discussed include monthly flow exceedance distributions, as well as daily time series for the OMR, OLD395 and USFS Hot Creek Flume gages. Chapter 5 of the Draft EIR evaluates potential impacts of the proposed project to water quality. No significant effects were identified.

Response to comment A2 - 5

In Chapter 7 at page 7-82, the Draft EIR describes a detailed riparian and wetland monitoring and adaptive management program in the event that unexpected impacts occur to botanical resources in the vicinity of Bodle Ditch. Please also see Response to Comment A2 - 2.

Response to comment A2 - 6

Thank you for the comment. Comment noted.

**DEPARTMENT OF FISH AND GAME**

<http://www.dfg.ca.gov>  
Inland Deserts Region (IDR)  
407 West Line Street  
Bishop, CA 93514  
(760) 872-1171  
(760) 872-1284 FAX



November 5, 2010

Ms. Irene Yamashita, Public Affairs/Environmental Specialist  
Mammoth Community Water District  
1315 Meridian Road  
P.O. Box 597  
Mammoth Lakes, CA 93546

**Mammoth Creek Fishery Bypass Flow Requirements, Watershed Operation  
Constraints, Point of Measurement, and Place of Use Draft EIR  
(State Clearinghouse Number: 1997032082)**

Dear Ms. Yamashita:

The Department of Fish and Game (Department) has reviewed the Draft Environmental Impact Report (DEIR) by the Mammoth Community Water District (District) for the above mentioned project relative to impacts to biological resources. The proposed project would encompass the following actions, which would be reflected in an application to amend the District's Water Right Permit #17332:

- Make permanent the present court-ordered minimum instream flow thresholds below which diversion from Lake Mary may not occur
- Make permanent the present court ordered change in compliance measurement point to the Old Mammoth Road stream gauge
- Add a concomitant minimum flow threshold of 4 cfs at the Highway 395 gauge
- Update the District's Place of Use for delivery of surface-derived water supplies
- Change certain "watershed operating constraint" (WOC) practices to make consistent with current regulatory and physical conditions, and make all WOCs explicit in the body of the permit. The nature of these changes affect requirements to store water, monitor, and maintain streamflows in the upper Lakes Basin; remove flow requirement for Bodle Ditch, and correct other inapplicable permit conditions.

The Department is providing comments on the DEIR as the State agency which has the statutory and common law responsibilities with regard to fish and wildlife resources and habitats. California's fish and wildlife resources, including their habitats, are held in trust for the people of the State by the Department (Fish and Game Code §711.7). The Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitats necessary for biologically sustainable populations of those species (Fish and Game Code §1802). The Department's Fish and wildlife management functions are implemented through its administration and enforcement of Fish and Game Code (Fish and Game Code §702). The Department is



a trustee agency for fish and wildlife under the California Environmental Quality Act (see CEQA Guidelines, 14 Cal. Code Regs. §15386(a)). The Department is providing these comments in furtherance of these statutory responsibilities, as well as its common law role as trustee for the public's fish and wildlife.

The Department offers the following comments and recommendations:

1) Page 7-94, indicates that plant surveys were not conducted during the blooming season for the following potentially occurring sensitive plant species: scalloped moonwort; Kern milk-vetch; scalloped-leaved lousewort; and slender-leaved pondweed.

The DEIR states (P. 7-94):

*“Sensitive plant surveys are recommended for the Bodle Ditch area in July of next year to determine the status of these species in the Bodle Ditch riparian and wet meadow habitats. If present in substantial numbers, their loss would be considered a potentially significant impact”.*

Impact Determination 7.3.3.3-7 states that impacts to these species would be “Less Than Significant.” The Department contends that such a finding is completely unsupported by evidence in the record as the DEIR does not determine whether the species are even present, nor does it include significance criteria for impacts.

The above statement should be rewritten as:

*“Sensitive plant surveys are **required** for the Bodle Ditch area **between mid-June to mid- July of 2011** to determine the status of these species in the Bodle Ditch riparian and wet meadow habitats. If **any of these species are present**, their loss would be considered a potentially significant impact”.*

Impact Determination 7.3.3.3-7 should also be revised to state that there is a potentially significant effect to scalloped moonwort, Kern milk-vetch, scalloped-leaved lousewort, and slender-leaved pondweed, and feasible mitigation measures should be developed and presented in the FEIR.

2) The Department recommends that the District provide written notification to the Department pursuant to Section 1602 of the Fish and Game Code. Activities associated with both the proposed project, as well as adaptive management activities described in the Riparian and Wetland Monitoring and Adaptive Management Program are subject to notification. If the Department determines that a Lake or Streambed Alteration Agreement is warranted, the Riparian and Wetland Monitoring and Adaptive Management Program would be incorporated into the agreement and would thereby be granted Department approval.

3). Any of the listed alternatives would cease surface diversion when flow measured at either monitoring gauge falls below specified thresholds. At such times the District

A3-1

A3-2

A3-3

relies wholly on well pumping to meet water demand. The Department has previously identified a concern over the potential for groundwater extraction to diminish flows in Mammoth Creek through increased channel losses (Custis, 2008; attached). An update and further analysis is attached herein as Custis (2010). The Water Balance Operations Model does not appear to account for potential pumping impacts on surface flow, therefore, actual flows and fish habitat may both be overstated by the analysis. This concern was also not addressed in the District's Groundwater Management Plan and associated Negative Declaration. We request that the final EIR analyze the potential cumulative effect of surface diversion and groundwater extraction on surface flow and fish habitat in Mammoth Creek, and propose mitigation if significant effects are identified.

A3-3

4). Figure 7-3. "Critical Habitat for the Owens Tui Chub" is misleading in that it incorrectly locates the designated Critical Habitat, and appears to exclude the actual confluence of Mammoth and Hot Creeks from the Project Area. Please correct these errors in the final EIR.

A3-4

Thank you for this opportunity to comment. The Department appreciates the collaborative approach taken by the District and District staff in this undertaking, and the well considered and well written draft EIR. Questions regarding this letter and further coordination on these issues should be directed to Mr. Steve Parmenter, Senior Biologist, at (760) 872-1123 or Ms. Tammy Branston, Environmental Scientist, at (760) 872-0751.

Sincerely,



Brad Henderson  
Senior Environmental Scientist

Attachments: As stated.

cc: Nancee Murray, Senior Staff Counsel  
State Clearinghouse  
Chron

## Memorandum

Date: October 16, 2008

To: Nancee Murray  
Senior Staff Counsel  
California Department of Fish and Game  
1416 Ninth Street, 13<sup>th</sup> Floor  
Sacramento, CA 95814

Steve Parmenter  
Associate Fishery Biologist  
Department of Fish and Game  
Eastern Sierra Inland Desert Region  
407 West Line Street  
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From: Kit Custis,  
Senior Engineering Geologist  
PG #3942, CEG #1219, CHG #254  
Department of Fish and Game  
Fisheries Engineering Program  
Regional Operations Division  
1812 9<sup>th</sup> Street  
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**Subject:** Preliminary Evaluation of Hydrogeologic Setting and Impacts of Mammoth Community Water District Ground Water Extraction on Surface Water Flows in Mammoth Creek, Mammoth Lakes, California

This letter discusses the preliminary findings of my review of the hydrogeologic setting at the Mammoth Community Water District's (MCWD) well field in Mammoth Lakes, California. The emphasis of this review is to evaluate the potential impacts from pumping at the MWCD well field on the surface water flows in Mammoth Creek. This review is based on numerous published and unpublished reports on the hydrology and hydrogeology of the Mammoth Lakes area, MCWD annual groundwater monitoring reports, well logs and well hydrographs. Reports considered relevant to this analysis are listed as references.

### Geologic Setting

The community of Mammoth Lakes is in the southwestern portion of Long Valley in Mono County, California. Long Valley is an elliptical, volcanic caldera that formed approximately 700,000 years ago during the eruption of ash that formed the Bishop Tuff (Bailey and others, 1976). Mammoth Lakes is within an area referred to as the "Mammoth embayment," an area

where Long Valley extends into the basement rock of the Sierra Nevada. A prominent resurgent magma dome has intruded the collapsed caldera. The Casa Diablo Hot Springs just east of the town lie on the southwestern flank of this dome.

South flanks of the MCWD well field are bounded by a zone of faults that are part of a system of fractures that ring the Long Valley caldera. Reinhart and Ross (1964) named this the Long Valley Fault Zone. This fault zone separates the down dropped caldera basin fill from the surrounding bedrock. Several northwest-southeast trending active faults at the eastern edge of the MCWD well field extend from within the resurgent dome south to join the Hilton Creek Fault (Figure 1). These faults are within a state designated Alquist-Priolo Special Study Zone (Bryant, 1981). Several north-trending active faults occur northwest of Mammoth Lakes (Bryant, 1984). The most well known is a tourist attraction called the “Earthquake Fault.” Other older faults mapped in the area of the MCWD well field are shown on Figure 1 (Reinhart and Ross, 1964).

There are more than 20 geologic units in the Mammoth Lakes area that Wildermuth (2003) divided into five hydrogeologic groups. For the purpose of this letter, they have been reduced to three groups: 1) Quaternary alluvial deposits that include recent alluvium, lake deposits and glacial tills; 2) Quaternary to Tertiary igneous rocks including lava flows, breccia, scoria, and tuffs whose compositions range from basalt to andesite and latite, to rhyolite; 3) pre-Tertiary igneous and metamorphic basement rocks.

### **Hydrogeologic Setting**

The groundwater basin that MCWD extracts from is generally formed by elevated Tertiary extrusive igneous rocks to the north, a central trough filled with Quaternary alluvium, glacial till inter-bedded with volcanic flows, and a rapidly rising pre-Tertiary igneous and metamorphic rocks to the south (Wildermuth, 2003). Most of the production well ground water is derived from volcanic flows, mostly basalts, with minor yield from the inter-bedded glacial deposits. Ground water from the volcanic rocks is produced mostly from secondary porosity, i.e. fractures, and scattered scoria layers. Glacial deposits consisting of boulders, sands and clays generally do not yield sufficient water for a successful municipal production well. The groundwater basin that the MCWD extracts from is recharged by surface water runoff from the Sierra Nevada that flows northward and eastward into the basin and by ground water flowing through bedrock from the west and south. Figure 1 depicts the numerous springs that were mapped Lipshie (1974) primarily along the edges of the basin. Figure 1 also shows the areas of meadow identified by Lipshie (1974).

MCWD currently has nine production wells (Figure 1). Five wells are in the southern part of the well field in the area of Old Mammoth and lie within the central trough traversed by Mammoth Creek, which flows from west to east. The other four are in the northern elevated area in the western half of the town.

More comprehensive discussions of the hydrology and hydrogeologic setting of the MCWD well field and surrounding area are given in DWR (1973), Farrar and others (1985), Wildermuth (2003), Burak and others (2006), and Schmidt (2006).

This review of the MCWD well field hydrogeology has identified five important features relevant in determining impacts from MCWD's pumping to surface water flows in Mammoth Creek. These features include:

1. A western artesian zone defined by wells that tap deep ground water – the deep ground water flows upwards producing water levels at or near the ground surface;
2. A groundwater barrier that defines the eastern boundary of the artesian zone;
3. Decreases in the amount of upward flow of ground water in the artesian zone that correlate to periods of high pumping. Decreases in the amount of upward flow of ground water have the potential for altering the flow in Mammoth Creek;
4. Correlation of groundwater levels with those in the eastern portion of the basin, which allows extrapolation of water elevation prior to 1992; and
5. A system of faults at the eastern boundary of the basin that likely have a significant impact on the flow of ground water out of the basin. The following discusses each of these features and their potential impact on flows in Mammoth Creek.

These features have not been previously identified or have only been given minor importance. The following discusses each of these features and their potential impact on flows in Mammoth Creek.

#### Western Artesian Zone

In the western portion of the MCWD well field, near the area of Old Mammoth Area, static ground water elevations in the deep wells, both production and monitoring, have had historic periods at near or above the ground surface. I call this area the western artesian zone because the water levels in the deep wells are significantly higher than those to the east and north with repeated periods where the recorded depth to water is zero feet. The artesian zone has three of the nine MCWD production wells, including wells #6, #10 and #18. This artesian zone also includes monitoring wells include well #5A, #5M, #10M, #11, #11M, and #12M.

Consistent with an artesian condition, shallow groundwater levels measured in adjacent monitoring wells #5M and #11M are generally lower than those in the adjacent deep wells, #5A and #11 (Figures 2 and 4). Since 1995, water levels in wells #5A, #6, and #11 have had extended periods where the depth is reported at zero feet (Schmidt, 2006). In 1987, just after the completion of well #6, the water level was reported at +2 feet, an artesian condition (DWR Well Completion Report No. 258587). The repeated reporting of zero depth to the water table in these wells suggest that these measurements are the maximum obtainable due to the wells' configuration and not the actual water level elevation which may have risen above the ground surface. In recent years, water levels above the ground surface, an artesian condition, have been reported for well #11 rather than zero.

The western artesian zone is created by a groundwater barrier that restricts the eastward flow of deep and possibly shallow ground water. The natures of this and other groundwater barriers are discussed below.

## Groundwater Barriers

A hydrologic barrier has been identified by MCWD trending east to west between wells #16 and #25, and wells #1 and #5A, Figure 1. This barrier is apparently identified by a steep drop in the elevation of the deep ground water from wells #1 and #5A to wells #16 and #25 that differed from approximately 43 to 300+ feet in September 2006 (Figure 18 of Schmidt, 2006). This groundwater barrier creates a boundary between the steeper gradient, eastward flowing ground water in the Old Mammoth area south of the barrier, and the flatter, radially outward flowing ground water that underlies the City of Mammoth Lakes.

I have identified a second groundwater barrier within the MCWD well field that trends generally northwest to southeast and bounds the western artesian zone on the east. This barrier appears to extend from the western end of the Long Valley faults on the south to at least the east-west MCWD hydrologic barrier discussed above (Figure 1). This barrier is defined by the change from an artesian to a non-artesian condition for the static water levels in the deeper wells. Groundwater gradients between the non-artesian and artesian wells are steep, typically 10 percent or greater. Elevation differences across the barrier in the deep wells ranged from 222 to 265 feet in September 2006 (Figure 18 of Schmidt, 2006). The cause of this barrier is unknown, but may be the result of juxtaposition of the volcanic and glacial units, or from a fault zone extending between the Long Valley fault and the active faults northwest of the town, or a combination of both (Figure 1).

My review of the existing literature on ground water in the MCWD's Old Mammoth well field found several discussions that support the existence of the ground water barrier I identified. Previous analysis of a pumped well recovery test conducted in July 1976 on well #1 suggested that an "impermeable barrier" is not too distant from the well (McCann, 1981). The impermeable barrier identified in this recovery test is likely the barrier I identified west of well #1 rather than to the east, the original interpretation. Wildermuth (2003) also noted the existence of a "competent groundwater barrier" east of wells #5A and #5M in the discussion of the relationship between groundwater production and discharge at Valentine Reserve springs. Wildermuth concluded that the barrier prevents production from MCWD and Snowcreek wells from having an impact on the Valentine Reserve springs. However, this conclusion may not be correct based on analysis of water levels in monitoring wells #5A and #5M (see below the discussion of ground water levels). Burak and others (2006) found evidence of a possible groundwater barrier that separates wells #6 and #10 from wells #1 and #15 based on isotope geochemistry. Their research suggests that ground water pumped in wells #6 and #10 is recharged from a source different from wells #1 and #15, and suggest that the wells #6 and #10 source is likely mountain front recharge from the caldera ring fractures below (south of) Sherwin Ridge. The fact that the ground water in these wells does not co-mingle suggests that some type of ground water barrier exists between them.

Chase (1972) conducted a series of seismic refraction surveys for the Department of Water Resource as part of the Mammoth water resource study (DWR, 1973). Chase postulated that a fault zone exists between stations 1100 and 1650 of his seismic Line D(ext) because of a conflict in depths to basement. Chase estimated depth to basement rock of about 100 feet in the western portion of the seismic line and 200-300 feet for eastern end with a fault zone as the cause of offset. Chase also postulates that this fault zone may be associated with the caldera escarpment shown ½ mile to the south of Line D(ext) (page 9, Chase 1972). Chase's postulated fault zone lies in the area between wells #1 and #3, similar to that the impermeable barrier suggested by McCann (1981) based on pump test data from well #1. McCann also notes that the quality of the seismic

surveys in the area west of the Los Angeles YMCA was considered poor to questionable. Although Chase's Line D(ext) lies within this area of poor quality seismic data, the boundary identified in the pump test of well #1, the change from artesian to non-artesian conditions and the steep drop in groundwater elevation all suggest that at least one northwest-to-southeast trending barrier is present in the Old Mammoth Well field.

The barrier I identified appears to allow some flow of ground water across it. For example, static water levels in artesian zone well #18, while at a much higher elevation than levels to the east in non-artesian zone wells #1 and #15, still do not reach the ground surface (Figure 3). The highest water level in well #18 is approximately 40 feet from the surface. Similarly, water levels in well #10 have risen to within approximately 10 feet of the surface. Water levels in adjacent monitoring well #10M are always higher than in production well #10 indicating downward gradient for ground water at least in the area of these wells. The direction of ground water flow at well #10 differs from the direction of upward vertical flow found in artesian zone wells to the south and north. To the south, at wells #11 and #11M, ground water has almost always had an upward gradient, with water levels in the deeper well #11 often at the ground surface, Figure 2. In the north, water levels in well #5A, the deep well, are generally higher than those in the shallow monitoring well #5M (Figure 4). Important exceptions will be discussed below. The reduction in elevation of the deep ground water at wells #10 and #18 suggests that there is a hydraulic gap in the barrier, centered in the area between wells #18 and #15, that allows ground water to more easily flow to the east into the non-artesian zone. The location of this hydraulic gap aligns with the bend in water levels shown in the annual MCWD ground water monitoring reports (Figure 18 of Schmidt, 2006).

An alternative hydrogeologic model to the upward flow of deep ground water in the artesian zone is the presence of an extensive confining layer that creates a high piezometric surface, but does not allow actual flow of deeper ground water upward to shallower depths. Although data to determine whether this confining layer exists and if so its lateral extent is generally lacking, some information can be acquired from existing wells from the levels of ground water and the depth of the annual well seals. If there is an effective, laterally extensive layer confining the deep ground water, it may lie above a depth of 112 feet at well #5A, elevation 7875 feet, and below a depth of 90 feet at well #18, elevation 7899 feet. Water level in well #5A is near the ground surface at approximately 7986 feet, while at well #18 recorded water level has never risen above an elevation of 7960 feet even with the ground surface close to that of well #5A at 7989 feet (Figures 2 and 4). If a laterally extensive confining layer exists, then it would have to occur above the annular seal of well #5A, above elevation 7975, to sustain the high near surface water levels. The lower deep water level at well #18 may be the result of the open well casing below elevation 7899 allowing the interconnection of deeper confined ground water with the shallower unconfined aquifers. This would likely reduce the head at well #18 due to the deep confined waters flowing into the shallow aquifer. Unfortunately, there is no shallow monitoring well adjacent to well #18 to determine levels of shallow ground water (Figure 1). The other wells that appear to contradict the confining layer model is wells #10 and #10M. Well #10 seems to contradict the hypothesis of an extensive confining layer between elevations 7875 and 7899 feet. The screen interval for well #10 begins at an elevation of 7792 feet approximately 80 feet below where a confining layer needs to occur based on wells #5A and #18 information, but similar to well #18 its water level does not reach the ground surface, and is consistently below levels in well #18 during one period in 2000 (see Figure 2). The shallow water level in the adjacent monitoring well #10M is consistently higher than well #10, suggesting shallow water recharge of the deeper aquifer. If well #10 also pierces a laterally extensive confining layer between elevations 7875 and 7899 feet, then why is there a consistent

downward groundwater gradient between wells #10M and #10? Perhaps the rate of pumping exceeds recharge in the area of wells #10 and #6 creating a sustained, local depression in the water table of deep aquifer. The lack of knowledge on the pre-pumping water levels in the area prevents understanding the natural condition. The fact that deep water levels in wells #5A and #11 remain in a near artesian condition on either side of well #10 and well #18, suggest that a confining layer(s) does not extend across the entire artesian zone well field. If there is a confining layer above the deep aquifer, there may be areas of significant leakage in the vicinity of wells #10 and #18, due either to well interconnection, the thinning of the layer, or an increase in the permeability from increased fracturing or higher porosity (scoria). No pump tests to date have reported that the deeper aquifers are in a confined condition and if so whether any leakage occurs across such a layer. Because of the lack of definitive information and the correspondence between the cycles of shallow and deep water levels, Figures 2 and 4, the hypothesis of a deep aquifer confining layer as the cause of the conditions in the western artesian zone is rejected, and the presence of a hydrologic barrier at the eastern boundary is assumed.

The east-west hydrologic barrier by MCWD may actually be a part of the northwest-southeast groundwater barrier I identified based on the following:

1. The difference in groundwater elevation between wells #1 and #25 is approximately 50 feet, with well #1 being higher. Well #1 is, however, screened slightly higher than well #25, and well #25's screen extends approximately 90 feet deeper than the screen in well #1. Because the vertical gradient of ground water in the non-artesian zone is downward, the static water being higher in the higher screened well than in the lower screened well is consistent. Because specific information is lacking on what part of the screened sections in each well actually provide most of the ground water, this 50-foot difference in water level may be attributed to where along the screened interval the ground water is produced to the wells. A similar drop in groundwater level of approximately 50 feet occurs between wells #25 and #20 where the screened interval for well #20 extends approximately 150 feet deeper than the screen in well #25.
2. A difference in groundwater level between deep monitoring well #5A in the artesian zone and production well #16 in the non-artesian zone is greater than 300 feet (388 feet in September 2006). A similar magnitude of groundwater elevation difference occurs in other wells across my groundwater barrier. In September 2006 ground water dropped from 222 to 280 feet across my ground water barrier.
3. If the northwest-southeast ground water barrier extends to well #16, it may extend further northwest to intersect the north-south fault zone northeast of Mammoth Lakes (Figure 1). The impact of any extension of the northwest-southeast barrier to the north-south zone of faults is poorly known. Only two test holes, wells #9B and well TH-9B, are located in this area (LeRoy Crandall, 1984). Both wells were drilled at the southern extension of the "Earthquake Fault" in the northwest corner of Section 33. Test hole well #9B was drilled to 602 feet, and well TH-9B to 802 feet without encountered ground water. The base of well TH-9B is at 7548 feet elevation, which is approximately 50 feet lower than at well #16, but consistent with the radially outward groundwater gradient depicted on Figure 18 of Schmidt (2006). The lack of deep ground water just west of the "Earthquake Fault" is not inconsistent with the northwest-southeast barrier with the "Earthquake Fault" acting as a hydrologic barrier to restrict eastward flow of deep groundwater.



## Non-Artesian Zone

Wells to the east and north of the northwest-southeast groundwater barrier I identified are not in the artesian zone. In fact, water levels in these deeper aquifers are several hundreds of feet below the surface. This non-artesian zone appears to have two hydrogeologically distinct areas. In the southernmost area, MCWD production wells #1 and #15, and the Snowcreek production well that lie in the central trough of the basin just east of the northwest-southeast groundwater barrier. The second hydrogeologically distinct area is a northern area that underlies the town of Mammoth Lakes.

The geologic units of the southern portion of the non-artesian zone consist of glacial tills interlayered with basalt flows and scoria to a depth of approximately 600 feet. In the northern non-artesian zone, glacial tills were encountered in the upper portion of the wells to depths ranging from approximately 125 to 375 feet with only rock encountered below.

The northern non-artesian zone lies under the town of Mammoth Lakes at a slightly higher elevation than the southern non-artesian zone. There are four operating MCWD production wells in this northern portion of this basin: #16, #17, #20 and #25. Two production wells are located in the southern non-artesian zone: wells #1 and #15. In the southern non-artesian zone deep ground water generally flows west to east in a trough roughly aligned with Mammoth Creek. In the northern non-artesian zone ground water appears to flow radially outward from the center of town (Figure 18 of Schmidt, 2006).

Hydrogeologic characteristics that distinguish the non-artesian zone are the static water levels of deeper wells that are several hundred of feet below the ground surface, and shallow well static water elevations that are higher than the corresponding deeper wells indicating a downward flow of ground water. Burak and others (2006) note that the ground water discharged from wells #1 and #15 is a mixture of surface and meteoric waters which they feel shows a hydrologic connection to surface water and precipitation.

Deep wells in the non-artesian zone include production wells #1, #2 (abandoned), #3 (abandoned), #15, #16, #17, #20, #25 and Snowcreek (Figure 1). Deep non-artesian monitoring wells include #7, #14M, #19, #24, #28, #29, #30, and USGS SC-2. Shallow non-artesian monitoring wells include wells #4M, #22, #23, and USGS SC-1. A more detailed discussion of the hydrogeologic characteristics of this non-artesian zone is discussed below in section of fluctuations in historic water levels.

## **Historic Groundwater Levels and Gradient**

The depth of ground water has been reported consistently in the MCWD well field since approximately 1992-1993, a time when many of the wells were constructed. Reports of measurement of groundwater levels prior to 1992 are fewer. Figures 2 and 3 show hydrographs of MCWD wells in the artesian and southern non-artesian zones, respectively. These figures were developed by scaling traces of the hydrographs from the MCWD groundwater monitoring reports (Schmidt, 2006) to uniform time and elevation scales. Artesian wells #6, #10 and #18 were added to the non-artesian Figure 3 to show their relatively higher water elevations, but also to show how they fluctuate like wells #1 and #15. The changes in water levels in well #18 have less amplitude

than wells #1 and #15, while wells #6 and #10 are greater. Wells #10 and #1 have a similar specific capacity, gallons per minute per foot of drawdown, and well #6 is slightly higher suggesting that the difference in elevation and amplitude of fluctuation is not due to transmissivity. The reduced amplitude at well #18 may be caused by less pumping reducing the impact to the aquifer, or more recharge. If the northeast-southwest groundwater barrier is less effective at well #18 as is suggested by the fact that the static water level at well #18 does not reach the ground surface, then there may be greater flow of ground water between the artesian and non-artesian zone in the area between wells #18 and #15. The curvature of the groundwater contours in the area of wells #18 and #15 suggest a zone of higher flow.

#### Water Level Fluctuation at Wells #5A and #5M and the Artesian Zone

The artesian zone monitoring wells #5A and #5M are north of Mammoth Creek and just east of the Valentine Reserve. The water levels and the variation in elevation, which translate to vertical gradient between these two wells, suggest that pumping of the MCWD wells may have an impact on flows in Mammoth Creek for the following reasons:

1. Figure 4 presents the historic water elevations in wells #5A and #5M. The graph shows that water levels in the deeper well, #5A, are generally higher than those in the shallower well, #5M, which indicates a general upward flow of ground water. The upward flow of ground water creates a condition where Mammoth Creek can gain flow from groundwater discharge. The elevation of the ground at the wells is approximately 7,985 feet. A similar elevation of the creek bed appears to lie several hundred feet to the east, near the beginning of the meadow area mapped by Lipshie (1974).
2. Figure 5 shows the difference in groundwater elevations between wells #5A and #5M. A positive difference indicates an upward flow of ground water, while a negative is downward. The graph shows that the elevation difference between these wells has varied. During the period from 1993 to 1995 the differences dropped. From 1995 to 1999 the upward flow increased as the difference increased, reaching the highest level in 1998/99. From 1999 to mid-year 2005, the elevation difference dropped and at times the gradient reversed and vertical flow was downward. This downward flow creates a condition where Mammoth Creek can lose flow rather than gain. After mid-year 2005 the elevation difference began to increase and upward gradient was re-established. At the bottom of Figure 5 is a list taken from Burak and others (2006) of the days per year where the flow out of Twin Lakes was greater than the flow at the Old Mammoth Road gage. Whenever the flow out of Twin Lakes was greater than at Old Mammoth Road gage, the creek was losing water. The analysis by Burak and others (2006) generally correlates with the variation in groundwater elevation difference in wells #5A and #5M. This suggests that the difference in groundwater elevation is reflected in the flows of Mammoth Creek.
3. Figure 6 shows the amount of monthly pumpage from the MCWD wells for both the artesian (wells #6, #10 and #18) and the southern non-artesian (wells #1 and #15). The variation MCWD pumpage appears to be negatively correlated with the changes in water elevation between wells #5A and #5M with a time-lag of several months. That is, when pumping increases, the elevation difference decreases several months later, and when the pumping stops the groundwater elevation differences increase.

4. The causes of this variation in groundwater elevations and their differences between wells #5A and #5M can be several. Seasonal fluctuations in groundwater levels caused by recharge are probably the cause of much of the annual variation. Long-term changes in precipitation could be responsible for the multi-year cycles. However, the long-term precipitation cycles are also reflected in the MCWD pumping cycles. Periods of low precipitation results in greater groundwater pumping.
5. The plots of water elevation in Figure 4 suggest that pumping of the deep aquifers influences the variation in elevation difference between wells #5A and #5M. If the changes were solely the result of long-term climate variation, the change in water levels would be expected to rise and fall together. There might be a time lag and suppression of peak water levels in the deep well relative to those in the shallow well. This type of synchronization is apparent from 1995 to 2000, a period of high precipitation and lower pumping. However, during the heavy pumping period from 2000 to mid-year 2005, the pattern changes. The water levels from the deeper aquifer drop faster and to a greater extent than those from the shallower aquifer, and the seasonal amplitudes of deep water levels increase. It is during this period that the gradient reverses and extended periods of downward flow occur. The greater drop in water levels in the deeper aquifer is consistent with the increase in pumping and a reduction in recharge with less precipitation. This pattern suggests that MCWD pumping above a certain level can have an impact on flow in Mammoth Creek. There do not appear to be sufficient data to determine whether artesian zone pumping causes the impact or whether non-artesian zone pumping also has an effect. The apparent gap in the groundwater barrier at well #18 suggests that effects of pumping wells #1 and #15 could extend into the artesian zone and may cause a reduction in the amount of groundwater discharge to Mammoth Creek. Any losses in Mammoth Creek flow within the artesian zone will extend downstream into the area of the non-artesian ground water.

#### Water Level Fluctuation in the Non-Artesian Zone

Groundwater levels in many of the wells in the non-artesian zone fluctuate more than others (Figure 3). In particular, the amplitude of water level variations in production wells #1 and #15 is greater than in production wells #17 and #20. This suggests that there is a hydrologic difference between these wells. The difference may be due to differences in amount of pumpage, rate of recharge, depth of pumping, a hydraulic barrier, or aquifer properties. As noted above, Schmidt (2006) places an east-west trending hydrologic barrier just north of well #1. Regardless of the cause, it appears that deep ground water levels in the southern portion of the non-artesian basin respond to MCWD pumping with greater changes in groundwater elevation. This portion of the basin also underlies Mammoth Creek.

An important question is whether pumping of the MCWD wells in the non-artesian zone can affect the flows in Mammoth Creek. To begin to address this issue, information is needed on groundwater elevations prior to pumping as well as knowledge of where the creek gains or loses flow. Unfortunately, this information is scarce to non-existent. Reports of groundwater levels in the non-artesian zone prior to 1992 are restricted to levels measured at the time of drilling. There is however one deeper-zone well in the eastern end of the southern non-artesian zone, USGS well SC-2, which has water level data going back to 1984, a period before significant ground water pumping began.

USGS well SC-2 is interesting because its water level has fluctuated similarly to wells #1, #15, #14M and #24, but with less amplitude, even though it is more than two miles east of any major production well. Hydrographs for these wells in the southern non-artesian zone are given in Figure 7. The timing and amplitude of water level fluctuations in well #24 are almost identical to those in well SC-2 for the period of measurement except for the years 1999 and 2000. This suggests that the hydrograph for well SC-2 can be used to estimate water levels for well #24 from 1984 to 1994. Figure 7 shows the projected hydrograph for well #24 between 1984 and 1994 based on the ratio of the 1984-high to 1994-low versus 1999-high to 1994-low in well SC-2. This results in an estimated peak historic groundwater level of 7,395 feet in well #24 for 1984.

Using the same high-to-low ratio of well SC-2 on the hydrograph of well #1, an estimate can also be made of the ground water elevations in the pumping area of the southern non-artesian zone. The accuracy of this estimate would be less than for well #24, but water levels recorded during drilling of wells #1, #2 and #3 can be used to calibrate the estimate (McCann, 1981). Figure 7 shows the projected 1984-peak ground water elevation in well#1 at 7,831 feet as well as the 7,789-foot elevation in July 1976 that was measured at the time of drilling. Additional information on the water level in well #1 may be available from MCWD records and would be worth researching to evaluate this estimate.

Water levels in wells #2 and #3 were also recorded at the time of their drilling and these levels are also much higher than those recorded since 1992. Figure 8 is a revision of the 2006 geologic cross-section provide in the MCWD annual ground water report (Schmidt, 2006). Measured groundwater levels in the deeper aquifers for the years 1994 (a low year), 1998 (a high year) and 2006 are shown. The figure also has water levels, both measured and estimated for wells, #1, #2, #3, #24 and SC-2. The water levels measured before 1984 in wells #1, #2, and #3 clearly show a much higher historic water level in the basin than at any time since 1992. When the 1984 water level measured in SC-2 is also considered, the peak water level in well #24 for 1984 is a reasonable estimate.

Figure 8 shows that the recent groundwater elevations in the southern non-artesian basin appear to be permanently lower than those of the mid-1980s. The fluctuations in water levels from the lows of 1994 and 2003/04 to the high of 1998/99 are too small to expect that levels before the mid-1980s will ever be reached again with pumping continuing at current rates. Thus, the cumulative effect of pumping is the permanent reduction in groundwater level and a reduction of the ground water in storage.

### Non-Artesian Water Level and Flows in Mammoth Creek

An important question on the potential impacts of MCWD pumping is whether a drop in groundwater levels in the non-artesian zone has an impact on the flows in Mammoth Creek. Although there is not sufficient data to quantify the impact, I believe that the hydrogeologic conditions are such that an impact is likely, but it will not be as great in the area of pumping as further downstream near Highway 395 for reasons that will be discussed below. Unfortunately, there are no monitoring wells in this area to document hydrogeologic conditions in this lower portion of the basin.

Gains and losses in Mammoth Creek likely occur seasonally in various reaches downstream from the Old Mammoth Road (OMR) gage due to movement of shallow ground water, and inflow from

tributary drainage. Although site-specific data on whether the shallow ground water is in saturated hydraulic connection with the deep ground water are lacking, the recent drop in deep ground water levels increases the likelihood that some area of the intermediate aquifer zone is unsaturated. If this is the case, then the changes in deep ground water levels may not have a significant effect on creek flows because the unsaturated zone creates a hydraulic break between the shallow and deeper aquifers. If there is an impact, it will likely be a delayed response, with greater creek losses due to re-filling of the drained shallow aquifer.

The exception to the creating of an unsaturated zone would be at the lower reaches of the creek beginning just upstream from Highway 395. Approximately 3,000 feet before reaching Highway 395, Mammoth Creek gradient flattens and the channel becomes multi-branched or anastomosed (Figure 1). In this area there also appears to be the beginnings of a meadow as mapped by Lipshie (1974) that extends beyond Highway 395. This change in channel characteristics occurs at an elevation of approximately 7,240 to 7,220 feet.

Hydrogeologic conditions at this area appear to change when the channel branches with the creek flowing out of a basalt flow and into an alluvial area. There are also north-south trending faults, active and inactive, in the area. One fault is mapped approximately 1,500 feet west and the others east of Highway 395. They extend south from the resurgent dome at Casa Diablo and eventually link with the active Hilton Creek Fault zone to the south. Faults are well known causes of groundwater barriers where they juxtapose geologic units with differing aquifer transmissivities. This reduces the flow of water and at the same time provides a vertical pathway for water to spring to the surface. In this transition area of Mammoth Creek there are also geothermal waters associated with Casa Diablo Hot Springs. The deeper, saline hot waters migrate upward along these faults and mingle with the cooler fresh waters (Farrar and others, 1985). The reduction in channel gradient, change in geologic units and presence of faults up and down gradient all combine to create a likely condition where deep ground water can more easily rise to intersect the land surface, thereby adding to the surface flows of Mammoth Creek. Although site-specific subsurface information in this lower basin is lacking, a hydrogeologic condition where groundwater flow is restricted as it moves through the series of faults is more likely than one where flow is unimpeded.

In the down gradient portion of the basin near Highway 395, ground water elevations will respond to changes in recharge and pumping either in unison with those to the west, e.g., well #24, or they will remain relatively constant at the groundwater barrier(s) while fluctuating in the west. Both of these conditions can lead to a reduction in discharge of ground water to Mammoth Creek, although the former condition will likely cause greater loss than the latter. I believe that in the area where the faults create groundwater barriers, the latter condition of a relatively constant groundwater elevation is more likely. This is similar to what occurs to the west in the artesian zone of the MCWD well field. Elevations at artesian zone wells #5A and #5M vary much less than those in the non-artesian zone to the east. The following discusses the implications of both lower basin conditions on flows in Mammoth Creek.

1. For the condition where ground water in the lower basin fluctuates in unison with that to the west, creating a constant gradient, impacts to flows in Mammoth Creek will be dependent on whether the elevation of deep ground water intersects the ground surface near the creek, creating a gaining reach condition, or does not, creating a losing reach. In September 2006, the gradient of the drop in groundwater elevation from monitoring wells #30 to #24 was

0.0092. Both wells lie near the center of ground water flow in the non-artesian basin (Figure 18, Schmidt, 2006). If this gradient between wells #30 and #24 were to remain relatively constant when water levels fluctuate, then the water levels in the deep aquifer below the lower sections of Mammoth Creek could be estimated from levels in wells further to the west, e.g., well #24. For example, in September 2006, a 0.0092 gradient east from well #24 at an elevation of 7,347 feet would produce a deep groundwater elevation of approximately 7,240 feet at the anastomosed lower reach, a distance of approximately 11,500 feet to the east. This is at or near the elevation of the ground surface. The gaining reach condition in the lower reach of Mammoth Creek would cease whenever the water level in well #24 fell below a depth of 370 to 390 feet, or elevations 7,345 to 7,325 feet. This condition occurred at least once before, in 1993 to 1995, and perhaps again in 2004 to 2005 (Figure 7). The location where a gain in surface water flow would occur also changes with fluctuations in deep groundwater elevation. As groundwater elevation rises, the extent of gaining reach increases upstream. With a condition of a consistent gradient, the gaining reach likely extended 1,000 feet up from the anastomosed reach during the groundwater high in 1998/99, and may have gone as far as 2,000 feet upstream during the high of 1984, if the projected elevation of 7,325 feet in well #24 is correct.

2. The second potential condition of ground water in the lower basin would occur if the faults create a groundwater barrier that at least partially restricts horizontal groundwater flow, causing a relatively constant elevation at the down gradient end. This scenario assumes that a relatively constant artesian condition occurs in the lower reach with a relatively constant elevation of deep ground water near the faults. Fluctuations in groundwater levels further to the west, e.g., well #24, will result in a change in the groundwater gradient. Movement of ground water follows Darcy's Law, which means that rate of flow changes are in part due to variation in the gradient of the ground water. In this scenario, whenever ground water levels fluctuate at well #24 the groundwater gradient to the east will change. The potential impact of this fluctuating groundwater gradient on flows in Mammoth Creek would be due to changes in the rate of groundwater available for discharged to the surface and also possible changes in the temperature and chemical character as a result of mixing with deeper geothermal waters. An example of the change in groundwater gradient is shown in a simplified diagram at the bottom of Figure 8. Change in gradient during periods of high ground water can be calculated from the estimated high at well #24 in 1984 and the measured level in 1998/99. The ground water gradient from well #24 to the anastomosed reach in 1984 is estimated to be 0.00135, and in 1998/99 measured at 0.0109. This represents a decrease in gradient of approximately 19 percent from 1984 to 1998/99. This change in gradient would result in a reduction of groundwater flow of an equal percentage, assuming the cross-sectional area of flow in the lower basin does not change appreciably. This reduction in groundwater flow appears to be permanent based on the discussion above, (i.e., that water level in SC-2 correlates with well #24). The level of ground water in the lower basin will therefore not likely rise to the historic, pre-pumping high. As noted above, data are lacking in the lower portion of the basin to determine which scenario is correct or determine the amount or location of any groundwater discharge to Mammoth Creek.

## Conclusions

1. The groundwater basin that MCWD extracts from is hydrogeologically more complex than previously described. There appears to be a barrier to the flow of ground water that extends

northwest from the western end of the Long Valley fault to at least the area between wells #5A and #16.

2. The annual MCWD ground water monitoring reports place an east-west trending hydrologic barrier north of wells #5A/#5M and #1 and south of wells #16 and #25. The western end of the MCWD barrier may join with the northwest-southeast barrier that I and others have identified.
3. The elevation of deep ground water up gradient, or west of the northwest-southeast groundwater barrier is several hundred feet higher than to the east. The flow of ground water in this area typically has an upward component of flow that creates a near-artesian condition during periods of high precipitation and low pumping.
4. Groundwater levels in wells #5A and #5M appear to change in response to the amount of pumping. Changes in water levels cause a change in the difference in groundwater elevations between the wells, which changes the magnitude and direction of the vertical gradient. The upward flow of ground water in the artesian zone creates the potential for ground water to discharge to Mammoth Creek, creating a gaining reach. During the most recent period of high pumping, 2001 to 2005, the upward vertical gradient between wells #5A and #5M dropped significantly and at times reversed direction with flow temporarily going downward.
5. A reduction in the vertical flow of ground water in the artesian zone may cause a reduction in the amount of ground water discharged to Mammoth Creek. This reduction in discharge would be felt downstream, possibly as far as the area of the non-artesian ground water.
6. Water levels in the southern non-artesian zone were higher prior to 1992 than today. Measurements taken in wells #1, #2, and #3 show that water levels have dropped since the MCWD well field was developed and pumping increased. A lack of data during the pre-well field development hampers analysis.
7. The lowering of water level in the non-artesian zone appears to be permanent; levels have not recovered to the highs measure during early years of development.
8. Water levels in wells #24 and SC-2 are correlated for the period of record, which allows the estimation of the water level in well #24 back to 1984. Water level in well #24 was likely 30 feet higher than the measured high in 1998/99. This estimated rise in water level is consistent with other measured water levels in wells #1, #2, #3 and SC-2.
9. Dropping water levels in the lower, eastern portion of the basin near Highway 395 may affect surface flows in Mammoth Creek. Two scenarios are likely: a constant groundwater gradient or a variable gradient. While data are lacking to determine which condition occurs, with either scenario a drop in groundwater level in the area of MCWD wells can produce a reduction in groundwater discharges to the lower reaches of the creek in the area near Highway 395.

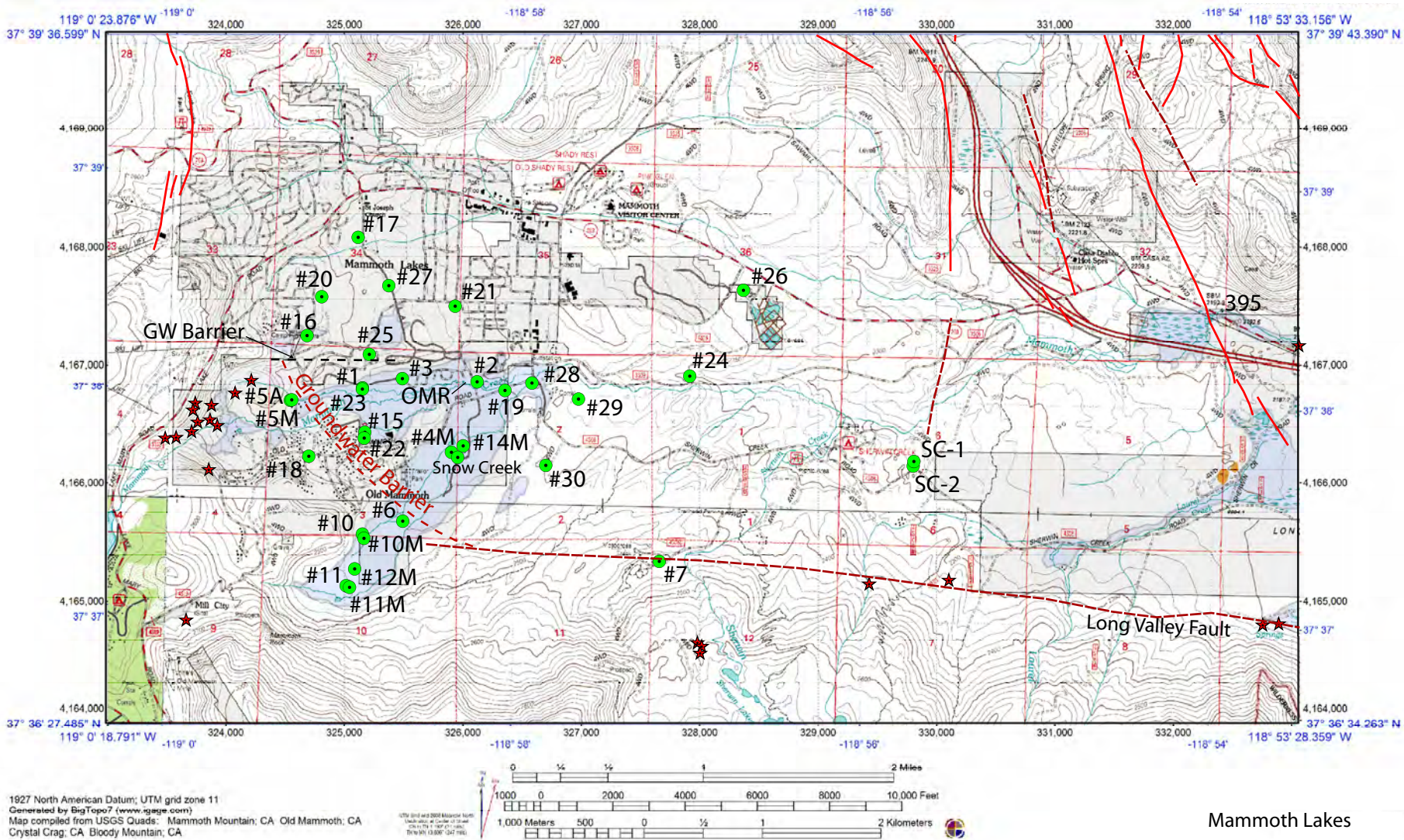
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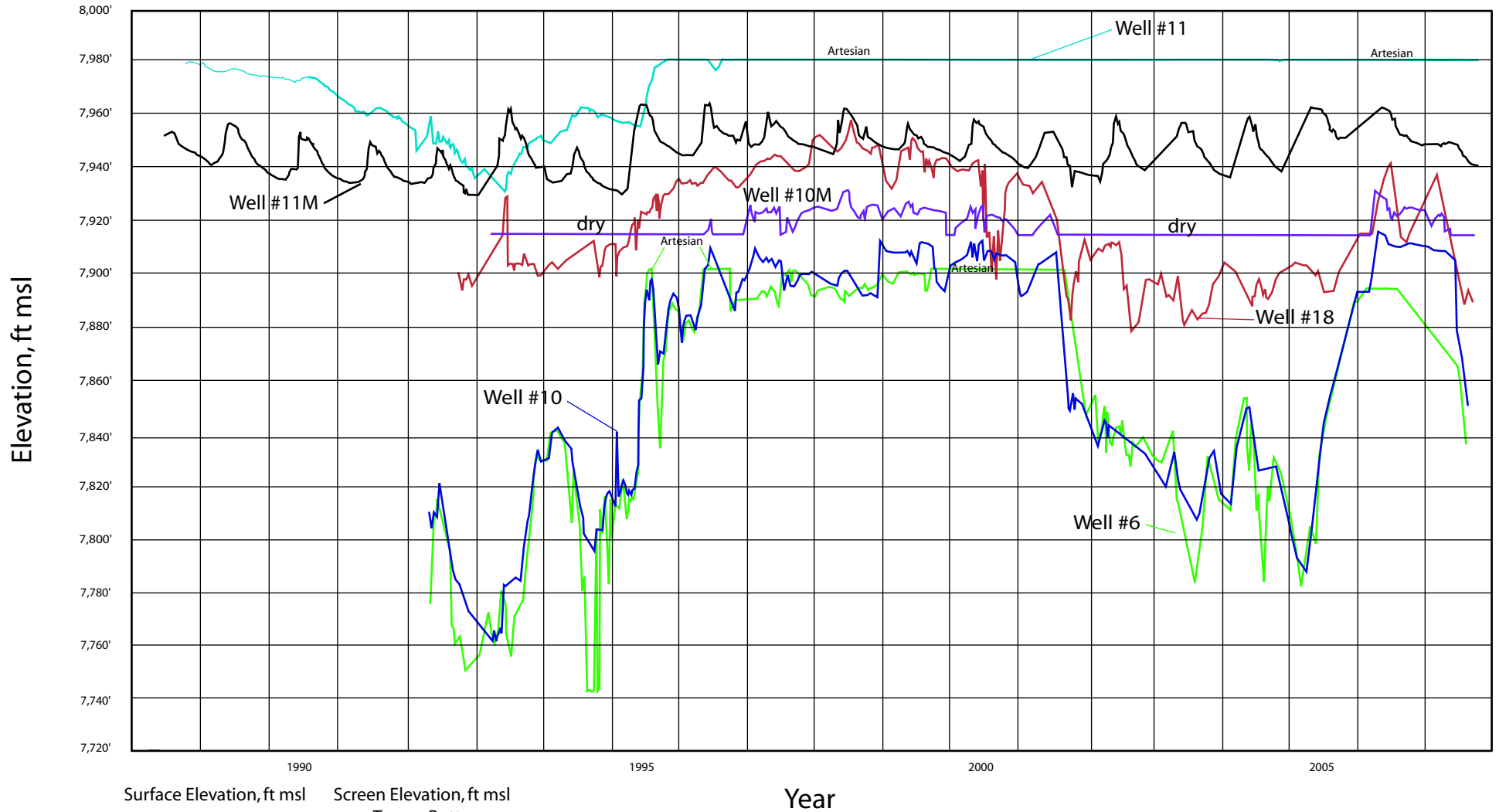
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- #1 ● Mammoth Community Water District Wells
- Alquist-Priolo Faults
- - - USGS Faults
- Meadows after Lipshie, 1974
- ★ Springs after Lipshie, 1974

Figure 1. Topographic base map of Mammoth Lakes Area showing MCWD wells, springs, faults, and groundwater barriers.

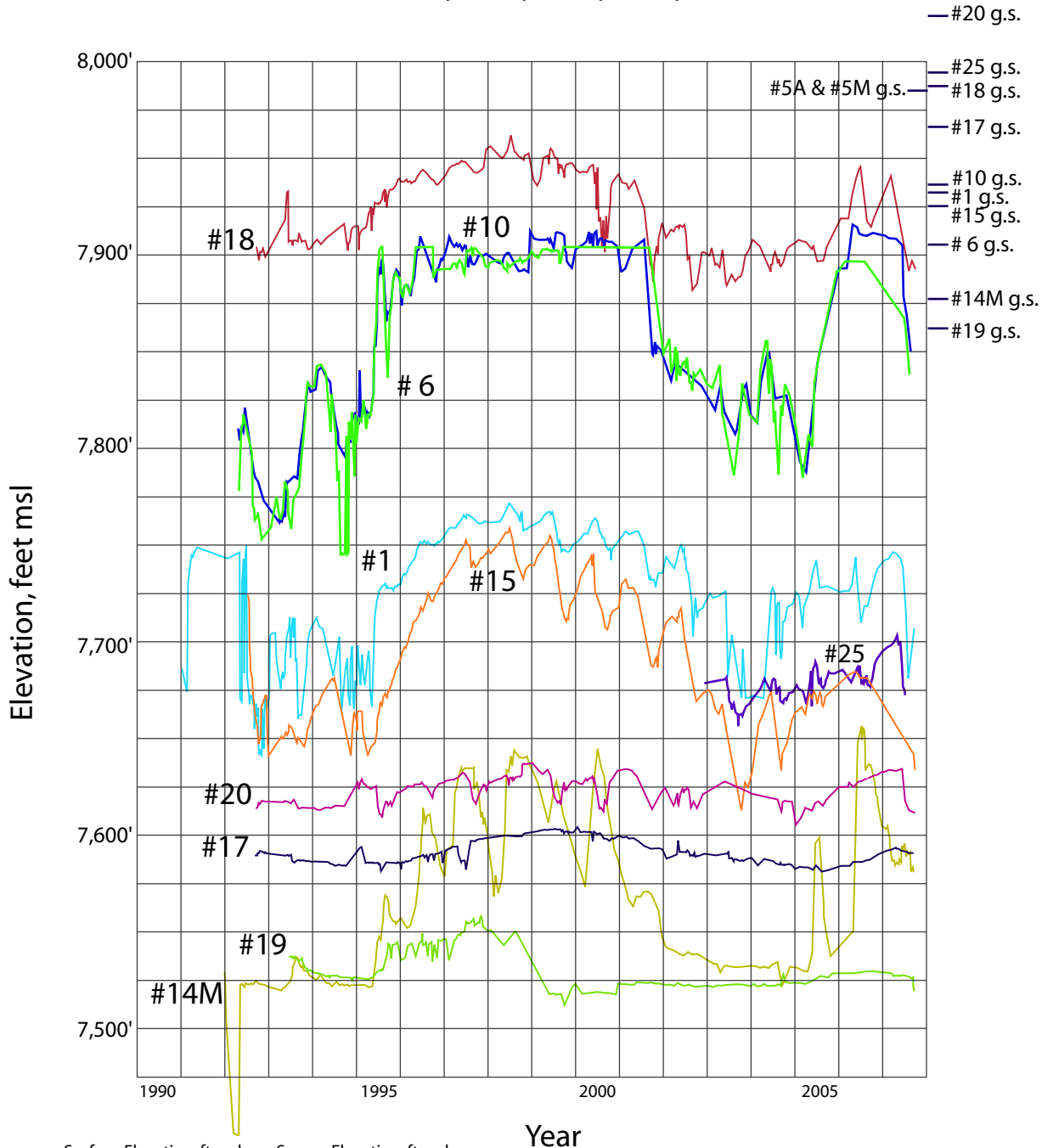
# Mammoth Community Water District Well Hydrographs Wells #6, #10, #10M, #11, 11M, #18



	Surface Elevation, ft msl	Screen Elevation, ft msl	
		Top	Bottom
Well #6	7906.49'	7814'	7290'
Well #10	7937.15'	7801'	7237'
Well # 10M	7939.85'	7933'	7913'
Well #11	7979.89'	7810'	7620'
Well #11M	7968.73'	7964'	7926'
Well #18	7988'	7898'	7838'
		7748'	7518'

Figure 2. Groundwater hydrographs of MCWD wells located within the artesian zone, wells #6, #10, #10M, #11, #11M, and 18 except wells #5A and #5M.

# Mammoth Community Water District Well Hydrographs Wells #1, #6, #10, #14M, #15, #17, #18, #19, #20, #25



	Surface Elevation, ft msl		Screen Elevation, ft msl	
	Top	Bottom	Top	Bottom
Well #1	7927'		7727'	7557'
Well #6	7906'		7814'	7290'
Well #10	7937'		7801'	7237'
Well #14M	7877'		7777'	7577'
Well #15	7925'		7518'	7205'
Well #17	7967'		7567'	7257'
Well #18	7988'		7898'	7838'
			7748'	7518'
Well #19	7862'		7662'	7542'
Well #20	8024'		7604'	7314'
Well #25	7994'		7652'	7464'

Figure 3. Groundwater hydrographs of MCWD wells located within the non-artesian zone, wells #1, #14M, #15, #17, #19, #20 and #25 except #16, #21, #26 and #27. Artesian zone wells #6, #10 & #18 included for comparison.



## Groundwater Elevations MCWD Wells #5A & #5M

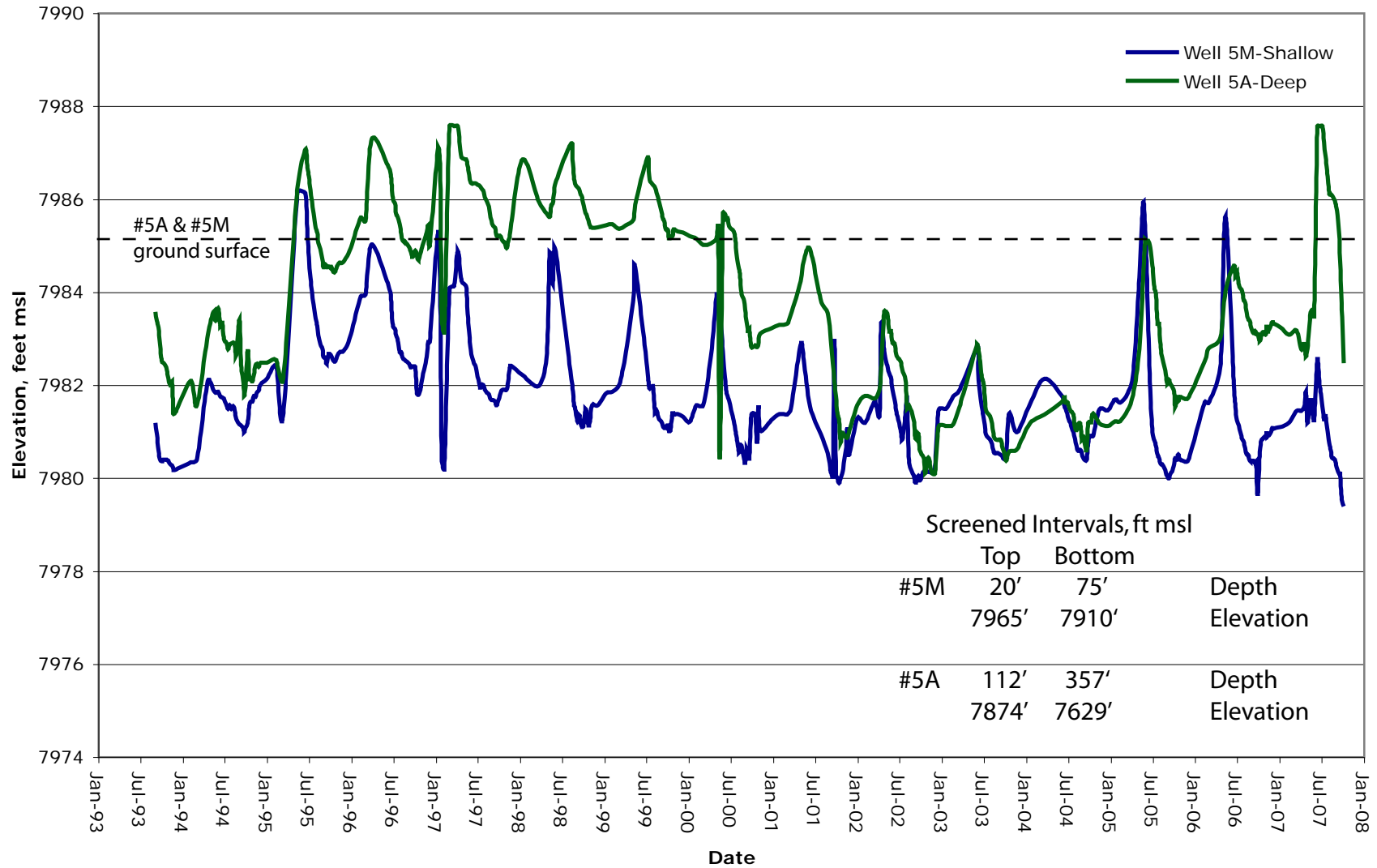


Figure 4. Groundwater hydrographs of MCWD wells #5A and #5M, 1993 to 2007

## Groundwater Elevations Difference Wells #5A and #5M

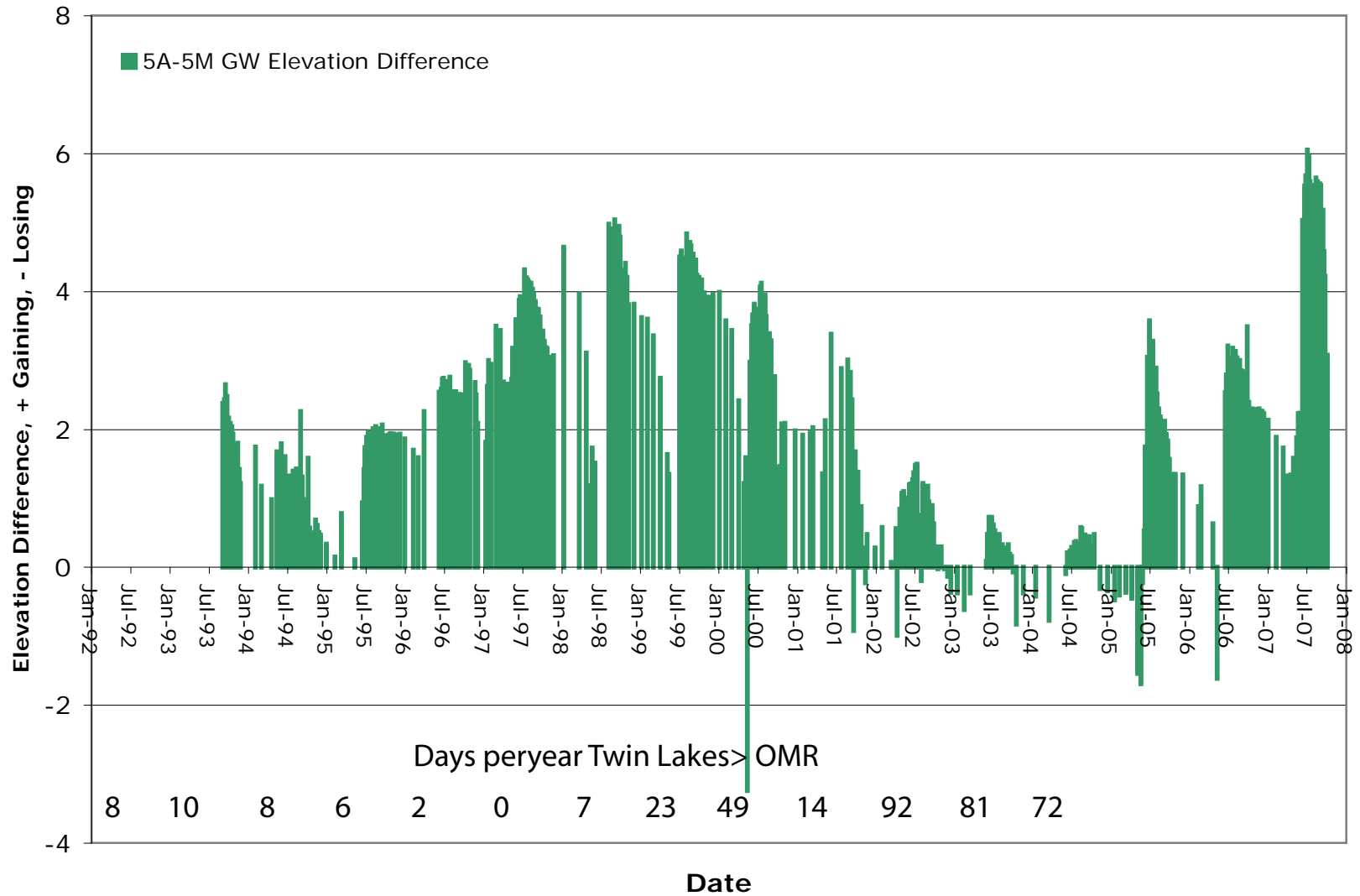


Figure 5. Differences in groundwater elevation between MCWD well #5A and #5M, 1993 to 2005. Days per year Twin Lakes flow greater than at OMR listed (from Burak and Farrar, 2006).

## Total Monthly Well Pumpage MCWD Wells #1, #6, #10, #15, and #18

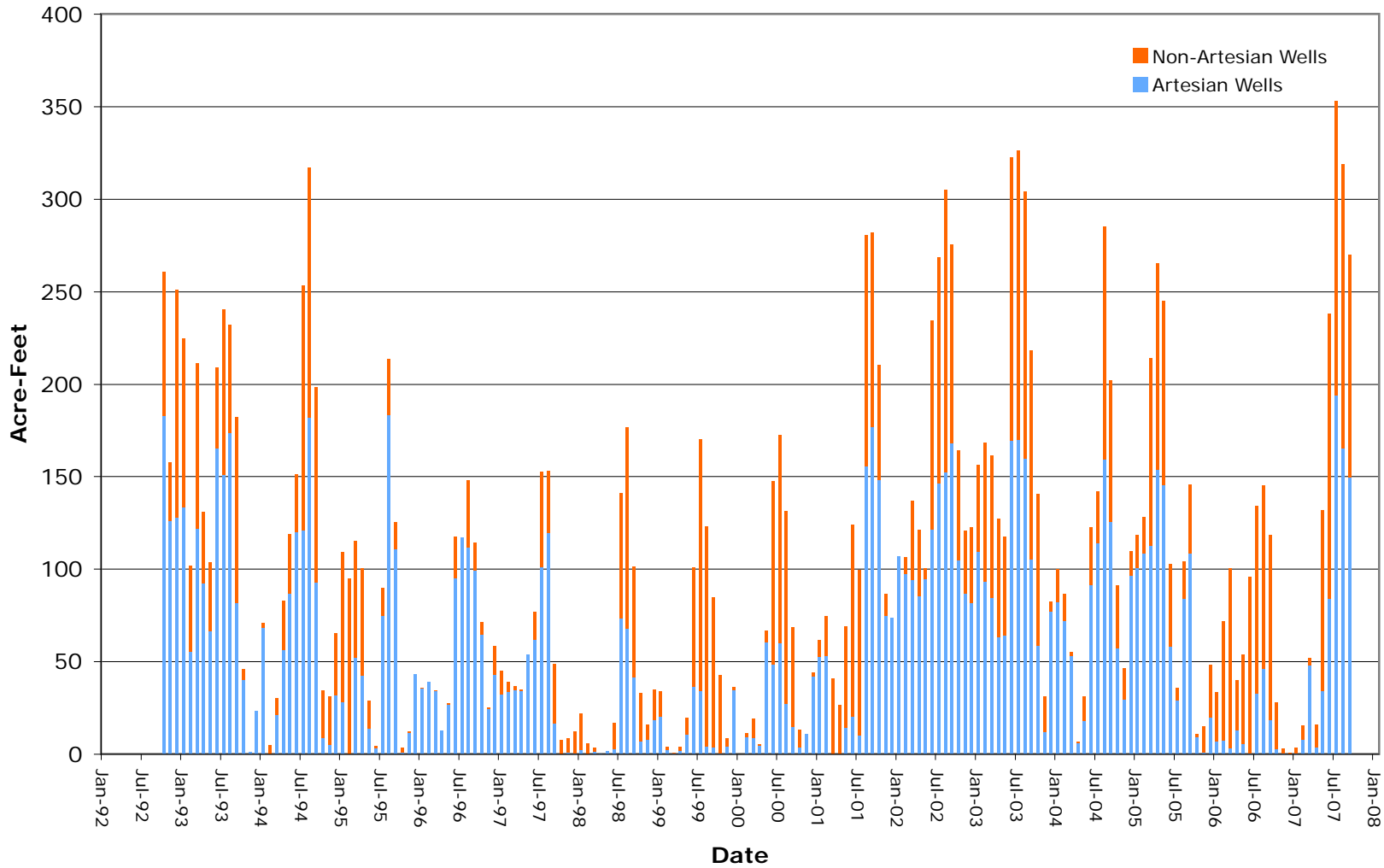
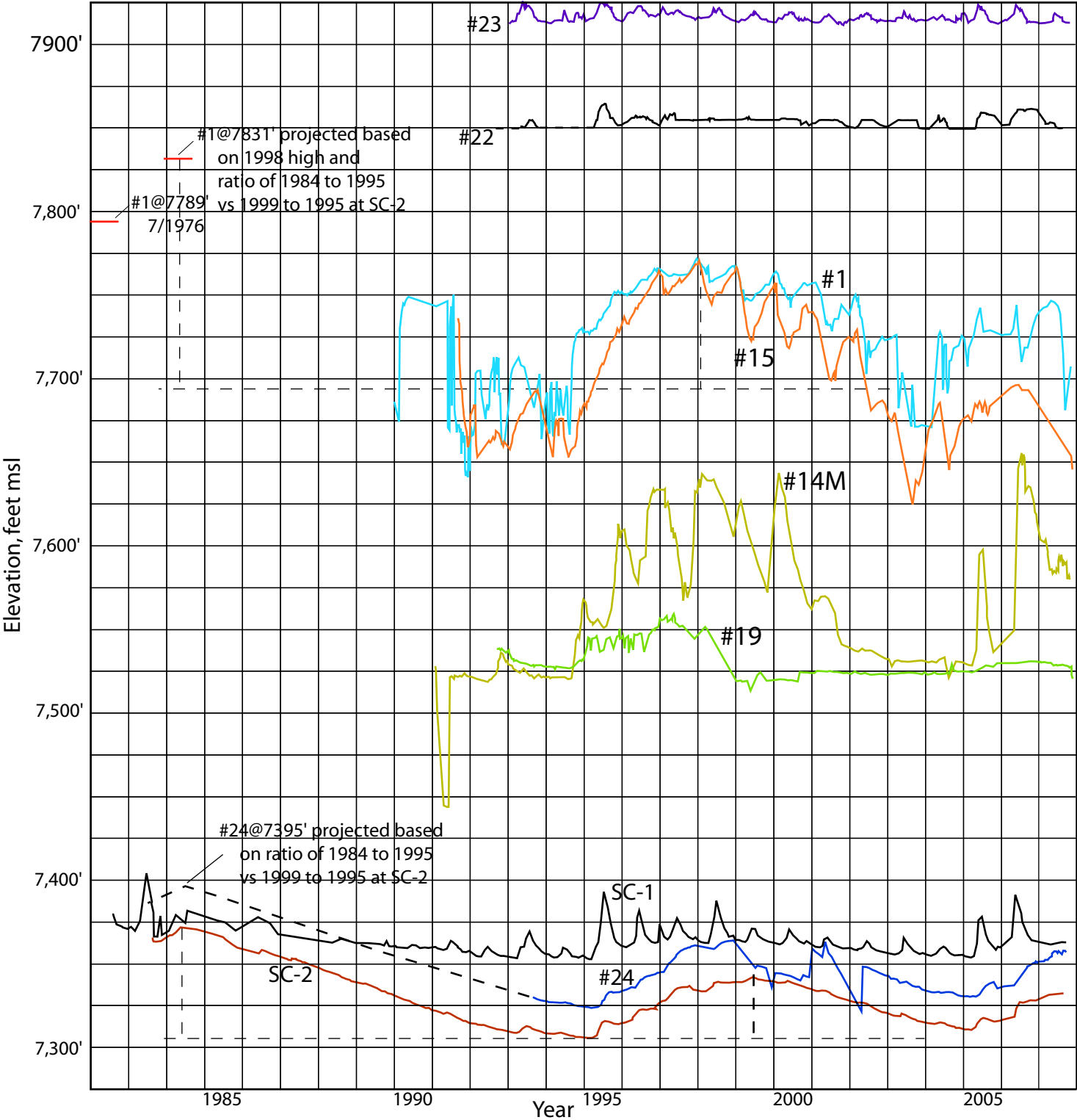


Figure 6. MCWD Total monthly pumpage for artesian wells #6, #10, #18, and non-artesian wells #1 and #15 for 1993 to 2006.

Mammoth Community Water District  
Well Hydrographs  
Wells #1, #14M, #15, #19,  
#22, #23, #24, SC-1, SC-2



	Surface Elevation, ft msl		Screen Elevation, ft msl	
			Top	Bottom
Well #1	7927'		7727'	7557'
Well #14M	7877'		7777'	7577'
Well #15	7925'		7518'	7205'
Well #19	7862'		7662'	7542'
Well #22	7932.6'		7878'	7848'
Well #23	7927'		7897'	7862'
Well #24	7715'		7415'	7265'
USGS SC-1	7471'		7431'	7339'
USGS SC-2	7472'		7257'	7242'

Figure 7. Groundwater hydrographs of MCWD non-artesian zone wells with pre-pumping groundwater elevations for MCWD well #1 and #24 based on ratio of 1984 high to 1994 low and 1999 high to 1994 low in USGS well SC-2.



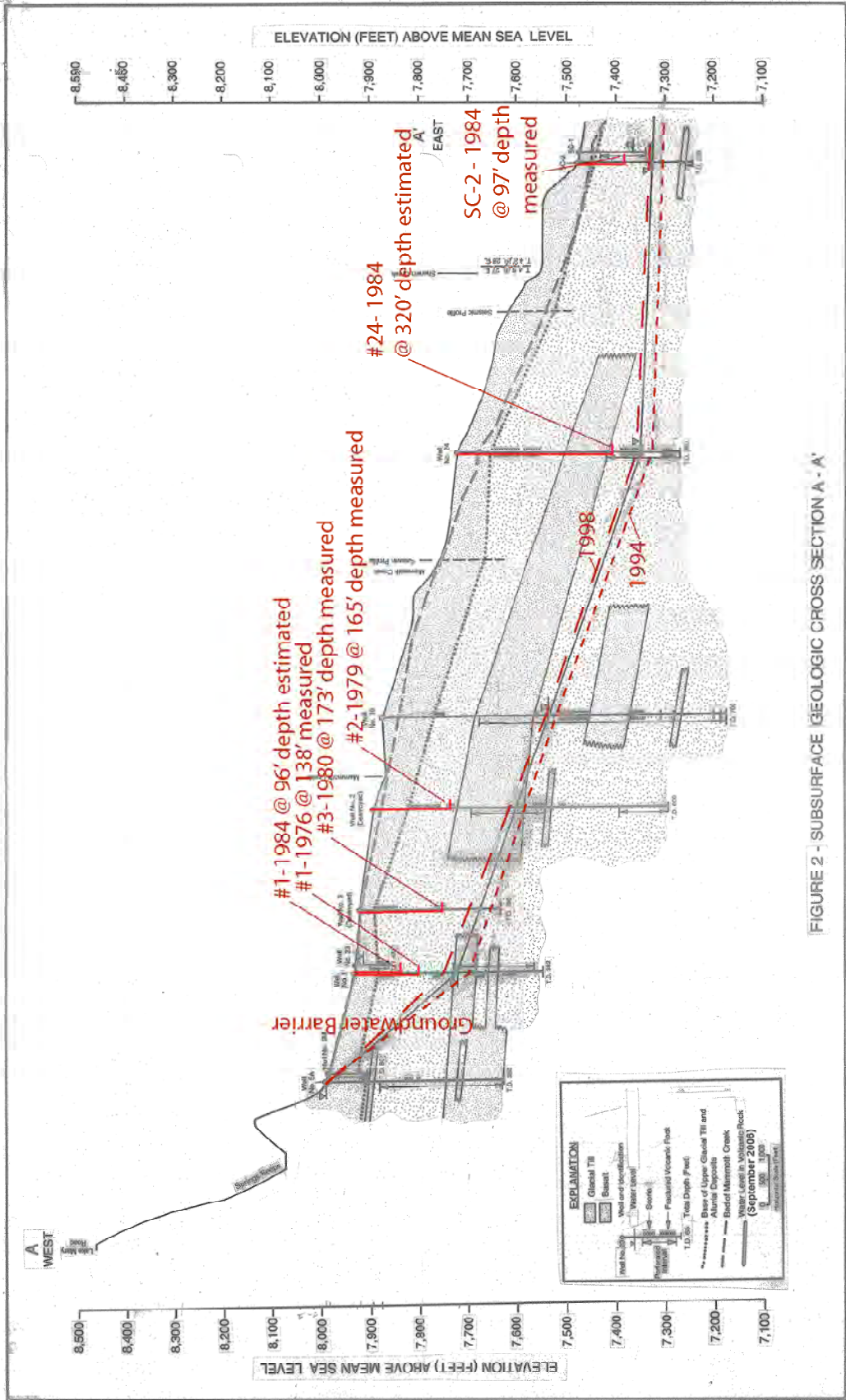


FIGURE 2 - SUBSURFACE GEOLOGIC CROSS SECTION A - A'

Figure 8. Subsurface geologic cross-section A-A' from 2006 annual MCWD ground water monitoring report. Annotated with water levels from 1994 (low) and 1998 (high), as well as measured and estimated water levels for 1984 and earlier.

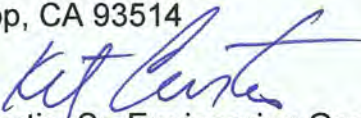


## Memorandum

Date: November 4, 2010

To: Nancee Murray  
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From: Kit Custis, Sr. Engineering Geologist  
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Regional Operations Division  
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Subject: Comments on September 2010 Draft EIR for Mammoth Creek Fishery Bypass Flow Requirements, SCH#1997032082 Water Rights Permit #17332.

The following are my comments on the September 2010 Draft Environmental Impact Report (DEIR) on Mammoth Creek bypass flow requirements, watershed operation constraints, points of measurement, and place of use for Mammoth Community Water District's (District) amendment to water right permit #17332. My comments are only related to the issue of surface water impacts from pumping of ground water. I offer the following comments and recommendations.

1. The DEIR essentially ignores the potential impacts of groundwater pumping on creek flows by stating that there is no evidence of existing impact, citing the Schmidt hydrogeologic monitoring reports. I don't agree with this assertion because I don't think the analysis of the Schmidt monitoring reports is done in a manner that evaluates potential groundwater pumping impacts on the creek. In addition, I think that the

data and information that I presented in my October 16, 2008 memorandum on the hydrogeologic setting of the Mammoth Creek basin show evidence of the potential impact of ground water pumping on surface water flows.

2. There should be temporal and spatial lags between the pumping of ground water and changes in the creek flow due, in part, to the depth to groundwater in a large portion of the basin, the depth of the screens in the wells, and the time it takes for the cone of depression from pumping to expand or recover with pumping. The ground water monitoring reports don't appear to consider the potential for temporal or spatial lags between groundwater pumping and surface flow impacts. There is also a problem in expecting the pumping impacts to be immediately adjacent to the wells that are down gradient of the OMR gage as there apparently is no immediate saturated connect between the shallow surface water and the deeper aquifer being pumped by the District's wells. In this setting, any response in the creek flow from changes in ground water pumping rates would occur further down gradient in areas where ground water naturally discharges to the surface.
3. There is however, an apparent saturated connection between the shallow ground water and deeper pumped aquifers in the area up gradient of the OMR gage. As I discussed in my October 16, 2008 memorandum on the hydrogeologic setting of the Mammoth Creek basin, the water level data indicate an artesian groundwater zone occurs in the western part of the basin. I called this zone the Western Artesian Zone and impacts from the District's groundwater pumping can be seen in the historic changes in groundwater levels in the artesian zone, especially for wells #5A and #5M (see pages 3, 7, 8, and 9, and Figures 1, 4, 5, and 6 in my October 16, 2008 memorandum). Wells #5A and #5M are important because they are adjacent to each other and their screens are set at two different elevations, one shallow and one deep. Water levels in these two wells can be used to measure the magnitude and direction of vertical groundwater flow, which appear to respond to changes in the rate and duration of groundwater pumping as I discussed in my October 16, 2008 memorandum.
4. Interestingly, some of the pumping impacts on vertical groundwater gradient measured at wells #5A and #5M, which are upstream of the OMR gage, are evident in the changes in surface water flows between OMR and Old 395 gage. I have attached Figure 1 that plots the monthly groundwater pumping rate, calculated as an average cubic feet per second (cfs), with the difference in creek flow between OMR and Old 395 gages, also in units of cfs. Gage data plotted Figure 1 begins in 1988, but because I don't have earlier data the groundwater pumping rate graph begins in 1992. The creek flows come from tables in Appendix D of the

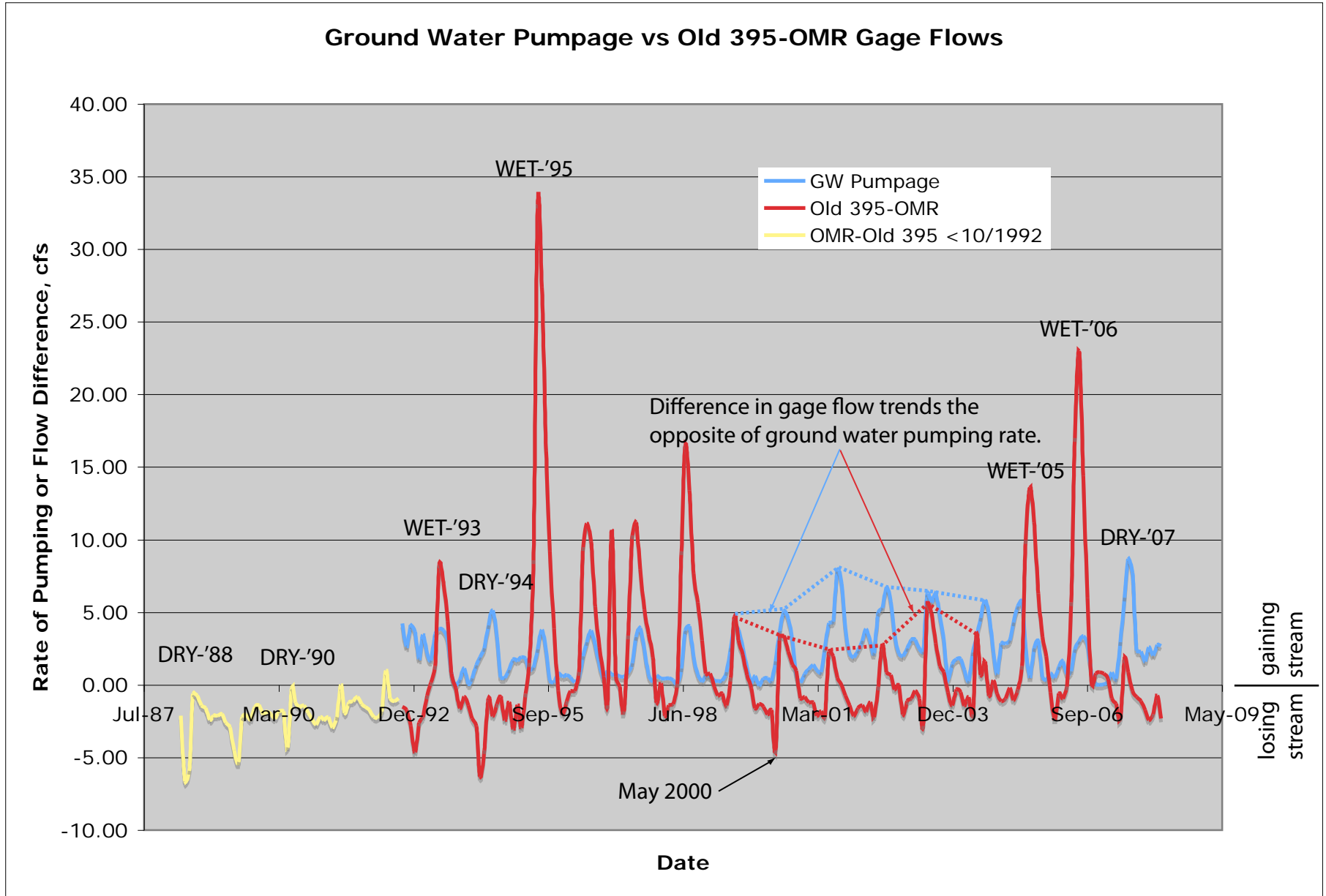


2010 DEIR, while the groundwater pumping rate is taken from the Schmidt annual monitoring reports. A positive flow difference means that the creek gains flow between the OMR and Old 395 gages. A negative value means the creek loses flow. The wet and dry years are labeled, otherwise the peaks are considered normal years.

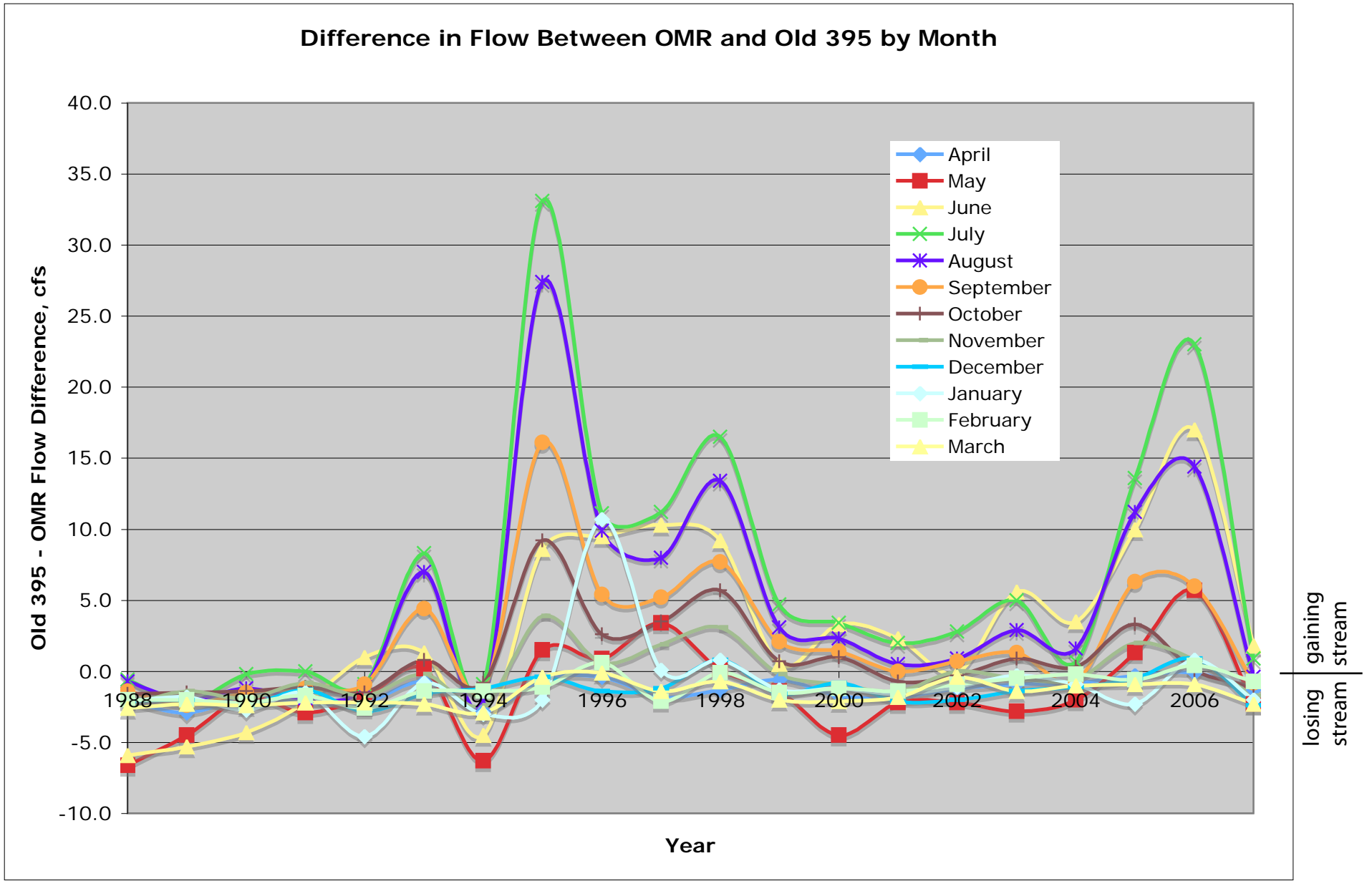
There is a general trend in the difference in flow between OMR and Old 395 gages going downward following an increase in groundwater pumping during the period from 1999 to 2005. As pumping rate increases from 1999 to 2001, the difference in flow between the gages become more negative; that is, more loss in creek flow occurs with continued pumping. The pattern reverses from 2001 to 2003 with a decrease in pumping, the flow difference become more positive; a slight gain in flow between the gages. A similar pattern is seen in wells #5A and #5M as shown in Figures 4 and 5 of my October 16, 2008 memorandum. The periods of increased loss in creek flow shown in Figure 1 also generally correspond to the 1999 to mid-2005 period of reduced vertical groundwater elevation, changes in vertical groundwater flow magnitude, and vertical groundwater flow direction in wells #5A and #5M associated with increased groundwater pumping. At times during this period, the vertical direction of ground water flow becomes periodically negative indicating that the creek may be losing flow to the shallow ground water. In summary, the negative elevation difference at wells #5A and #5M (Figure 5 in my October 16, 2008 report) also corresponds to the period where the creek had increased losses in flow between the OMR and Old 395 gages. It is interesting that during the 1999-2005 period, the greatest loss in creek flow between OMR and Old 395 gages (Figure 1) occurs in the same month, May 2000, as the greatest difference in ground water elevation between wells #5A and #5M (Figures 5 in my October 16, 2008 report).

5. The correlation between changes in the magnitude and direction of vertical groundwater gradient at wells #5A and #5M with the changes in stream flow between OMR and Old 395 gage suggests that a hydraulic linkage exists between the rate and duration of groundwater pumping and creek flow. I've attached Figure 2, which shows the flow difference between gages by month for each year from 1988 to 2007. Obviously, many other factors that influence the changes in the pattern of flows in Mammoth Creek at the OMR and Old 395 gages in the period before and after 1992. Figure 2 shows that there has been a significant change in the pattern of flows between the two gages after 1992. This may reflect some operation changes in the releases from Lake Mary, changes in rate, duration and timing of groundwater pumping, or climate changes. Note that following a wet year there is a sustained increase in creek flow between gages lasting several years. Interestingly, some of peaks in the gage difference shown in Figure 1 during "normal" years between 1996 and 2004 are higher than the peaks for "wet" years 1993 and 2005.

6. I would recommend that we continue to track the changes in flow between OMR and Old 395 gages against the groundwater pumping along with the elevation differences between wells #5A and 5M to see if the pattern continues. The linking of bypass flow requirements to flows measured at the Old 395 gage and the difference in flow with the OMR gage is critical to ensuring that groundwater pumping doesn't cause surface water flow impacts. A sustained decrease in the creek flow between these gages with constant or increased groundwater pumping would suggest that groundwater pumping is having a negative impact on creek flows. Impacts of groundwater pumping on creek flow may increase if the flows measured at either gage repeatedly fall below the level of bypass flow that results in greater and longer periods of groundwater pumping.



**Figure 1:** Monthly ground water pumpage versus difference in Mammoth Creek flow between the OMR and Old 395 gages. Positive values indicate a gaining stream, negative values a losing stream.



**Figure 2:** Difference in creek flow between OMR and Old 395 gages. Positive when flow increases below OMR gage (gaining stream), and negative when flow decreases (losing stream).

**Letter A3**

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Response to comment A3 - 1

The Draft EIR evaluated potential impacts to sensitive plant species at pages 7-93 to 7-94 of the Draft EIR in the Impact Consideration 7.3.3.3-7. The Draft EIR at page 7-93 provides that sensitive plant species “may occur within the region but are not expected to occur within the Project Area due to the lack of suitable habitat or the Project Area’s location outside the species’ range.” At page 7-94, the Draft EIR states that “Sensitive plant surveys are recommended for the Bodle Ditch area in July of next year to determine the status of these species [those noted in the comment letter] in the Bodle Ditch riparian and wet meadow habitats.” Based on these recommendations, the District planned on conducting the focused surveys for the four species identified in the comment letter at the appropriate time of year (mid-June to mid-July or as otherwise determined through consultation with the Inyo National Forest botanist) prior to the cessation of managed diversions from Lake Mary into Bodle Ditch. Impact Consideration 7.3.3.3-7 will be revised to reflect the District’s intent to complete the surveys in 2011. The Draft EIR also inadvertently omitted inclusion of provisions for monitoring and implementing adaptive management measure should sensitive plant populations be discovered during the survey.

As discussed at page 7-80 of the Draft EIR, the riparian vegetation and habitat along Bodle Ditch that is comprised of obligate or facultative plant species appears to be supported by hydrologic inputs other than the managed diversions into Bodle Ditch from Lake Mary. In particular, culverts under Lake Mary Road collect and discharge rain and snowmelt runoff to Bodle Ditch as do several springs along the middle and downstream reaches. In addition, shallow groundwater may potentially play a role in supporting riparian vegetation and habitat along Bodle Ditch. In addition, it should be noted that an intensive botanical survey was conducted in 2000 for the Lake Mary Road Bicycle Lanes and Off-Street Bicycle Paths<sup>1</sup>. That survey covered an area that overlapped most of Bodle Ditch from Lake Mary to Old Mammoth Road and found no occurrences of rare plant species. Additionally, the flows in Bodle Ditch are not characteristic of the habitat for pondweeds. These species require relatively stable lakeshore or lake outflow habitat for rooting.

The proposed project’s Riparian and Wetland Monitoring and Adaptive Management Program (RWMAMP) was developed to monitor changes in the riparian and wetland plant communities and to address significant loss of riparian and/or wetland habitat. Any population of sensitive plant species located during the rare plants surveys, described above, will be included in the RWMAMP and monitored. The RWMAMP has been revised in several sections to include

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<sup>1</sup> Paulis, J. 2000. Botanical Survey for the Proposed Lake Mary Road Bike Path. Final Environmental Assessment for Lake Mary Road Bicycle Lanes and Off-Street Bicycle Paths, Town of Mammoth Lakes and USDA Forest Service-Inyo National Forest.



monitoring and additional consideration of adaptive management measures for populations of sensitive plant species should they be located during the 2011 surveys. The first paragraph following the heading, Riparian and Wetland Monitoring and Adaptive Management Program, at page 7-82 has been revised to read as follows:

*As discussed above, riparian and wetland vegetation, including a number of obligate and facultative hydrophytic plant species, have established themselves along the banks of Bodle Ditch and surrounding areas since it was constructed in the late 1880s to supply water to mining camps that existed in the area. In addition, several sensitive plant species may be present in locations supported by Bodle Ditch flows. The hydrophytic vegetation along the ditch is supported by rain, snowmelt runoff, input from several natural seeps and springs along its length, natural accretion, and by the direct diversion of water from Lake Mary into the ditch between May 1 and November 1, although the specific amount and timing of water released is dependent on the availability of water in Lake Mary. It is not known what percentage of water flow in the ditch annually comes from "natural" sources and what percentage comes from Lake Mary. In addition, determining the amounts, by source, of water flowing into Bodle Ditch, and its relationship to the health of hydrophytic plant species, would require several years of data and installation of additional gauges, where the data ultimately collected could be difficult to interpret given seasonal variations and other factors. While it is suspected that the riparian vegetation and habitat found along Bodle Ditch is supported primarily by inputs other than the diversions from Lake Mary, the potential for impacts associated with the Proposed Project Alternative's cessation of direct diversion from Lake Mary into Bodle Ditch cannot be accurately determined based on available information. Due to this uncertainty, a Riparian and Wetland Monitoring and Adaptive Management Program (RWMAMP) is proposed as part of the Proposed Project Alternative.*

An additional section describing monitoring of sensitive plant species has been added to follow the section titled, Measurement of Woody Species Regeneration, at page 7-83 and reads:

**SURVEY AND MONITORING OF SENSITIVE PLANT SPECIES**

*Prior to cessation of managed diversions from Lake Mary into Bodle Ditch, a sensitive plant survey for scalloped moonwort, Kern milk-vetch, scalloped-leaved lousewort, and slender-leaved pondweed will be conducted for the Bodle Ditch area between mid-June and mid July (or as otherwise determined appropriate) in 2011. If populations of these species are found to be present, CDFG and the Inyo National Forest botanist shall be consulted and the populations shall be monitored in accordance with the regime described below. If the monitoring biologist detects any adverse effects on the population(s), the need for responsive measures and how they will be carried out will be documented.*

The paragraph following the heading, Monitoring Stations and Monitoring Regime at page 7-83 has been revised to read:

*To best elucidate the relationship between diversions from Lake Mary to the maintenance, health and vigor of riparian vegetation along Bodle Ditch, as well as the role of rain, snowmelt runoff, input from several natural seeps and springs along its length, and natural accretion in supporting riparian vegetation along Bodle Ditch, three to four monitoring stations will be established: (1) just below the point of current discharge from Lake Mary; (2) just downstream of the LADWP weir; (3) just downstream of the spring at the base of Red Mountain; and (4) sensitive plant populations, if located during the 2011 survey. These*

*stations represent a woody riparian community, a lodgepole pine dominated riparian community, a woody riparian community, and potentially, populations of sensitive plant species, respectively. The measurement of baseline, or starting conditions, following the methods outlined above, will be conducted in mid- to late July (corresponding to the middle of the growing season) in the beginning year of the RWMAMP. Monitoring at these stations, following the methods outlined above, will take place in mid to late July during each following year of monitoring. Monitoring will be conducted annually for the first three years in order to discern the potential, but unanticipated loss of riparian vegetation along Bodle Ditch, and implement responsive measures if necessary, as set forth below. Following year three of monitoring, if no loss of riparian communities is detected due to the cessation of diversions from Lake Mary, monitoring will take place at year six following the cessation of diversions. If, at the end of the entire 6-year monitoring program no significant loss of riparian communities is detected, the monitoring program will be terminated.*

The paragraph following the heading, Adaptive Management Measures, at page 7-83 has been revised to include additional measures that may be considered for sensitive plant species and will read:

*The adaptive management strategy for identified degradation and/or loss of riparian and wetland communities and/or sensitive plant populations shall include creation, restoration and/or enhancement of riparian and/or wetland habitat. The adaptive management shall be accomplished in one or more of the following ways: (a) creation, restoration and/or enhancement of habitat within the Mammoth Creek riparian zone; (b) creation, restoration and/or enhancement outside the Mammoth Creek riparian zone, but within the Mammoth Creek watershed; (c) payment of in lieu fees to an existing riparian mitigation/conservation bank and/or existing Inyo National Forest habitat management and/or enhancement program; and (d) through such actions as "set asides" and transplanted receiver site(s), including the recordation of a conservation easement or deed restriction and related best management practices (BMPs) such as protective fencing. The site(s) will be chosen with an emphasis placed on both ecological suitability to allow for maximum survival rate of transplants as well as the minimization of impacts to existing quality habitat. The selection of a site or program to which adaptive management measures will be applied should set a priority for locations where the highest benefit to habitat can be realized while also enhancing the quality of public views and the enjoyment of trail experiences by the public. The payment of in lieu fees, if such a program exists, shall fulfill these requirements, in part or in full. For adaptive management entailing habitat creation, restoration and/or enhancement, a Habitat Management and Monitoring Plan shall be prepared for review and approval by MCWD and trustee agencies, as appropriate (for example, CDFG). The plan shall stipulate success criteria for the habitat being created, restored and/or enhanced and shall be monitored by a qualified restoration ecologist for five years or until such time as the success criteria are met, but no sooner than one year following cessation of all inputs (e.g., soil amendments, irrigation, etc.) to the creation, restoration and/or enhancement project. The success criteria will address requirements for no significant net loss of riparian and/or wetland habitat and will focus on habitat replacement to the extent practicable and satisfactory to the participating trustee resource agencies.*

The second paragraph at page 7-94 in the Draft EIR, under the heading Impact Consideration 7.3.3.3-7 Potential Adverse Effects on Sensitive Biological Resources, has been revised as follows:

*The species listed in the preceding paragraph (except alkali tansy-sage, smooth saltbush, Lemmon's milk-vetch, alkali ivesia, and Inyo County star tulip which occur in alkali areas not present within Bodle Ditch) have a potential to occur within Bodle Ditch. A sensitive plant survey was conducted by PCR in August 2009 which covered the blooming period of all potential sensitive plant species in Bodle Ditch except scalloped moonwort (blooming period of June to July), Kern milk-vetch (blooming period of June to July), scalloped-leaved lousewort (blooming period of June to July), and slender-leaved pondweed (May to July). Sensitive plant surveys shall be conducted for the Bodle Ditch area between mid-June and mid-July (or as otherwise determined appropriate) in 2011 prior to the cessation of managed diversions from Lake Mary into Bodle Ditch to determine the status of these species in the Bodle Ditch riparian and wet meadow habitats. If populations of these species are found to be present, CDFG and the Inyo National Forest botanist shall be consulted and the populations shall be monitored as part of the Riparian and Wetland Monitoring and Adaptive Management Program with adverse effects avoided through adaptive management strategies. If the monitoring biologist detects any adverse effects on the population(s) the need for responsive measures and how they will be carried out will be documented. As trustee agencies, the CDFG and USFS, and other agencies, as appropriate, shall be provided copies of the annual reports and related documentation concerning the survey findings and any responsive measures for their review and comment.*

This revised text is included in the Final EIR at Chapter 3, Corrections and Additions to the Draft EIR.

#### Response to comment A3 - 2

Comment noted. The District will provide written notification to the California Department of Fish and Game (CDFG) pursuant to Section 1602 of the Fish and Game Code as applicable to the proposed project.

#### Response to comment A3 - 3

The Department's concern is acknowledged. The District has expended a considerable effort to study and monitor potential groundwater and surface water interactions. To date, these studies and monitoring activities indicate that District's pumping is not having a detectable impact on Mammoth Creek streamflows, the springflows at the UC Valentine Reserve, or the Hot Creek headsprings. In addition, water level monitoring demonstrates that pumped aquifers fully recover following normal and higher runoff years. The Water Balance Operations Model does reflect the influence of accretions and depletions on each major reach of Mammoth Creek, as noted in *Appendix C MCWD Water Balance Operations Model Technical Appendix*. The water balance model was developed and calibrated using 20 years of data, from 1987-2007, during which time the District's groundwater pumping averaged approximately 1,700 ac-ft/year. The stream flow data reflect the influence of any changes to accretion and depletion characteristics both seasonally and spatially, including any of those potentially related to groundwater level changes.

The groundwater studies, conducted by two hydrogeologists, are described in Chapter 4 - Hydrology, beginning at Section 4.1.2. A description of the groundwater basin appears at page 4-9; the groundwater monitoring program is discussed at page 4-15; a summary of water balance estimation for the Mammoth groundwater basin is presented at page 4-16; and Section

4.1.2.4 addresses the potential for groundwater/surface water interactions. The cited studies (full citations of the studies are found in Chapter 14 of the Draft EIR) are:

- Ken Schmidt & Associates 1993 – Study and report on an aquifer test of the District’s Well No. 15 to determine whether the District’s groundwater pumping affected certain springs in the UC Valentine Reserve area. During continuous pumping of Well 15, flow measurements were collected at the North Spring on the Reserve and at Mammoth Creek and water levels were monitored in several shallow and deep observation wells. This study was conducted pursuant to a settlement agreement among the District, CDFG and the University of California. The study concluded that “pumping Well No. 15 does not influence streamflow in Mammoth Creek, reduce flow of the North Spring at the Valentine Reserve, or lower water levels in other wells in the area.”
- Ken Schmidt & Associates 1993 – current (ongoing). Annual reports presenting an evaluation of groundwater levels, surface flows, and water quality monitoring data. The analyses of the data have been unable to detect a connection between District groundwater pumping and streamflows in Mammoth Creek, the springs at Valentine Reserve or the Hot Creek headsprings. Springflow data at the Valentine Reserve has not been provided to the District for all years of the annual reports.
- Wildermuth 1996. This study evaluated the potential effects of groundwater pumping expected under the Snowcreek golf course expansion project on the Hot Creek headsprings. The report concluded that, “historical groundwater extraction in the western part of the Mammoth Basin has not noticeably impacted the discharge at the AB and CD headspring.” In addition, Wildermuth concluded, “groundwater extraction has not impacted the surface discharge measured at this location [Mammoth Creek at the OLD395 Gage] – groundwater levels are too deep to influence streamflows.”
- Ken Schmidt & Associates 1997. A short-term aquifer study conducted at the request of CDFG to investigate whether pumping of Well No. 15 negatively impacted spring flow on the Valentine Reserve, Mammoth Creek flows or groundwater levels. The study did not find effects on surface water flows or groundwater levels. The study description and results were included in the 1997 annual report.
- Wildermuth 2003. This report addressed concerns that groundwater production in the western part of the Mammoth basin would cause a reduction in spring flow at the Hot Creek headsprings or at the Valentine Reserve springs. Wildermuth concluded that historic production at District wells has not influenced spring discharge at the Valentine Reserve or at the Hot Creek headsprings.
- Ken Schmidt & Associates 2009. An evaluation of District pumping effects on Mammoth Creek streamflow and water levels in monitoring wells. The evaluation describes recharge influences on the wells, the localized extent of the cone of depression, and the lack of evidence for impacts to springs on the Valentine Reserve, flows in Mammoth Creek, and the flow at the Hot Creek headsprings.
- Wildermuth 2009. This study was conducted to develop and report on a groundwater basin model for the Mammoth basin. Data used for the model included calendar years 1992 – 2006. The report described the response of groundwater levels to pumping of District production wells over time and indicated that groundwater levels recover almost completely each year, even during periods of lower than normal precipitation.

Since 1993, the annual monitoring and evaluations reports completed by Ken Schmidt & Associates have been provided to CDFG and to the UC Valentine Reserve Manager. In addition, the Long Valley Hydrologic Advisory Committee (LVHAC) established by the Mono County Board of Supervisors in 1986 monitors groundwater in order to track changes in hydrologic features that could be impacted by geothermal or water resource developments.

The monitoring program and studies indicate no detectable effects of groundwater pumping on surface water flow in Mammoth Creek. The District will continue the groundwater monitoring program reporting that began in 1993 pursuant to the District's agreement with CDFG and will continue future groundwater/surface water modeling work. In addition, as described at page 4-22 of the Draft EIR, the proposed project does not propose any changes to the District's groundwater management activities.

#### Response to comment A3 - 4

Figure 7-3 in the Draft EIR exactly depicts the map provided at the USFWS' Critical Habitat Portal website (<http://criticalhabitat.fws.gov/>). Additionally, the Final Rule designating critical habitat for the Owens tui chub describes critical habitat in or near the study area as "a portion of Hot Creek and outflows, and those areas of land within 50 feet of all sides of the springs, their outflows, and a portion of Hot Creek. This area includes about 0.25 miles of stream and springs, and about 5 acres of fronting land." No mention is made of the confluence of Mammoth and Hot Creeks or sections of Mammoth Creek, although a portion of Mammoth Creek is shown as critical habitat. If the actual critical habitat differs from that depicted in the Draft EIR, the USFWS web site does not reflect this. Despite efforts to resolve the discrepancy with the USFWS, no response was received by the time of this publication.

To eliminate the potential for incorrectly depicting the Owens tui chub critical habitat area, the Draft EIR will be revised to include an additional map in Chapter 7. The new map was developed by the CDFG Senior Biologist of the Inland Desert Region Office, Steve Parmenter, depicting his understanding of the Owens tui chub critical habitat area. This map is labeled, Figure 7- 3a, Potential Considerations Regarding the USFW Critical Habitat Map for the Owens Tui Chub, and will follow Figure 7-3 at page 7-72. Figure 7-3a is contained at Chapter 3, Corrections and Additions to the Draft EIR, of the Final EIR. The Draft EIR text in Chapter 7, section 7.1.5.6, page 7-71, will be revised to describe that the Owens tui chub critical habitat map on the USFWS website that was used in the Draft EIR may contain errors; therefore, a new figure has been inserted in the EIR to illustrate the potential corrections that Mr. Parmenter has submitted to the USFWS. The Draft EIR text will be revised to add the following text to the second paragraph in the Draft EIR section heading 7.1.5.6 Critical Habitat, at page 7-71:

*CDFG Senior Biologist of the Inland Desert Region Office, Steve Parmenter, has informed the District that the USFWS has been notified that the Owens tui chub critical habitat map should be considered for revision based on the written description of the critical habitat area and his knowledge of area. Figure 7-3a, Potential Corrections to the USFWS Critical Habitat Map for the Owens Tui Chub, is the same map as Figure 7-3 with the addition of three roman numerals and associated explanations from Mr. Parmenter regarding the need to potentially revise the Owens tui chub critical habitat map. His explanations are as follows:*

*I. This polygon encloses a waterway that is traditionally known as Mammoth Creek; however, this section of Mammoth Creek is labeled Hot Creek on the USGS map. Locally, Hot Creek begins at the confluence of the waterway comprised of the outflow from the hot springs with Mammoth Creek. The Owens tui chub are not in this northernmost polygon and have not been there since well before the listing date. The area described in the recovery plan as the “two spring provinces at Hot Creek Hatchery” is outside of the northernmost polygon. The spring provinces where the tui chub occur are well known and have not changed since well before listing and critical habitat designation. These are shown in light blue highlight on the map, and are labeled “AB Spring” and “CD Spring.”*

*II. This blue line depicts the approximate location of the spring channel known as AB Supply, one of the two spring provinces where Owens tui chub are known to occur.*

*III. This blue line depicts the spring channel known as CD Supply, one of the two spring provinces where Owens tui chub are known to occur.*

The Final EIR will include this revision at Chapter 3, Corrections and Additions to the Draft EIR.

Regardless of the discrepancy, as described at pages 6-48 to 6-50 of Chapter 6 of the Draft EIR, there would not be substantial differences between the proposed project and the Existing Condition relative to the magnitude, frequency, duration, timing and rate of change of hydrologic conditions in Mammoth and Hot creeks, and therefore, the proposed project's potential impacts to Owens tui chub critical habitat would be less than significant.

Letter B1

Department of Water and Power



the City of Los Angeles

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*Chief Operating Officer*

November 3, 2010

Ms. Irene Yamashita  
Mammoth Community Water District  
P.O. Box 597  
Mammoth Lakes, CA 93546

Dear Ms. Yamashita:

Subject: Comments Regarding Mammoth Community Water District's (District) Draft Environmental Impact Report for Proposed Changes in Mammoth Creek Fishery Bypass Flow Requirements, Watershed Operation Constraints, Point of Measurement, and Place of Use, SCH No. 1997032082

Thank you for providing the opportunity to the Los Angeles Department of Water and Power (LADWP) to review and provide comments on the Draft Environmental Impact Report for the above project. As we understand, the proposed project calls for the amendment of Permit 17332, to include the following three components: changing bypass requirements along Mammoth Creek, change of point of flow measurement, and changes of place of use of diverted flows.

LADWP has a number of concerns with the Draft EIR, particularly with water right issues that would result from the proposed changes to the bypass flow requirements and point of measurement. LADWP believes that the Draft EIR is fundamentally flawed by categorically excluding water right issues. The Draft EIR also fails to adequately address issues pertaining to water quality, groundwater/surface water interaction, water availability for existing projects and fish habitat, and other general concerns with the lack of sufficient studies and explanations. As such, LADWP maintains that the document does not comply with the requirements of the California Environmental Quality Act (CEQA) Public Resources Code Secs. 21000-21178. The proposed project needs additional study. After the required analysis is complete, the revised document will need to be re-circulated for comment. Furthermore, LADWP will oppose the

B1-1

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District's request to the State Water Resources Control Board (SWRCB) to grant the District's efforts to amend Permit 17332 based on the current Draft EIR. The reasons are detailed below.

### Water Right Issues

LADWP is a senior riparian and pre-1914 appropriative water right holder on Mammoth Creek. Our riparian rights on Mammoth and Hot Creek are utilized on approximately 660 acres of City of Los Angeles (City)-owned land that stretches from the property known as Chance Ranch to the area where Hot Creek intersects Upper Owens River. Our pre-1914 appropriative right stems from a 1905 Notice of Appropriation with a maximum diversion of 1,250 cfs from Owens River and all of its tributaries; measured at Charley's Butte.

In regard to water rights issues, the following items should be included and addressed:

1. The District has based all of their current and future operations on water that belongs to senior water right holders, including LADWP's riparian and pre-1914 appropriated rights. There is no indication that the District has the water to carry out the project or acknowledgement that the District has junior rights to LADWP, yet the EIR specifies in Section 1.5.2.1 on page 1-12, that fishery bypass requirements in Permit 17322 have no relevance to senior downstream water rights. Accordingly, the District states that the matter of protection of downstream water rights is outside the scope of this Draft EIR. This statement is inconsistent with the requirements of CEQA. Not only must this document consider downstream senior water right holders, but CEQA analysis calls for the proper analysis of a reliable water source.<sup>1</sup>
2. Amongst the City's riparian land holdings, the City owns 3 parcels of land which total approximately 660 acres of irrigated land. These properties are composed of the approximately 400 acre Chance Ranch (of which about 360 acres is irrigated), and the approximately 300 acre irrigated property which had once been leased to Jess Chance (before the City bought Chance's property in 1967). According to SWRCB Decisions D904 and D917, dated 1958 and 1959 respectively, a water duty of 1 cfs for every 60 acres of irrigated land is

B1-2

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<sup>1</sup> Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova (2007)  
40 Cal. 4th 412.



designated for this area. (Attachments A and B). Using the SWRCB's water duty, the City's 660 acres of irrigated land along Mammoth Creek should receive approximately 11 cfs during irrigation season; May 1 to October 1. Furthering the SWRCB's Decisions 904 and 917, the Mono County Superior Court granted a permanent injunction, on July 6, 1964, against the District on behalf of Jess Chance (owner of 400 acres at the time) that forever enjoined and restrained [District] from diverting any water from Mammoth Creek or its tributaries unless a flow of not less than 6.67 cubic feet per second in said creek is reaching Plaintiff's [Chance] said real property (400 acres) during the irrigation season. (Attachment C). Hence, the minimum bypass flow of 4 cfs at OLD395 is insufficient in providing adequate water to the City's 660 acre property and also violates both SWRCB Decisions and the Mono County Superior Court's Permanent Injunction.

3. As stated previously, LADWP also holds a pre-1914 appropriation to all unappropriated water from Owens River and all of its tributaries to the extent of 1,250 cfs. The priority date of this appropriation is October 23, 1905. (Attachment D). As such, with Mammoth Creek being tributary to Owens River, all water that had been unappropriated on, and following, October 23, 1905 would be included in LADWP's pre-1914 1,250 cfs water right holding. Consequently, Mammoth Creek had effectively been a fully appropriated stream as of 1913 when the Los Angeles Aqueduct (LAA) started operating. The City has since been continuously putting all of the water from Owens River and its tributaries to reasonable and beneficial use.
4. Respectfully, because the SWRCB has no jurisdiction over pre-1914 appropriated water rights, they had no right to award the District its two post-1914 licenses 1947, 1957 and the permit in 1978. The SWRCB may have given away a portion of the City's water rights.
5. On a related water right issue, LADWP is currently involved in two illegal diversion disputes with Snow Creek Resort and Valentine Eastern Sierra Reserve (Valentine); located near Mammoth Creek. LADWP filed two complaints with the SWRCB on August 11, 2006 and January 18, 2007 requesting that the SWRCB investigate these illegal diversions. Both divert water flow from Mammoth Creek to create a series of ponds located on their properties. LADWP cannot locate records that support the Snow Creek Resort and Valentine

B1-2

diversions. With the detention of Mammoth Creek waters at the Snow Creek Resort and Valentine ponds, the flows in Mammoth Creek are being restricted; further eroding LADWP's water right holdings on the creek.

B1-2

6. This EIR also fails to analyze the impacts of moving the point of measurement OLD395 to OMR. No studies were conducted to quantify the loss of flow between the two gauges; OLD395 is approximately 4 miles downstream of OMR. It is critical that these impacts must be quantified since MCWD is also proposing to lower the minimum bypass flows for all months of the year except January-March (Table 2-2 of EIR). An earlier study conducted by HDR (Attachment E), consultant to the District, calculated accretions/depletions between the two gauges for each month of year using data from 1988 to 2008. The study showed that in dry years, the depletion losses between the two gauges ranges between 1.1 and 4.2 cfs. It is highly recommended that the District conduct further studies to quantify the relationship of flows between these two gauges; especially during dry year conditions.

B1-3

7. Regarding Section 1.2.2 on page 1-5, the Draft EIR's study area excludes the area located downstream of the USGS Flume Gauge and the upper Owens River. It claims that Hot Creek flows are strongly influenced by spring contributions and that Mammoth Creek has limited contribution to flows in Hot Creek. However, the District itself states that Mammoth Creek accounts for approximately 19% of the flow in Hot Creek; measured at the USGS gauge. As such, the Draft EIR's study area is incomplete and should be expanded to include the area downstream of the USGS gauge since there is still a resultant effect on Hot Creek when flows are altered in Mammoth Creek.

B1-4

8. On page 1-6, the District claims that the proposed project's alternatives would provide flows in Mammoth Creek that are equal to, or higher than, those that occur during the Existing Condition. However, this is not the case for the period between April and December. Flows are all lower than the original flow regime in Permit 17332. Once again, no studies were performed to show the relationship between changes in flow requirements at OMR on the flow at the downstream OLD395 gauge. Therefore, this EIR fails to prove that the potential changes in flow associated with the implementation of the proposed project are not going to adversely affect hydrologic conditions downstream of the USGS Hot Creek Flume gauge. (Note that the City of Los Angeles owns approximately 2,500 acres of land downstream of the USGS Gauge that is riparian to Hot Creek.)

B1-5

B1-6

9. Section 1.5.2.1 on page 1-12, the District states that the proposed fishery bypass requirements are based on the SWRCB order in the temporary water right Permit 20250 for the District to study and determine flow requirements to protect in-stream beneficial uses. This study, however, did not consider downstream water rights holders. But, with the City owning land riparian to Mammoth Creek and continuously using its flow, water rights should have been included in the study. Additionally, since permit 20250 was issued without any CEQA documents, the bypass flow requirements in this permit were insufficiently substantiated.

B1-7

10. Section 1.5.2.1 on page 1-12, the EIR claims that senior water rights are protected in the District's water right Permit 17332 and Licenses 5715 and 12593, since they are subject to prior vested rights. However, the City's senior riparian and appropriated water rights have in fact not been protected. And as a senior riparian water right holder, the City should be able to exercise its full riparian right before any other appropriative right on Mammoth Creek. If un-appropriated flow remained (which there is not because of the City's 1905 appropriated right to a maximum of 1,250 cfs), then the District could exercise its post-1914 appropriated water rights.

B1-8

11. Per the statutory "no injury" rule set forth in Water Code section 1702, which codifies the common law no injury rule, Section 1702 states that before permission to make a change of point of diversion, place of use, or purpose of use is granted the petitioner shall establish, to the satisfaction of the State Water Resources Control Board (SWRCB), and the SWRCB shall find, that the change will not operate to the injury of any legal user of the water involved.

B1-9

It is critical to consider senior downstream water right holders, because they require specific minimum flows for irrigation, livestock, and domestic uses. In addition, riparian rights are generally held superior to pre- and post-1914 appropriated water rights. Hence, before water rights or creek contributions are deemed irrelevant, the impact of the proposed changes in flow must be satisfactorily studied.

B1-10

### Water Quality Issues

The proposed amendments impact the water quality in Mammoth Creek in the following ways:

1. LADWP is concerned about the decreased flows in Mammoth Creek affecting the temperature of Hot Creek as it enters the Upper Owens River. California Department of Fish and Game conducted studies in the late 1980's and concluded that, during low flow years, a thermal barrier is created in the Upper Owens River at the confluence with Hot Creek. This barrier is created because the quantity of water entering Hot Creek from Mammoth Creek is not adequate to cool water temperatures. High temperature water from Hot Creek enters the Upper Owens River creating a thermal barrier to the upstream migration of spawning trout. The District's project could increase the occurrences of the formation of this thermal barrier by decreasing flows in Mammoth Creek.

B1-11

The reduction in creek flows reduces the thermal mixing with Hot Creek resulting in warmer water entering the Upper Owens River as discussed above. This warm water enters Crowley Reservoir and increases the growth of algae. This creates problems regarding reservoir management, water quality, and for recreational users.

2. Water from the Owens Valley/Mono Basin via the LAA is a high quality, pristine source that is generally free of anthropogenic sources of contamination. LADWP has relied on the high quality of this water to meet drinking water and turbidity standards. In contrast, the State Water Project supply contains higher levels of chloride and bromide due to seawater intrusion in the Sacramento Delta and higher natural organic matter (NOM). Both of these water quality parameters pose treatment challenges to meet drinking water standards for turbidity and the following disinfection by-products (DBPs) – trihalomethanes, haloacetic acids and bromate. If LADWP is forced to reduce the LAA supply and rely more heavily on SWP supply, which has varying turbidity levels, treatment will be more difficult (and costly) and plant capacity may be exceeded on occasion. Additionally, the higher natural organic matter and mineral content of the SWP will result in increased DBP levels, will restrict the full use of ozone to meet disinfection requirements, and will make it increasingly difficult to meet inland chloride discharge standards. The result will be an overall diminished quality of water delivered to residents of Los Angeles. (Attachment F)

B1-12

### **Groundwater/Surface Water Interaction Issues**

1. Referring to Section 1.5.2.5 on page 1-15, the District claims that the groundwater/surface water interaction has been the subject of considerable study over the past few decades; including the hydro-geologic evaluations

B1-13

performed by Kenneth Schmidt and Associates and Wildermuth. However, both studies are incomplete and need to be expanded in order to conclude that groundwater pumping from the District's production wells have not influenced flows in Mammoth Creek. For one, the study area in Schmidt's evaluation is restricted to the town of Mammoth Lakes. It does not include Chance Ranch or any area downstream of the town. Since Mammoth Creek contributes to the flow in Hot Creek, a minimum of 19% as measured at the USGS gauge, the evaluation should include the area downstream of the USGS gauge before it can be concluded that there are no impacts. Additionally, even though Wildermuth's studies include land along Mammoth and Hot Creek up to the USGS gauge, the study area should be expanded to land downstream of the gauge for the same reasons the Schmidt studies should be expanded. Furthermore, Wildermuth's study fails to incorporate future groundwater production scenarios to determine the potential impacts on Hot Creek. (Wildermuth's analysis only included historical groundwater production by MCWD and the Snowcreek golf courses on springs that discharge to Hot Creek or the Valentine Reserve.)

B1-13

2. Section 1.5.2.5 and 4.1.2.4 of the EIR describes the surface-groundwater interactions. While the EIR describes the historic and the current conditions, it lacks a presentation of a water balance for the basin, including the inflow and outflow components. The EIR declares that currently, water levels in the basin are stable. However, the EIR lacks an analysis of the effect of future groundwater pumping on the flow in Mammoth Creek. Such analysis would require a modeling simulation of future pumping scenarios. Additionally, the groundwater monitoring should be based on water levels in the shallow and deep monitoring wells near Mammoth Creek that could detect possible future effects of pumping on the flow in Mammoth Creek.

B1-14

B1-15

B1-16

### **Water Availability Issues**

1. LADWP understands that the bypass flows were set for the purpose of protecting fish in the stream, however, LADWP considers them as a partial measure of protecting downstream water right holders, as well. By releasing reduced bypass flow and moving the point of measurement upstream to OMR, LADWP's water rights are going to be further eroded, causing significant impacts that have not been evaluated by the Draft EIR.

B1-17

2. LADWP is concerned with the District's proposed project has potential to alter the peak flows on Mammoth Creek. LADWP, working with its ranching lessees, began a riparian improvement/restoration project on Mammoth, Convict and McGee Creeks in 1992. This project involved the establishment of riparian pastures, grazing management plans and allowing unimpeded peak runoff on LADWP owned lands for the promotion of riparian vegetation. The project has been very successful because of good flow management and good land management resulting in the establishment of healthy stream banks that are armored with native riparian vegetation and diverse aquatic habitats with healthy pool-to-riffle ratios.

B1-18

This project would not be successful without the peak flows. The District's project has the potential to decrease peak flows and the timing of these events on Mammoth Creek. LADWP is concerned that changes in Mammoth Creek flows

could negatively affect the success of the riparian improvement/restoration project. The potential result is a decrease in creek bank stability and fishery health.

3. In Section 2.1.2 on page 2-11, the District proposes a second alternative bypass flow requirement. However, this flow schedule is insufficiently supported since no in-stream flow study was performed to analyze the impacts on the brown trout fishery, the rainbow trout, and the downstream senior water right holders resulting from these flow changes. Once this in-stream flow study has been conducted, LADWP would review the District's proposed alternative flow regime.

B1-19

4. The Draft EIR fails to conduct relevant dry year evaluations; in particular to successive dry year scenarios. These dry year evaluations are critical because minimum flows impact fish and other creek dependent resources. A clear analysis of future dry year impacts has been masked by using the twenty year average, which does not provide clear insight into the project's impacts in future dry years. Thus, more comprehensive dry year studies need to be included in the District's Draft EIR.

B1-20

### **Other General Issues**

The District is proposing to delete 3 terms (21, 24, and 25) from Permit 17332. Our issues involve the following items:

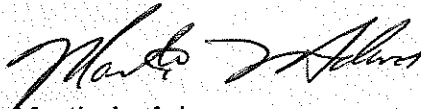
Ms. Irene Yamashita  
Page 9  
November 3, 2010

1. The District's intent to eliminate its responsibility to reevaluate management constraints within five years of the date of permit issuance and prior to the issuance of a license (Term 21). It is important for the District to study the effects of their proposed changes so any negative impacts can be mitigated. B1-21
2. The District's intent to change the measuring frequency of all natural flow entering Lake Mary from daily monitoring to weekly monitoring. (Term 24). Daily reads are preferred so that the District, and other interested parties, can respond more quickly in adjusting diversions to adhere to the fishery bypass flow requirements and to also satisfy the water demands of senior downstream riparian water users. B1-22
3. The District has failed to specify what their submittal of daily data on a "regular basis" means, regarding Term 25. This should be explicitly defined and substantiated. B1-23

In summary, the Draft EIR fails to adequately analyze and disclose potential impacts to senior water rights holders, water quality, water availability, and groundwater and surface water interaction and therefore has failed to comply with CEQA. Unless and until these issues are adequately identified, studied, and mitigated, LADWP must act to protect the City's water supply and will oppose the proposed amendment of Permit 17332.

Please contact me at (213) 367-1014 if you have any questions or need clarifications.

Sincerely,



Martin L. Adams  
Water Operations Division

JW:jm

Enclosures

c: Ms. Barbara Evoy, – SWRCB

*DHS*

STATE OF CALIFORNIA  
STATE WATER RIGHTS BOARD

oOo

In the matter of Application  
17770 by Mammoth County Water  
District

Source: Twin Lakes  
County: Mono

Decision No. D 904

Decided: May 14, 1958

oOo

In attendance at conference held by the staff of the State Water  
Rights Board in Bishop on April 3, 1958:

L. M. Butler	President, Mammoth County Water District
Hugh J. O'Connell	Secretary, Mammoth County Water District
N. Edward Denton and Vern Summers	Attorneys for Applicant
Jess W. Chance, Sr.	Protestant
Mildred F. Chance	Protestant
Willis Smith	Attorney for Protestants
Jess W. Chance, Jr.	Interested party
Gerald Chance	Interested party
Howard Arcularius	Interested party
K. L. Woodward	Supervising Hydraulic Engineer, representing State Water Rights Board

oOo



## DECISION

### Substance of the Application

Application 17770 was filed by Mammoth County Water District on August 13, 1957, for a permit to appropriate 2 cubic feet per second (cfs) of unappropriated water, year-round, from Twin Lakes on Mammoth Creek tributary to Owens River via Mammoth Creek thence Hot Creek in Mono County for municipal and domestic purposes. Water is to be diverted by a wood and concrete dam approximately 3 feet high by 40 feet long, at the outlet of Twin Lakes within the SW $\frac{1}{4}$  of SW $\frac{1}{4}$  of Section 4, T4S, R27E, MDB&M\* and will be conveyed through about 11,000 feet of 8" steel pipe for use within the District boundaries in Sections 33, 34 and 35, T3S, R27E. According to the application, the present population of the place of use is 1,188 persons, with an expected increase to 12,000 persons by 1980. It is further estimated that use will eventually extend to about 200 acres of domestic lawns and gardens in addition to household use.

### Protest and Answer

A written protest against approval of Application 17770 is of record from Jess W. Chance, Sr., and Mildred F. Chance, doing business as Jess Chance and Sons, based upon riparian rights and continuous and uninterrupted use since prior

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\* Hereinafter all township references are to Mount Diablo Base and Meridian (MDB&M).

to 1900. The protestants allege there is insufficient water at present for irrigation, livestock and domestic use on approximately 400 acres owned by them; that they irrigate 360 acres from April to October of each year; that all water in Mammoth Creek is necessary for their present requirements, and that during many dry years there is not sufficient water to complete the irrigation season.

In reply to the protest, the applicant states that there is a sufficient water supply for both the reasonable use of the riparian protestant and the applicant.

#### Proceedings in Lieu of Hearing

The applicant and protestants, with the approval of the State Water Rights Board, stipulated to the proceedings in lieu of hearing as provided for by Section 737 of the Board's rules, and a conference was held by K. L. Woodward, an engineer of the Board, with all record interested parties in the City Council Chambers, City Hall, Bishop, California, on April 3, 1958.

#### Records Relied Upon

The records relied upon in support of this decision are Application 17770 and all relevant information on file therewith with particular reference to a memorandum dated April 7, 1958, of the conference held on April 3, 1958; streamflow records of City of Los Angeles, Department of Water and Power, at Station "Hot Creek-Highway" for the period October, 1946 through

September, 1957; a publication of the Division of Water Resources entitled "Report on Water Supply and Use of Water on Middle Fork of Feather River and Tributaries, Plumas and Sierra Counties, California", dated August, 1937; Division of Water Resources, "Report on Investigation and Water Master Service on Middle Fork of Feather River Above Beckwith, Sierra and Plumas Counties, California, During Season of 1937", dated April, 1938; United States Geological Survey, Devils Post, California and Mt. Morrison, California, quadrangles, both 15-minute series, dated 1953; and United States Weather Bureau, Climatological Data, California.

#### Source and Watershed

Mammoth Creek heads on the eastern slope of the Sierra Nevada at Barney and Woods Lakes near the Mono-Fresno County line. The creek flows in a northwesterly direction for about 3 miles through Skelton and Arrowhead Lakes into Lake Mary, thence in a northerly direction for about  $1\frac{1}{2}$  miles through Lake Mamie into Twin Lakes, the proposed point of diversion under Application 17770. Overflow from Twin Lakes continues in a northeasterly direction for about one mile thence easterly about 5 miles to U. S. Highway 395 crossing where a stream gaging station of the City of Los Angeles is located. Below the highway, the water course (called Hot Creek on the Mt. Morrison quadrangle) continues for about 9 miles in a northeasterly direction to the confluence with Owens River. The point of diversion of protestants Chance as described in their protest is located on Hot Creek about

one-half mile downstream from the highway crossing. Sherman Creek, the principal tributary of Mammoth Creek downstream from Twin Lakes, joins the latter stream from the south at a point about two miles above the aforementioned gaging station.

The drainage area above the applicant's proposed point of diversion scales about 11 square miles ranging from a maximum elevation of 11,772 feet to about 8,600 feet.

#### Protestants' Project

According to the memorandum of the April 3, 1958, conference, Protestants Chance claim to be irrigating each year approximately 360 acres of pasture (seeded clover and natural grasses) within Sections 34 and 35, T3S, R28E, under an appropriate right initiated prior to the effective date of the Water Commission Act and by virtue of riparian ownership. From the legal description given in the protest, this property as plotted on the Mt. Morrison quadrangle is contiguous to Hot Creek. The protestants also claim to have under lease from the City of Los Angeles, Department of Water and Power considerable acreage of pasture land in Sections 4, 5, 6, 7, 8, and 9, T4S, R28E, and Sections 32, 33, 34, and 35, T3S, R28E, which is susceptible of irrigation; that the City owned land is likewise claimed riparian to the stream; that except during extremely dry years (when use of water on the City owned land is allegedly disallowed by order of the City) the protestants also irrigate some 300 acres of the leased property; and that more land would be irrigated if the water supply during the critically dry months were adequate.

The protestants claim to divert by gravity from Hot Creek at one or more of four points along the stream; that the water is applied to the land by flooding; that their irrigation season extends from about May 1 to about October 1 of each year; that no shortage is usually experienced prior to July 15; that August and September are usually months of deficient supply; that except for a limited by-pass for the maintenance of fish life the entire flow is diverted during August and September; and that even during years of unusually large runoff the entire flow reaching the protestants' property is put to beneficial use during August and September.

#### Water Supply

The flow of Mammoth Creek (Hot Creek) is measured at a point near U. S. Highway 395 by the City of Los Angeles, Department of Water and Power. The point of measurement scales about one-half mile upstream from protestants' Chance point of diversion. As there is reportedly no intervening use of water, the flow passing the City's gage, less channel losses, represents the flow reaching the protestants' property. Except during extremely low flows such losses are probably within the accuracy of the measurements and will be disregarded in the following discussion. Table I sets forth in cubic feet per second the monthly mean flow of Hot Creek covering the period from October, 1946, through September, 1957, as measured by the City of Los Angeles. As shown in Table I, flow during the months of August and September, the months of primary concern, has varied during

the above-mentioned period from a maximum and minimum, respectively, of 42.0 cfs and 6.26 cfs during August and 19.9 cfs and 2.6 cfs during September. Median monthly flow for the period was 8.6 cfs during August and 5.0 cfs during September.

#### Estimated Water Requirements of Protestants

Present use of water by the protestants from Hot Creek (except during extremely dry years when use on 300 acres of leased property is prohibited) is for the irrigation of 660 acres of pasture, for stockwater and for incidental domestic purposes. As no information is apparently available as to the reasonable water requirements for land being served by the protestants, it is necessary that an estimate be made from the findings of water requirements in other areas of similar physiography.

In 1936 and 1937 the Division of Water Resources made an extensive study of water requirements of Sierra Valley in Plumas and Sierra Counties in connection with the Middle Fork Feather River Adjudication. The results of the investigation are contained in publications by that agency entitled "Report on Water Supply and Use of Water on Middle Fork of Feather River and Tributaries, Plumas and Sierra Counties, California", dated August, 1937, and "Report on Investigation and Water Master Service on Middle Fork of Feather River Above Beckwith, Sierra and Plumas Counties, California, during Season of 1937", dated April, 1938.

TABLE I

Monthly Mean Flow-Mammoth (Hot) Creek  
at U. S. Highway 395

Quantities expressed in Second-feet

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Mean	
													Sec.-Feet	Acre Ft.
1946-47	8.71	9.49	7.51	4.47	5.12	7.64	13.18	57.8	40.5	20.5	6.26	4.07	15.5	11210
1947-48	5.0	4.8	3.6	5.2	3.6	4.3	11.6	30.4	56.6	28.9	8.6	2.6	13.8	9981
1948-49	4.7	3.1	4.3	3.4	2.9	3.2	12.5	34.7	56.8	20.1	8.3	2.7	13.1	9460
1949-50	4.0	4.9	4.1	5.9	5.4	5.1	12.4	36.4	49.9	22.5	6.4	5.5	13.6	9811
1950-51	4.1	27.9	35.1	12.5	10.4	8.2	12.5	38.3	57.2	30.2	16.2	8.0	21.8	15744
1951-52	7.1	5.7	10.5	9.9	8.4	6.1	11.9	61.6	103.5	93.1	42.0	19.3	31.7	22992
1952-53	12.2	7.1	8.7	10.6	6.4	6.7	13.8	16.6	50.1	44.3	10.0	5.0	16.0	11580
1953-54	5.0	5.0	4.1	3.5	5.0	8.5	18.3	50.8	42.0	19.9	6.4	4.4	14.4	10447
1954-55	2.4	5.6	4.8	5.3	4.0	4.4	8.4	19.8	71.3	22.0	7.5	3.3	13.2	9559
1955-56	4.5	4.6	25.3	13.2	7.7	7.1	15.9	54.1	143.3	95.5	37.1	19.9	35.7	25933
1956-57	16.6	12.8	9.4	9.2	10.3	8.7	11.8	26.7	106.6	40.2	13.1	7.0	22.7	16408

Sierra Valley is a mountain valley in the northeastern part of California at an elevation of about 5,000 feet. The winters are moderately severe with the monthly minimum temperature remaining below freezing during the period from November through March. The summers are warm throughout the day, but are cool during the night. During the period from June through September the monthly mean maximum temperature ranges from about 76 to 85 degrees. The highest recorded temperature at Sierraville in a 27-year record was 104 degrees and the lowest was a minus 30 degrees, a range of 134 degrees.

The protestants' property is located at an elevation of about 7,000 feet and although the mean annual precipitation is undoubtedly somewhat less in that vicinity than in Sierra Valley, the summer precipitation and temperatures are believed reasonably comparable. Table II and Table III set forth the monthly temperatures and total precipitation for May through September, 1957, at the United States Weather Bureau Station, Sierraville in Sierra Valley, elevation 4,975 feet; Mono Lake in Mono Valley, elevation 6,520 feet (about 25 miles north of the protestants' property); and Bishop in Owens Valley, elevation 4,108 (about 30 miles southeast of the protestants' property). Relative to the water requirements in Sierra Valley, the aforementioned 1937 report states as follows:

"By reference to studies made on other streams of similar characteristics in mountain valleys in Northeastern California it appears that the return flow from meadow grass irrigation is ordinarily approximately one-third of the gross diversions, where a proper spread and penetration of irrigation water has been obtained, i.e., it is necessary



to divert and apply to meadow grass about 50 per- cent more water than is actually consumed in order to secure an adequate and proper irrigation. Such additional water is utilized as a vehicle for spreading. If such an allowance is made for a spreading head over and above the consumptive duty on upper Smithneck Creek, the resultant gross duty of water is calculated to be one cubic foot per second to about 80 acres of irri- gated land."

According to Table 84 of the aforementioned report, the gross duty of water for land irrigated from Middle Fork Feather River and its tributaries within Sierra Valley varies from 1 cfs per 47 acres to 1 cfs per 160 acres as computed on a continuous flow basis. Further investigation and study during the 1937 irrigation season, as described in the aforementioned 1938 report, revealed that one cubic foot per second for 80 acres for the area was inadequate and that one cubic foot per second for 60 acres appeared to be more realistic of requirements. The Board concludes that a gross duty of one cfs for each 60 acres irrigated is a reasonable duty for the area in the vicinity of the protestants' place of use in view of the findings of water requirements in Sierra Valley. On that basis, irrigation of 660 acres of pasture will require a continuous flow of 11.0 cubic feet per second.

#### Discussion

Inspection of Table I shows that for the past eleven years flow of water in Mammoth Creek on a monthly mean flow basis has been inadequate to meet the protestants' estimated water requirements during August of 6 years and during September

TABLE II

Average Temperature - Long-Term Mean  
in °F

Station	May	June	July	Aug.	Sept.
Sierraville	50.6	56.8	62.9	61.7	55.8
Mono Lake	51.7	59.8	67.7	66.6	61.9
Bishop	62.6	69.4	75.5	72.7	67.3

TABLE III

Total Precipitation - Long-Term Mean  
in Inches

Station	May	June	July	Aug.	Sept.
Sierraville	0.92	0.57	0.32	0.15	0.48
Mono Lake	0.83	0.21	0.81	0.14	0.41
Bishop	0.20	0.10	0.10	0.14	0.19

of 9 years. As irrigation in that area usually does not extend outside the period from about the first of May to the end of September, diversion under Application 17770 between October 1 and July 31 may be allowed without qualification.

According to the applicant, the period of its greatest demand for water from Twin Lakes will be during those months of surplus flow, and that during August and September the District believes that its present well will produce an amount equal to the District's anticipated future needs. A water supply for a development such as contemplated under Application 17770 must be available year-round. Unlike most irrigation projects, it cannot be designed on a possible deficiency basis without undue hardship to the users. Furthermore, the District may be required from a public health standpoint to provide certain water treatment facilities which could not be conveniently operated should the District, due to the requirements for downstream prior rights, be forced to resort to an alternate supply during periods of low streamflow. On the other hand, Application 17770 is for a permit to appropriate "unappropriated" water and use of water thereunder must be subject to vested rights.

Under the circumstances heretofore discussed, approval of Application 17770 can be allowed year-round provided adequate protection is afforded to the downstream prior right users. The applicant has suggested that during such times as a deficiency exists in Mammoth Creek for downstream users that the District release into the creek from its well water supply an amount equal

to that diverted by it from Twin Lakes. Such a proposal appears fair to all parties and the Board believes that the physical circumstances are such that a provision to this effect can be inserted in the permit which will not be an unreasonable burden on the applicant.

Conclusion

The information before the Board indicates and the Board finds that there is unappropriated water in Twin Lakes which water may be appropriated to a substantial extent in the manner proposed under Application 17770 and that the application may be approved and permit issued, if appropriately conditioned, without injury to downstream existing rights.

ORDER

Application 17770 for a permit to appropriate unappropriated water having been filed, a protest having been submitted, the parties having stipulated to proceedings in lieu of hearing, a conference with all record interested parties having been held, the Board having considered all available relevant information, and said Board now being fully informed in the premises:

IT IS HEREBY ORDERED that Application 17770 be, and the same is hereby approved and that a permit be issued to the applicant subject to vested rights and to the following terms and conditions to wit:

1. The amount of water appropriated shall be limited to the amount which can be beneficially used and shall not exceed 2.0 cubic feet per second to be diverted from January 1 to December 31 of each year.

2. The maximum amount herein stated may be reduced in the license if investigation so warrants.

3. Actual construction work shall begin on or before September 1, 1958, and shall thereafter be prosecuted with reasonable diligence, and if not so commenced and prosecuted, this permit may be revoked.

4. Said construction work shall be completed on or before December 1, 1959.

5. Complete application of the water to the proposed use shall be made on or before December 1, 1965.

6. Progress reports shall be filed promptly by permittee on forms which will be provided annually by the State Water Rights Board until license is issued.

7. All rights and privileges under this permit including method of diversion, method of use and quantity of water diverted are subject to the continuing authority of the State Water Rights Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use or unreasonable method of diversion of said water.

8. At such times during August and September of each year that flow of Mammoth (Hot) Creek at or near U. S. Highway 395 Crossing in Section 32, T3S, R28E, MDB&M, does not exceed 11.0 cubic feet per second, permittee shall, upon demand of Protestants Chance, release into Mammoth Creek from a nontributary source at any point between Twin Lakes and said highway crossing sufficient water to provide a flow of 11.0 cubic feet per second at said highway crossing; provided however, permittee shall not be required to release water into Mammoth Creek at a rate in excess of that being diverted by permittee from Twin Lakes.

9. This permit is conditioned upon full compliance with Section 5937 of the Fish and Game Code.

Adopted as the decision and order of the State Water Rights Board at a meeting duly called and held at Fresno, California, on the 14th day of May, 1958.

/s/ Henry Holsinger  
Henry Holsinger, Chairman

/s/ W. P. Rowe  
W. P. Rowe, Member

/s/ Ralph J. McGill  
Ralph J. McGill, Member

STATE OF CALIFORNIA  
STATE WATER RIGHTS BOARD

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In the Matter of Application 17814 )	Source: Mammoth Creek
by U.S.-Inyo National Forest )	County: Mono

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Decision No. D 917

Decided: January 9, 1959

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In attendance at investigation conducted by the staff  
of the State Water Rights Board on June 24, 1958:

J. T. Radel	Forest Supervisor - Inyo National Forest
Jess W. Chance ) Mildred F. Chance ) Jess A. Chance ) Gerald N. Chance )	Protestants
Vern Summers	Attorney for Protestant
N. Edward Denton	District Attorney, County of Mono
Hugh J. O'Connell	Director, Mammoth County Water District
Bill Laurence	Interested party
W. M. Bathrick	Interested party
W. A. Cashbaugh	Interested party
K. L. Woodward, Supervising ) Hydraulic Engineer )	Representing the State Water Rights Board
R. R. Forsberg, Assistant ) Hydraulic Engineer )	

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## DECISION

### Substance of the Application

Application 17814 was filed by U.S.-Inyo National Forest on September 5, 1957, for a permit to appropriate 36,000 gallons per day (approximately 0.056 cubic foot per second) year-round, from Hot Creek\* tributary to Owens River in Mono County for domestic and recreational purposes. Water is to be diverted at a point within the NW $\frac{1}{4}$  of SW $\frac{1}{4}$  of Section 33, T3S, R28E, MDB&M\*\* by a pump and conveyed through 3350 feet of 4-inch steel pipe to the place of use within the SE $\frac{1}{4}$  of NW $\frac{1}{4}$  of Section 32, T3S, R28E. The water is to be used to supply a 50-room motor hotel, a restaurant, a bar and a small swimming pool.

### Protest and Answer

A written protest against approval of Application 17815 is of record from Jess W. Chance and Mildred F. Chance, doing business as Jess Chance and Sons, based upon riparian rights and continuous and uninterrupted use since prior to 1900. The protestants allege there is insufficient water at present for irrigation, livestock and domestic use on approximately 400 acres owned by them; that they irrigate 360 acres from April to October

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\* According to USGS Mt. Morrison quadrangle 15-minute series, dated 1953, and as confirmed by the parties present at the field investigation on June 24, 1958, the source is Mammoth Creek which joins Hot Creek in the N $\frac{1}{2}$  of Section 34, T3S, R28E, MDB&M, about 2 miles downstream from U.S. Highway 395. Hereinafter the names of the various streams involved will be referred to as shown on the above named quadrangle.

\*\*All township references are to Mount Diablo Base and Meridian (MDB&M).

of each year; that all water in Mammoth Creek is necessary for their present requirements, and that during many dry years there is not sufficient water to complete the irrigation season.

In reply to the protest the applicant indicates that it does not believe the relatively small amount requested will have an adverse effect upon the protestants' operations. It claims that records supplied by the Los Angeles Department of Water and Power show the long-term minimum flow of Mammoth Creek to be 1.7 cfs, which, the applicant claims, is over a million gallons per day, and that the proposed appropriation is just 3 percent of this minimum flow. The applicant further claims riparian rights and cites the court case of Pabst vs. Finmand as evidence that priority of use establishes no priority of right under a riparian right.

#### Proceedings in Lieu of Hearing

The applicant and protestants, with the approval of the State Water Rights Board, stipulated to the proceedings in lieu of hearing as provided for by Section 737 of the Board's rules, and a field investigation was conducted on June 24, 1958, by R. R. Forsberg and K. L. Woodward, engineers of the Board. The applicant and protestants were present or represented at the investigation.

#### Records Relied Upon

The records relied upon in support of this decision are Application 17770 of Mammoth County Water District and Application 17814 and all relevant information on file therewith, with

particular reference to "Report of Field Investigation on Application 17814", dated June 26, 1958; streamflow records obtained by the City of Los Angeles, Department of Water and Power, of Mammoth Creek immediately below U.S. Highway 395 at Station "Hot Creek-Highway" for the period October, 1946, through September, 1957; a publication of the Division of Water Resources entitled "Report on Water Supply and Use of Water on Middle Fork of Feather River and Tributaries, Plumas and Sierra Counties, California", dated August, 1937; Division of Water Resources, "Report on Investigation and Water Master Service on Middle Fork of Feather River above Beckwith, Sierra and Plumas Counties, California, During Season of 1937", dated April, 1938; United States Geological Survey, Devils Post, California and Mt. Morrison, California, quadrangles, both 15-minute series, dated 1953; and United States Weather Bureau, Climatological Data, California.

#### Source and Watershed

Mammoth Creek heads on the eastern slope of the Sierra Nevada at Barney and Woods Lakes near the Mono-Fresno County line. The creek flows in a northwesterly direction for about 3 miles through Skelton and Arrowhead Lakes into Lake Mary, thence in a northerly direction for about  $1\frac{1}{2}$  miles through Lake Mamie into Twin Lakes. Overflow from Twin Lakes continues in a northeasterly direction for about one mile thence easterly about 5 miles to U.S. Highway 395 crossing. Below the highway, the water course continues for about 9 miles in a northeasterly direction to the confluence with Owens River. Sherman Creek, the principal

tributary of Mammoth Creek downstream from Twin Lakes, joins the latter stream from the south at a point about two miles above the highway.

The drainage area above the applicant's proposed point of diversion scales about 36.6 square miles ranging from a maximum elevation of 12,052 feet to about 7,200 feet.

#### Protestants' Project

According to the report of field investigation on Application 17814 dated June 26, 1958, protestants claim to be irrigating each year approximately 360 acres of pasture (seeded clover and natural grasses) within Sections 34 and 35, T3S, R28E, under an appropriative right initiated prior to the effective date of the Water Commission Act and by virtue of riparian ownership. From the legal description given in the protest, this property as plotted on the Mt. Morrison quadrangle is contiguous to the stream channel. The protestants also claim to have under lease from the City of Los Angeles, Department of Water and Power, considerable acreage of pasture land in Sections 4, 5, 6, 7, 8 and 9, T4S, R28E, and Sections 32 and 33, T3S, R28E, which is susceptible of irrigation; that the City owned land is riparian to the stream; that except during extremely dry years (when use of water on the City owned land is allegedly disallowed by order of the City) the protestants irrigate some 300 acres of the leased property; and that more land would be irrigated if the water supply during the critically dry months were adequate.

The protestants divert by gravity at one or more of

four points along the stream beginning with the uppermost point being about 0.5 mile below the highway for flood irrigation; claim that their irrigation season extends from about May 1 to about October 1 of each year; that no shortage is usually experienced prior to July 15; that August and September are usually months of deficient supply; that except for a limited by-pass for the maintenance of fish life the entire flow is diverted during August and September; and that even during years of unusually large runoff the entire flow reaching the protestants' property is put to beneficial use during August and September.

#### Water Supply

The flow of Mammoth Creek is measured at a point immediately downstream from U.S. Highway 395 by the City of Los Angeles, Department of Water and Power. This gaging station is approximately 300 feet upstream from the proposed point of diversion. As there is no intervening use of water between the gage and protestants Chance upper point of diversion, the flow passing the City's gage, less channel losses, represents the flow reaching the protestants' property. Except during extremely low flows such losses are of no moment and will be disregarded in the following discussion. Table I sets forth in cubic feet per second the monthly mean flow of Mammoth Creek covering the period from October, 1946, through September, 1957, as measured by the City of Los Angeles. As shown in Table I, flow during the months of August and September, the months of primary concern, has varied during the above-mentioned period from a maximum and

TABLE I

Monthly Mean Flow-Mammoth Creek\*  
at U. S. Highway 395

Quantities expressed in Second-feet

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Mean	
													Sec.-feet	Ac. Ft.
1946-47	8.71	9.49	7.51	4.47	5.12	7.64	13.18	57.8	40.5	20.5	6.26	4.07	15.5	11210
1947-48	5.0	4.8	3.6	5.2	3.6	4.3	11.6	30.4	56.6	28.9	8.6	2.6	13.8	9981
1948-49	4.7	3.1	4.3	3.4	2.9	3.2	12.5	34.7	56.8	20.1	8.3	2.7	13.1	9460
1949-50	4.0	4.9	4.1	5.9	5.4	5.1	12.4	36.4	49.9	22.5	6.4	5.5	13.6	9811
1950-51	4.1	27.9	35.1	12.5	10.4	8.2	12.5	38.3	57.2	30.2	16.2	8.0	21.8	15744
1951-52	7.1	5.7	10.5	9.9	8.4	6.1	11.9	61.6	103.5	93.1	42.0	19.3	31.7	22992
1952-53	12.2	7.1	8.7	10.6	6.4	6.7	13.8	16.6	50.1	44.3	10.0	5.0	16.0	11580
1953-54	5.0	5.0	4.1	3.5	5.0	8.5	18.3	50.8	42.0	19.9	6.4	4.4	14.4	10447
1954-55	2.4	5.6	4.8	5.3	4.0	4.4	8.4	19.8	71.3	22.0	7.5	3.3	13.2	9559
1955-56	4.5	4.6	25.3	13.2	7.7	7.1	15.9	54.1	143.3	95.5	37.1	19.9	35.7	25933
1956-57	16.6	12.8	9.4	9.2	10.3	8.7	11.8	26.7	106.6	40.2	13.1	7.0	22.7	16408

\*Station called "Hot Creek-Highway" by City of Los Angeles

minimum, respectively, of 42.0 cfs and 6.26 cfs during August and 19.9 cfs and 2.6 cfs during September. Median monthly flow for the period was 8.6 cfs during August and 5.0 cfs during September.

#### Estimated Water Requirements of Protestants

Present use of water by the protestants from Mammoth Creek (except during extremely dry years when use on 300 acres of leased property is prohibited) is for the irrigation of 660 acres of pasture, for stockwater and for incidental domestic purposes. As no information is apparently available as to the reasonable water requirements for land being served by the protestants, it is necessary that an estimate be made from the findings of water requirements in other areas of similar physiography.

In 1936 and 1937 the Division of Water Resources made an extensive study of water requirements of Sierra Valley in Plumas and Sierra Counties in connection with the Middle Fork Feather River Adjudication. The results of the investigation are contained in publications by that agency entitled "Report on Water Supply and Use of Water on Middle Fork of Feather River and Tributaries, Plumas and Sierra Counties, California", dated August, 1937, and "Report on Investigation and Water Master Service on Middle Fork of Feather River Above Beckwith, Sierra and Plumas Counties, California, during Season of 1937", dated April, 1938.

Sierra Valley is a mountain valley in the northeastern part of California at an elevation of about 5,000 feet. The

winters are moderately severe with the monthly minimum temperature remaining below freezing during the period from November through March. The summers are warm throughout the day, but are cool during the night. During the period from June through September the monthly mean maximum temperature ranges from about 76 to 85 degrees. The highest recorded temperature at Sierraville in a 27-year record was 104 degrees and the lowest was a minus 30 degrees, a range of 134 degrees.

The protestants' property is located at an elevation of about 7,000 feet and although the mean annual precipitation is undoubtedly somewhat less in that vicinity than in Sierra Valley, the summer precipitation and temperatures are believed reasonably comparable. Table II and Table III set forth the monthly temperatures and total precipitation for May through September, 1957, at the United States Weather Bureau Station, Sierraville in Sierra Valley, elevation 4,975 feet; Mono Lake in Mono Valley, elevation 6,520 feet (about 25 miles north of the protestants' property); and Bishop in Owens Valley, elevation 4,108 (about 30 miles southeast of the protestants' property). Relative to the water requirements in Sierra Valley, the aforementioned 1937 report states as follows:

"By reference to studies made on other streams of similar characteristics in mountain valleys in North-eastern California it appears that the return flow from meadow grass irrigation is ordinarily approximately one-third of the gross diversions where a proper spread and penetration of irrigation water has been obtained, i.e., it is necessary to divert and apply to meadow grass about 50 percent more water than is actually consumed in order to secure an adequate and proper irrigation. Such additional water is utilized as a vehicle for spreading.



TABLE II

Average Temperature - Long-Term Mean  
in °F

Station	May	June	July	Aug.	Sept.
Sierraville	50.6	56.8	62.9	61.7	55.8
Mono Lake	51.7	59.8	67.7	66.6	61.9
Bishop	62.6	69.4	75.5	72.7	67.3

TABLE III

Total Precipitation - Long-Term Mean  
in Inches

Station	May	June	July	Aug.	Sept.
Sierraville	0.92	0.57	0.32	0.15	0.48
Mono Lake	0.83	0.21	0.81	0.14	0.41
Bishop	0.20	0.10	0.10	0.14	0.19

If such an allowance is made for a spreading head over and above the consumptive duty on upper Smithneck Creek, the resultant gross duty of water is calculated to be one cubic foot per second to about 80 acres of irrigated land."

According to Table 84 of the aforementioned report, the gross duty of water for land irrigated from Middle Fork Feather River and its tributaries within Sierra Valley varies from 1 cfs per 47 acres to 1 cfs per 160 acres as computed on a continuous flow basis. Further investigation and study during the 1937 irrigation season, as described in the aforementioned 1938 report, revealed that an allowance of one cubic foot per second for 80 acres for the area was inadequate and that one cubic foot per second for 60 acres appeared to be more realistic. The Board concludes that a gross duty of one cfs for each 60 acres irrigated is a reasonable duty for the area in the vicinity of the protestants' place of use in view of the findings of water requirements in Sierra Valley. On that basis, irrigation of 660 acres of pasture will require a continuous flow of 11.0 cubic feet per second.

#### Discussion

The question of availability of unappropriated water in Mammoth Creek was previously considered by the Board in Decision No. D 904 adopted on May 14, 1958. That decision involved Application 17770 of Mammoth County Water District to appropriate 2.0 cubic feet per second, year-round, from Twin Lakes for municipal purposes. Twin Lakes is located on Mammoth Creek about six miles upstream from the aforementioned stream gaging station of the City

of Los Angeles. Jess Chance and Sons were likewise protestants to Application 17770.

In Decision No. D 904 the Board concluded that unappropriated water normally exists in Mammoth Creek only during the ten-month period of October through July. Mammoth County Water District contended that its present well water supply is adequate to meet the District's requirements during the months of August and September. Therefore in order to obviate the necessity of maintaining an alternate water supply during the two-month period of shortage, the application was approved for a year-round diversion season with the condition that at such times during August and September as the flow of Mammoth Creek at the City's gage does not exceed 11.0 cubic feet per second, the deficiency, up to the amount being diverted by the District at its Twin Lake diversion, would be released into Mammoth Creek from a non-tributary source (presumably from its well) upon demand of the protestants.

Inyo National Forest, to our knowledge, does not have a convenient alternate supply available which could be used to offset its diversion under Application 17814 during periods of shortage and accordingly the Board does not believe that circumstances warrant extending to the United States the alternative afforded Mammoth County Water District.

Inspection of Table I shows that for the past eleven years, flow of water in Mammoth Creek on a monthly mean flow basis has been inadequate to meet the protestants' estimated water requirements during August of 7 years and during September of 9 years. Flow during the other months of the years of record has been adequate without exception.

Application 17814 is for a permit to appropriate "un-appropriated" water and diversion thereunder can be allowed without restriction as to season provided adequate protection is afforded to the downstream users under prior rights. From the preceding section, "Estimated Water Requirements of Protestants", it is determined that a flow of 11 cfs is a reasonable requirement on a continuous flow basis for the irrigation of 660 acres of pasture in the area under consideration (This is the acreage claimed by the protestants to be under irrigation). Inasmuch as the points of diversion of the applicant and protestants are both located downstream from the gaging station of the City of Los Angeles on Mammoth Creek and the available flow can be readily determined by the parties, a permit conditioned upon the basis of flow at that gage would not be an unreasonable method of determining when water is available for appropriation under the subject application. Therefore, in order to protect downstream prior rights a provision should be inserted in the permit issued to the applicant restricting diversion during the months of August and September to such times as the flow of Mammoth Creek at the aforementioned gage is in excess of 11.0 cubic feet per second.

#### Conclusion

The information before the Board indicates and the Board finds that there is unappropriated water in Mammoth Creek which water may be appropriated to a substantial extent in the manner proposed under Application 17814 and that the application may be approved and permit issued, if appropriately conditioned, without injury to downstream existing rights.

ORDER

Application 17814 for a permit to appropriate unappropriated water having been filed, a protest having been submitted, the parties having stipulated to proceedings in lieu of hearing, an investigation having been made by the Board, the Board having considered all available relevant information, and said Board now being fully informed in the premises:

IT IS HEREBY ORDERED that Application 17814 be, and the same is hereby approved and that a permit be issued to the applicant subject to vested rights and to the following terms and conditions to wit:

1. The amount of water appropriated shall be limited to the amount which can be beneficially used and shall not exceed 0.056 cubic foot per second to be diverted from January 1 to December 31 of each year.

2. The maximum amount herein stated may be reduced in the license if investigation so warrants.

3. Actual construction work shall begin on or before June 1, 1959, and shall thereafter be prosecuted with reasonable diligence, and if not so commenced and prosecuted, this permit may be revoked.

4. Said construction work shall be completed on or before December 1, 1961.

5. Complete application of the water to the proposed use shall be made on or before December 1, 1962.

6. Progress reports shall be filed promptly by permittee on forms which will be provided annually by the State Water Rights Board until license is issued.

7. All rights and privileges under this permit including method of diversion, method of use and quantity of water diverted are subject to the continuing authority of the State Water Rights Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use or unreasonable method of diversion of said water.

8. No water shall be diverted under this permit during the months of August and September when the flow of Mammoth Creek at U.S. Highway 395 Crossing in Section 32, T3S, R28E, MDB&M, is 11.0 cubic feet per second or less.

9. This permit is conditioned upon full compliance with Section 5937 of the Fish and Game Code.

Adopted as the decision and order of the State Water Rights Board at a meeting duly called and held at Sacramento, California, on the 9th day of January, 1959.

/s/ Henry Holsinger  
Henry Holsinger, Chairman

/s/ W. P. Rowe  
W. P. Rowe, Member

/s/ Ralph J. McGill  
Ralph J. McGill, Member

**FILED**

JUL 6 1934

ENTERED JUL - 6 1934  
County Clerk

RECORDED  
VOL. 1 PAGE 395  
JUDGMENTS & DECREES  
JUL - 6 1934  
GEO. C. DELURY, JR.  
COUNTY CLERK MONO COUNTY  
BY *[Signature]*

GEO. C. DELURY, JR.  
COUNTY CLERK MONO COUNTY  
BY *[Signature]*

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2 Attorneys at Law  
3 520 Capitol Mall, Suite 700  
4 Sacramento 14, California  
5 Telephone: 444-8920  
6 Attorneys for Plaintiffs

7 IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA  
8  
9 IN AND FOR THE COUNTY OF MONO

10  
11 JESS W. CHANCE, MILDRED F. CHANCE,  
12 and GERALD N. CHANCE, dba JESS  
13 CHANCE & SONS,

14 Plaintiffs,

No. 3244

15 vs.

16 MAMMOTH COUNTY WATER DISTRICT,  
17 a county water district of the  
18 State of California, et al.,

19 Defendants.

JUDGMENT DECLARING WATER  
RIGHTS AND GRANTING  
PERMANENT INDIEMNITY

20 Findings of Fact and Conclusions of Law having been made  
21 and filed with respect to all issues in the above-entitled action  
22 other than the amount of damages (as to which a trial has been set),

23 IT IS HEREBY ADJUDGED, ORDERED AND DECREED as follows:

24 1. Plaintiffs JESS W. CHANCE, MILDRED F. CHANCE and  
25 GERALD N. CHANCE are the owners in fee of the following described  
26 real property in Mono County containing in total 400 acres more or  
27 less and described as the East half of Northwest quarter, West half  
28 and Southeast quarter of Northeast quarter, and West half of South-  
29 west quarter of Section 34; Southwest quarter of Northwest quarter  
30 of Section 35; and South half of Southeast quarter of Section 33;  
31 all in Township 3 South, Range 28 East, M.D.B. & M. All of said real  
32 property is riparian to Mammoth Creek, also known as Hot Creek.

2. Plaintiffs own riparian rights, which are part and

EXHIBIT A

1 parcel of all of their said real property, to divert and use such  
2 amounts of the unimpaired natural flow of Mammoth Creek as may be  
3 necessary for the beneficial purposes to which such real property  
4 is or may be devoted under reasonable methods of diversion and use.  
5 For purposes of irrigation of pasture and watering of livestock in  
6 a livestock growing enterprise, to which said real property is now  
7 and for many years has been devoted, an average continuous rate of  
8 diversion of 6.67 cubic feet per second during the irrigation sea-  
9 son between about May 1 and October 1 each year is necessary.

10 Plaintiffs' riparian rights to the flow of Mammoth Creek in such  
11 amounts as are necessary for the beneficial uses to which said real  
12 property is or may be devoted are prior and superior to any rights  
13 which Defendant may have to divert and use water of Mammoth Creek  
14 or its tributaries.

15 3. Defendant MAMMOTH COUNTY WATER DISTRICT and its  
16 officers, servants, agents, attorneys, assigns and all persons  
17 claiming by, through or under said district and its successors are  
18 and each of them is hereby forever enjoined and restrained from  
19 diverting any water from Mammoth Creek or its tributaries unless a  
20 flow of not less than 6.67 cubic feet per second in said creek is  
21 reaching Plaintiffs' said real property during the irrigation sea-  
22 son between May 1 and October 1 each year, except diversions shall  
23 not be enjoined if simultaneously with such diversions Defendant  
24 at its own expense supplies into the main channel of Mammoth Creek  
25 upstream from Plaintiffs' said real property a flow of water, from  
26 a source or sources not tributary to Mammoth Creek or its tribu-  
27 taries, equal in amount to that diverted by Defendant from Mammoth  
28 Creek or its tributaries. Should Defendant wish to avail itself  
29 of the privilege of making such diversions and simultaneously  
30 supplying to the main channel of Mammoth Creek an equivalent amount  
31 of water from a non-tributary source, Defendant shall install  
32 meters at its point or points of diversion from Mammoth Creek or



1 its tributaries and at the point or points where Defendant supplies  
2 water from a non-tributary source or sources into the main channel  
3 of Mammoth Creek, and shall maintain continuous and accurate re-  
4 cords of the amounts of water diverted and supplied at these points.  
5 Written records of the amounts of water so diverted and supplied  
6 shall be provided to Plaintiffs by Defendant each day during any  
7 period when a flow of less than 6.67 cubic feet per second reaches  
8 Plaintiffs' said real property, and Plaintiffs shall have the right  
9 to inspect the facilities by which water is diverted and supplied  
10 and the measuring devices therefor, in order that Plaintiffs may  
11 assure themselves that Defendant is simultaneously supplying the  
12 main channel of Mammoth Creek with the same amounts of water from  
13 a non-tributary source or sources as Defendant is diverting from  
14 Mammoth Creek or its tributaries.

15 Dated: July 6, 1964

16  
17 S/ Walter C. Evans  
18 Judge of the Superior Court  
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Telephone 442-8920

(PROOF OF SERVICE BY MAIL—

C.C.P. 1013a, 2015.5)

STATE OF CALIFORNIA }  
COUNTY OF SACRAMENTO } ss.

I am a citizen of the United States and a resident of the county aforesaid; I am over the age of eighteen years and not a party to the within above entitled action; my <sup>business</sup> address is:

526 Capitol Mall, Suite 700, Sacramento 14, California

On July 2, 1964, I served the within Judgment Declaring

Water Rights and Granting Permanent Injunction

on the Defendant in said action, by placing a true copy thereof enclosed in a sealed envelope

with postage thereon fully prepaid, in the United States post office mail box at Sacramento, California addressed as follows:

Mr. N. Edward Denton  
District Attorney  
Mono County Courthouse  
Bridgeport, California

I certify (or declare), under penalty of perjury,\* that the foregoing is true and correct.

Date July 2, 1964

/s/ Brenda J. Kiefer  
(Signature)

proof of service by mail forms, being signed under penalty of perjury, do not require notarization.

*SW 1/4 Sec 2, Twp. 11 N, Rge 34 E*  
*Intake - SW 1/4 Sec 24, Twp. 11 N, Rge 34 E*

NOTICE OF WATER APPROPRIATION.

Notice is hereby given, that the undersigned Fred Eaton, claims all of the water, both surface and underflow, and seepage and return waters that are now flowing, or that may hereafter flow in this certain natural stream, to-wit: Owens River, to the extent of 50,000 inches, measured under a four inch pressure.

The point where this notice is posted is the point of intended diversion, and is situated and described as follows:- On a willow tree at or near the Southern end of what is known as Charley's Butte on the West side of Owens River. Said water is claimed for irrigation, manufacturing purposes, water power, domestic use, supplying municipalities with water, and other beneficial uses, and the places of its intended use are in Owens Valley, Inyo County, California, and in the County of Los Angeles, California, and at intermediate points along the line of the canal or waterway.

The water will be diverted by means of a dam in and across said Owens River and will be conveyed through a ditch or canal, 60 feet wide on top, 35 feet wide on the bottom and 10 feet deep, having a grade of at least one foot to the mile, or through a waterway or canal having a cross sectional area of at least 400 square feet and with a grade of one foot to the mile.

Fred Eaton,

Dated and posted this 23rd day of October, 1905.

WITNESS:

E. MacFarlane

*Recorded Oct. 27, 1905 Vol. A of Land + Water Claims  
Page 386, Records of Inyo County*



## DERIVATION OF ACCRETIONS AND DEPLETIONS

### ACCRETIONS/DEPLETIONS BETWEEN THE OMR AND OLD395 GAGES

After compiling the available OMR and OLD395 gage daily flow data for the April 1988 through March 2008 period, the resulting series were scrutinized for completeness (i.e., presence and extent of missing data) and quality (i.e., detection of potential erroneous recordings). Inspection of the daily records identified missing data for short periods extending from one to a few days, and longer periods extending for one or more weeks. Annotations in some of the records also identified suspect readings caused by external forces (e.g., frozen gages, debris obstructing measurements, power or mechanical failures of the installed equipment).

Initial inspections of the daily data series identified periods of consecutive days with identical readings at a gage, while the data series for the closest gage upstream or downstream exhibited daily variation. These periods of constant readings were particularly evident during winter months and were attributed to frozen or stuck gages. Additionally, days with aberrant, often extremely high flow readings at one gage without comparably high readings in the closest gages upstream or downstream to the site of the aberrant observation, and with no clear relation to precipitation data recorded at the USBR Mammoth Pass (MHP) meteorological station, also were identified. Both the constant and the aberrantly high records were eliminated from the calculation of daily accretions and depletions.

Additionally, potential erroneous recordings at the OMR and OLD395 flow gages were identified by the examination of the residual distributions obtained by performing simple linear regressions between both flow variables sorted by month and runoff year types. For each monthly and runoff year type regression line, the Studentized residuals with absolute value greater than 2 were identified, and the pattern of the series of consecutive OMR and OLD395 flow records surrounding the pair that produced the large residual were examined. The pairs of records with identified large residuals were eliminated from the model calculation of daily accretions and depletions, particularly when the daily distributional patterns of OMR and OLD395 flow records surrounding the pair were not parsimonious.

For the regression analyses mentioned above and derivation of accretions/depletions between the OMR and OLD395 gages (see below), the runoff year was defined as beginning on April 1 and extending through March 31 of the following calendar year. Runoff year types were identified as Wet, Normal, or Dry based upon the April 1 snowpack water content (SWC) data for the Mammoth Pass station (the "revised" snowpack water content readings for 1988 through 2000 and the "raw" SWC for 2001 through 2007 were used for the runoff year type characterization). The runoff year type definitions were based on a 20/80 frequency demarcation to be consistent with CDFG's recommendation and the State Water Resources Control Board's (SWRCB) adoption for the Mono Basin Decision D-1631 (pages 18-19).

Once potentially erroneous readings at the OMR and OLD395 gages were eliminated from the data set, daily flow averages per month and runoff year type were calculated for both gages, and the average accretions/depletions were calculated by subtracting the average OLD395 flows from the average OMR flows. **Table 1** (below) summarizes the results of these calculations.

**Table 1.** Average daily flows and average differences between daily flows measured at the OMR gage and the OLD395 gage in Mammoth Creek, Mono County, California, for each month during dry, normal and wet runoff years (using 20/80 frequency demarcation of Mammoth Pass snowpack water content) over the period extending from April 1988 through March 2008.

Month	Dry Years			Normal Years			Wet Years		
	Average Daily Flow at OMR Gage (cfs)	Average Flow Loss (-) or Gain (+) to Old 395 Gage (cfs)	N	Average Daily Flow at OMR Gage (cfs)	Average Flow Loss (-) or Gain (+) to Old 395 Gage (cfs)	N	Average Daily Flow at OMR Gage (cfs)	Average Flow Loss (-) or Gain (+) to Old 395 Gage (cfs)	N
April	10.13	-2.01	115	13.88	-1.48	359	13.89	-0.38	120
May	24.68	-4.22	121	42.05	-1.81	358	64.93	2.11	121
June	27.01	-3.23	118	59.61	3.13	359	122.88	9.23	117
July	10.60	-0.21	115	30.30	4.53	372	92.08	19.55	118
August	6.59	-1.10	112	13.21	3.15	372	29.96	15.45	112
September	5.30	-1.28	118	8.71	1.54	360	12.57	8.19	116
October	5.29	-1.25	121	7.16	0.81	371	9.75	3.37	122
November	6.21	-1.97	96	8.99	-0.16	325	8.77	1.54	100
December	6.38	-2.03	85	8.25	-1.36	263	10.96	-0.59	119
January	7.36	-2.46	112	9.57	-0.56	305	9.78	-0.99	117
February	6.29	-1.54	102	8.20	-1.09	304	9.91	-0.72	106
March	8.75	-2.57	82	8.99	-1.45	350	10.06	-1.26	107

**MODEL TREATMENT OF ACCRETIONS AND DEPLETIONS**

- Accretions and depletions between the various nodes are not calculated by the MCWD Model
- Accretions and depletions are calculated externally and input to the MCWD Model
- Accretions and depletions between two adjacent locations (i.e., nodes) are calculated from known points of measurement in Mammoth Creek and reservoirs (see Figure 1 in the MCWD Model Technical Memorandum)
- For each day in the simulated period when there is a reliable data record (see data QA/QC procedure described above) at two adjacent nodes, the accretion or depletion is the resultant difference between the data records at the two nodes
- For periods of missing data extending from one to several days, values were estimated based on the data values of the previous and subsequent daily data points, often using simple averaging or linear interpolation
- The longer gaps in the data sets, extending for one or more weeks, were typically estimated using linear regression equations, developed by runoff year type and month, for the particular flow locations
- After the missing data value is generated, the accretion or depletion is calculated as the difference between the data values at the two nodes

- For example, if a two-week gap in the data for the OMR Gage occurred during April of a dry runoff year, the daily flows obtained from the OLD395 Gage are input into the regression equation describing the relationship of natural logarithm of OMR flow as function of the natural logarithm of OLD395 flow for April of dry years
- After applying the antilogarithm to the predicted values, the results are utilized as the estimated flows at the OMR Gage during the period when daily flows were missing
- An analogous process is used to estimate daily flows at the OLD395 gage when data gaps occur at that gage, but daily flow data are available at the OMR gage
- The intercept and slope parameters of the monthly linear regressions relating OMR and OLD395 flows are presented in Table 2 and Table 3 of the MCWD Model Technical Memorandum.
- For those occasions when daily flow data are not available at either the OMR or OLD395 gages, linear interpolation is performed between the last known and the next known data point at the OMR gage, and the appropriate month/runoff year type regression equation is used to estimate the data at the OLD395 gage
- A process analogous to the entire process described above is used to estimate daily flows and accretions/depletions between various adjacent nodes incorporated into the MCWD Model
- Scatterplots, intercepts and slope parameters, coefficients of determination ( $r^2$ ), and levels of significance (P) of the linear regressions used to reconstruct OMR gage daily flows from OLD395 gage daily flows for each month of the year by runoff year type (dry, normal, and wet) are presented in Figures 24-35 (attached)
- Scatterplots, intercepts and slope parameters, coefficients of determination ( $r^2$ ), and levels of significance (P) of the linear regressions used to reconstruct OLD395 gage daily flows from OMR gage daily flows for each month of the year by runoff year type (dry, normal, and wet) are presented in Figures 36-47 (attached)
- Because the MCWD Model operates on a daily time-step calculating daily accretions and depletions between consecutive flow gages, daily flow values at the gage locations must be included over the entire modeled hydrologic period. Thus, input to the MCWD Model includes estimates of accretions and depletions derived from both reliable recorded data, as well as reconstructed data to fill in missing data gaps. **Table 2** (below) summarizes daily flow averages per month and runoff year type at the OMR gage, and the average of the daily accretions/depletions between the OMR and OLD395 gages which were input to the MCWD Model.

**Table 2.** Modeled Existing Condition average daily flows at the OMR gage, and the average of the daily accretions/depletions between the OMR gage and the OLD395 gage which were input to the MCWD Model, for each month during dry, normal and wet runoff years (using 20/80 frequency demarcation of Mammoth Pass snowpack water content) over the period extending from April 1988 through March 2008.

Month	Dry Years			Normal Years			Wet Years		
	Average Daily Flow at OMR Gage (cfs)	Average Flow Loss (-) or Gain (+) to Old 395 Gage (cfs)	N	Average Daily Flow at OMR Gage (cfs)	Average Flow Loss (-) or Gain (+) to Old 395 Gage (cfs)	N	Average Daily Flow at OMR Gage (cfs)	Average Flow Loss (-) or Gain (+) to Old 395 Gage (cfs)	N
April	10.19	-2.00	120	13.87	-1.48	360	13.89	-0.38	120
May	24.72	-4.22	124	44.26	-1.67	372	67.11	2.20	124
June	26.98	-3.22	120	59.65	3.13	360	123.05	9.27	120
July	10.55	-0.21	124	30.30	4.53	372	91.47	19.50	124
August	6.51	-1.11	124	13.21	3.15	372	28.89	15.01	124
September	5.30	-1.28	120	8.71	1.54	360	12.60	8.21	120
October	5.33	-1.24	124	7.16	0.82	372	9.73	3.33	124
November	6.61	-2.09	120	8.96	-0.16	360	8.77	1.61	120
December	6.26	-2.06	124	8.10	-1.41	372	11.16	-0.38	124
January	7.25	-2.46	124	9.68	-0.25	372	9.96	-1.08	124
February	6.27	-1.57	113	8.09	-1.13	339	10.12	-0.72	113
March	8.90	-2.54	124	8.97	-1.45	372	10.26	-1.14	124

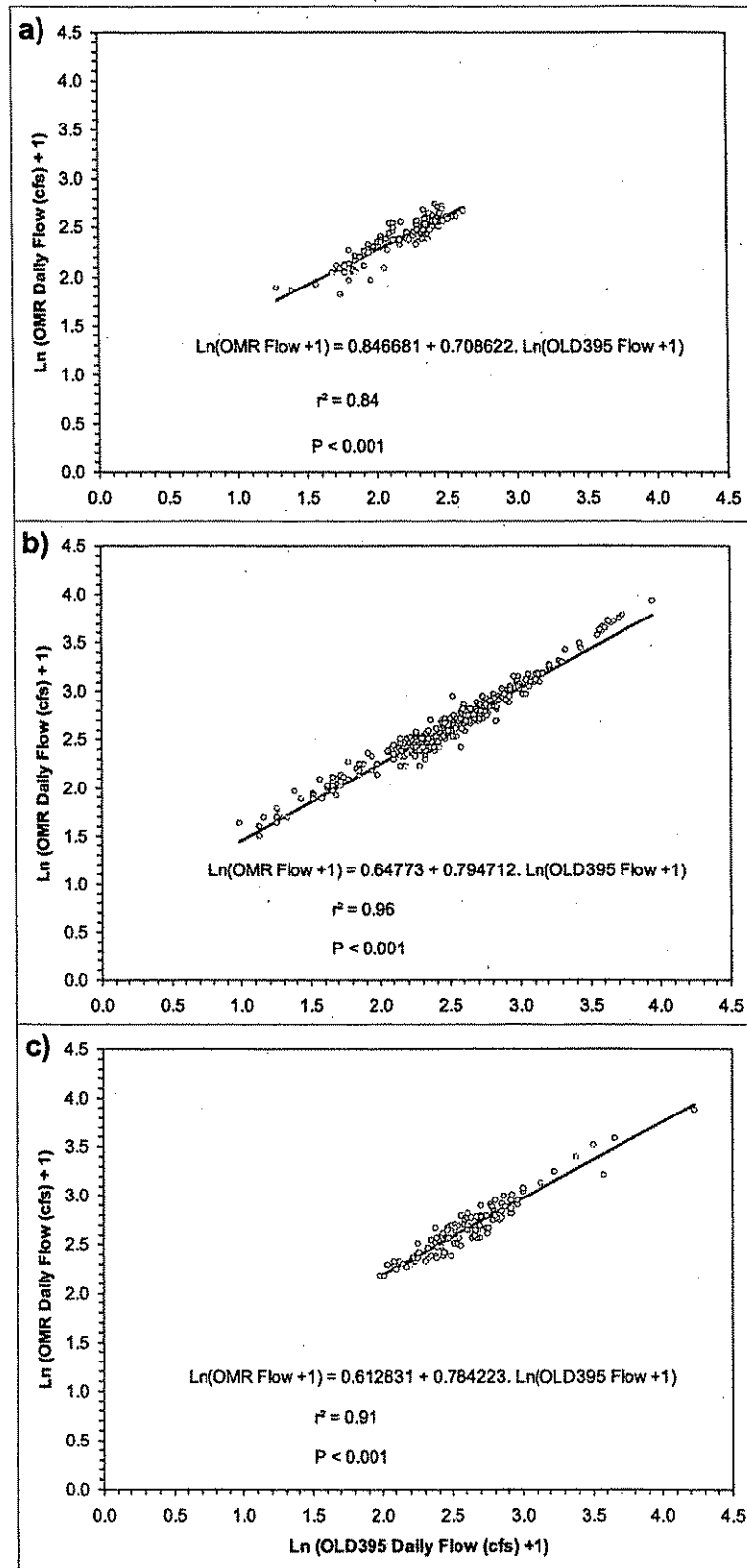


Figure 24. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance ( $P$ ) of the linear regression used to reconstruct OMR gage daily flows from OLD395 gage daily flows during April for (a) dry, (b) normal, and (c) wet runoff years.



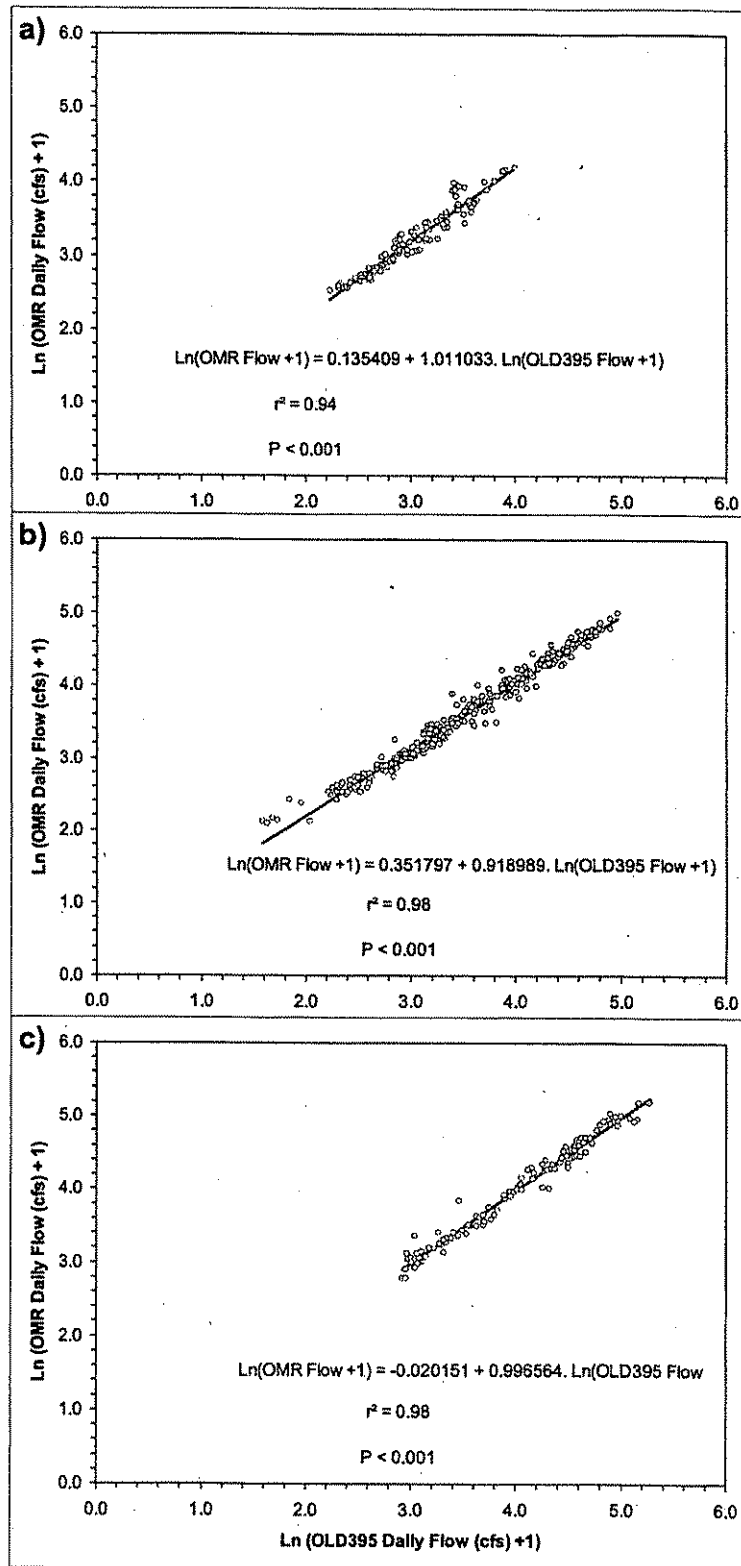


Figure 25. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance (P) of the linear regression used to reconstruct OMR gage daily flows from OLD395 gage daily flows during May for (a) dry, (b) normal, and (c) wet runoff years.

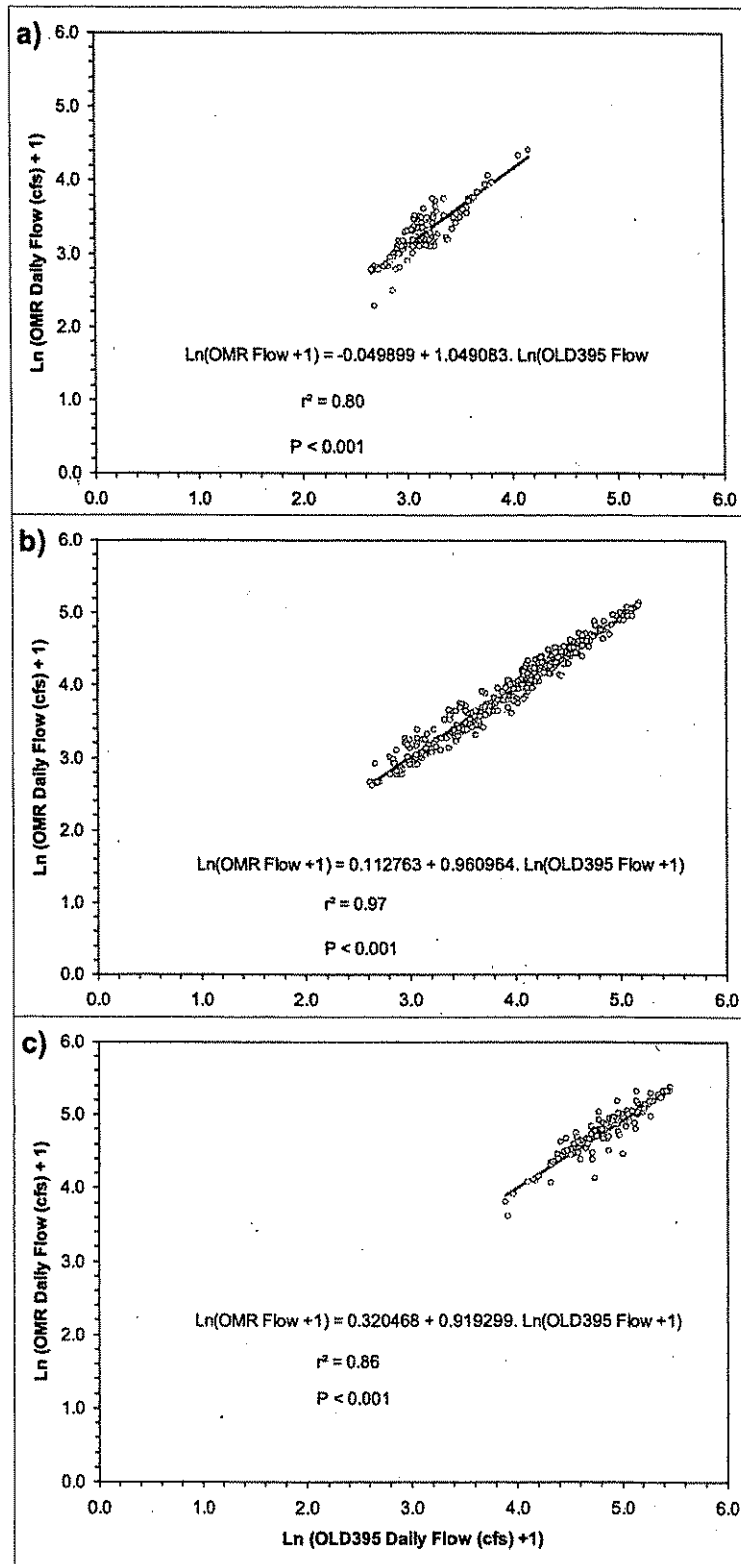


Figure 26. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance ( $P$ ) of the linear regression used to reconstruct OMR gage daily flows from OLD395 gage daily flows during June for (a) dry, (b) normal, and (c) wet runoff years.

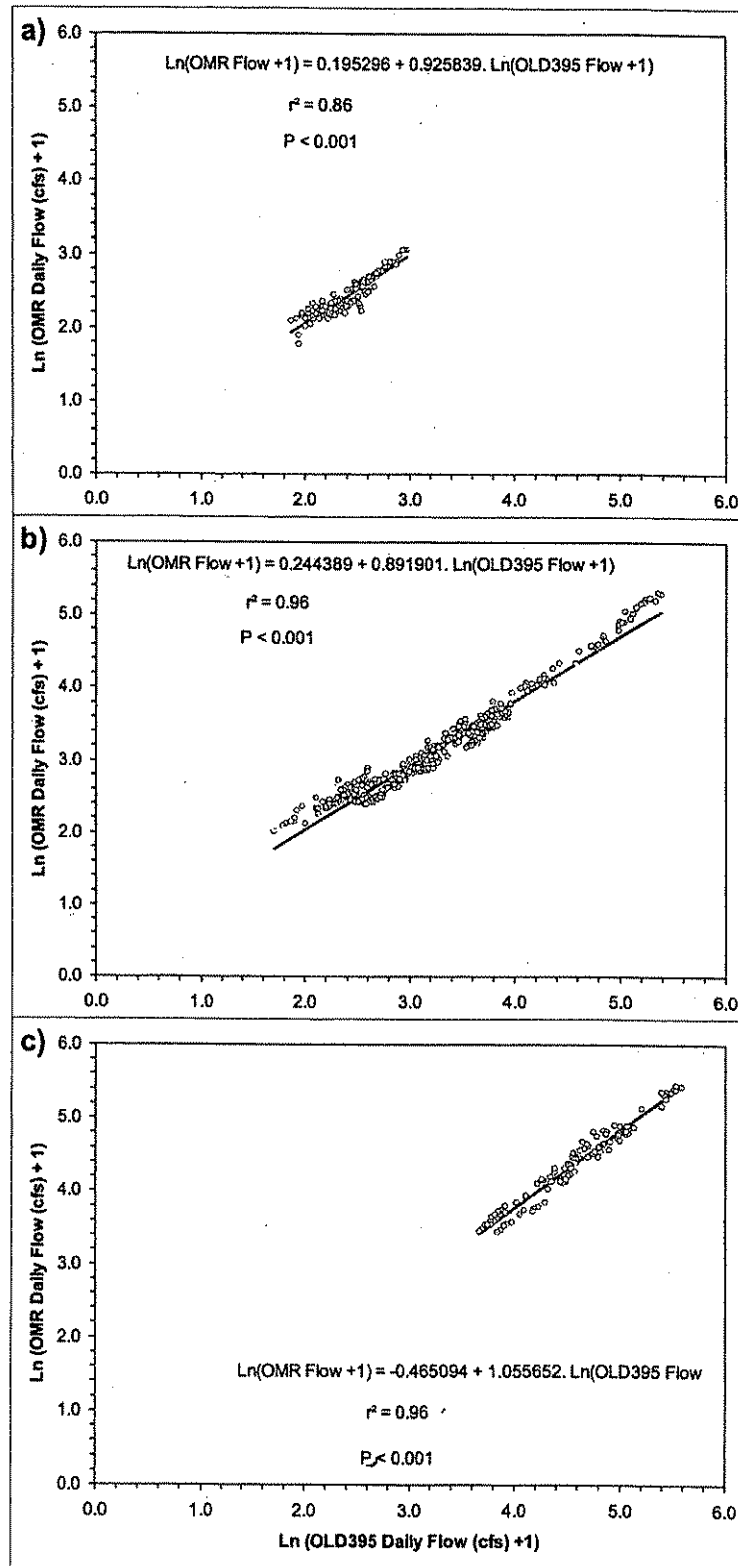


Figure 27. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance (P) of the linear regression used to reconstruct OMR gage daily flows from OLD395 gage daily flows during July for (a) dry, (b) normal, and (c) wet runoff years.

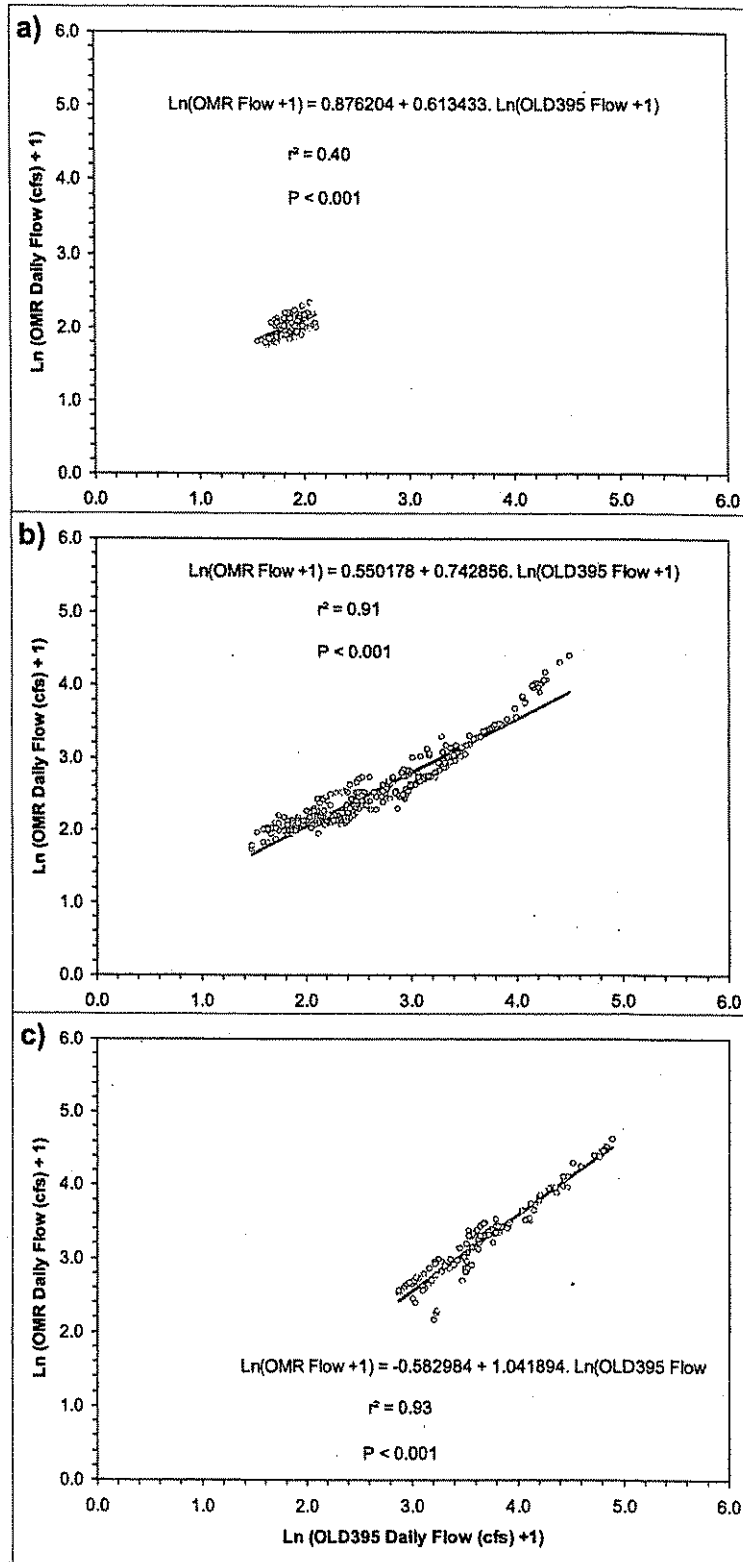


Figure 28. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance (P) of the linear regression used to reconstruct OMR gage daily flows from OLD395 gage daily flows during August for (a) dry, (b) normal, and (c) wet runoff years.

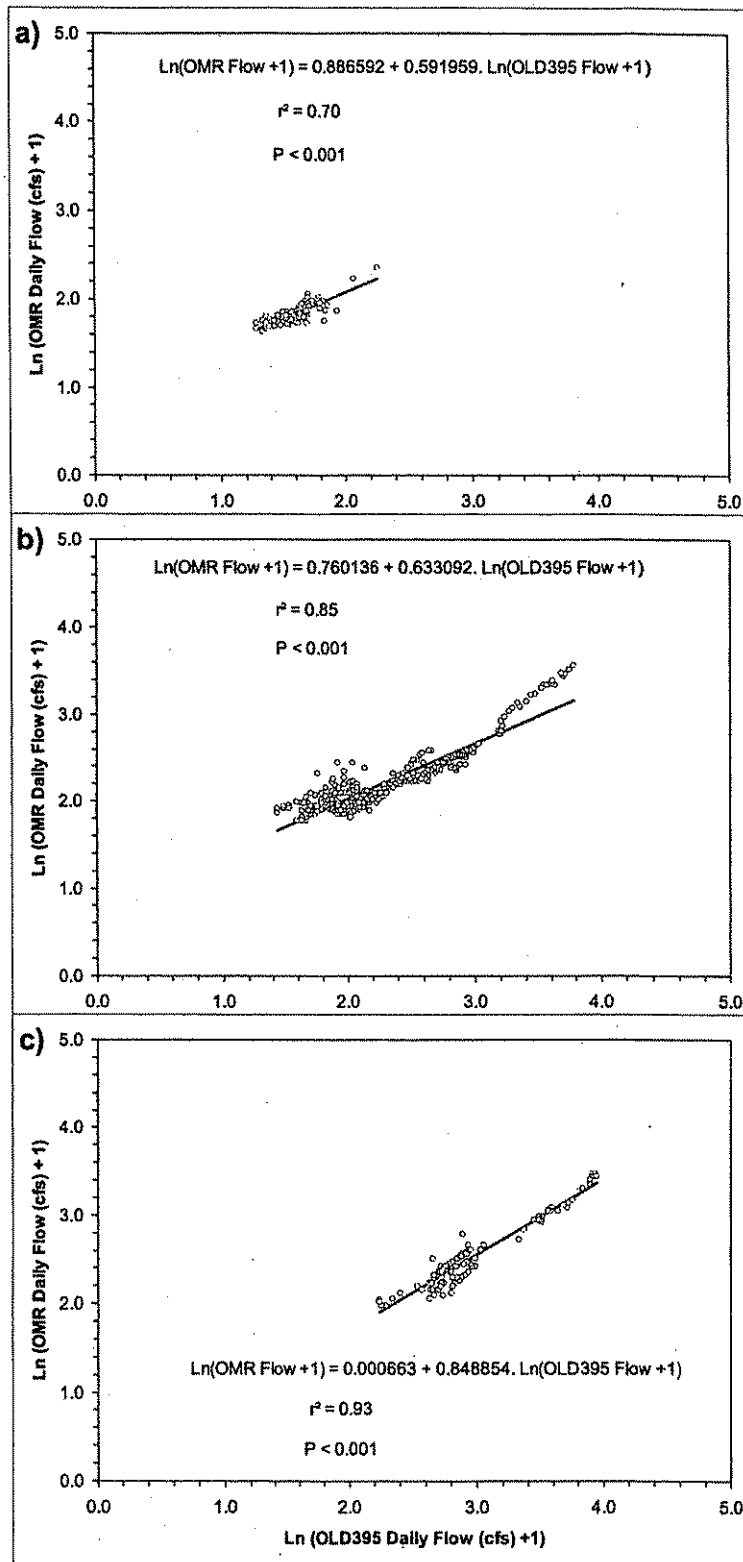


Figure 29. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance (P) of the linear regression used to reconstruct OMR gage daily flows from OLD395 gage daily flows during September for (a) dry, (b) normal, and (c) wet runoff years.

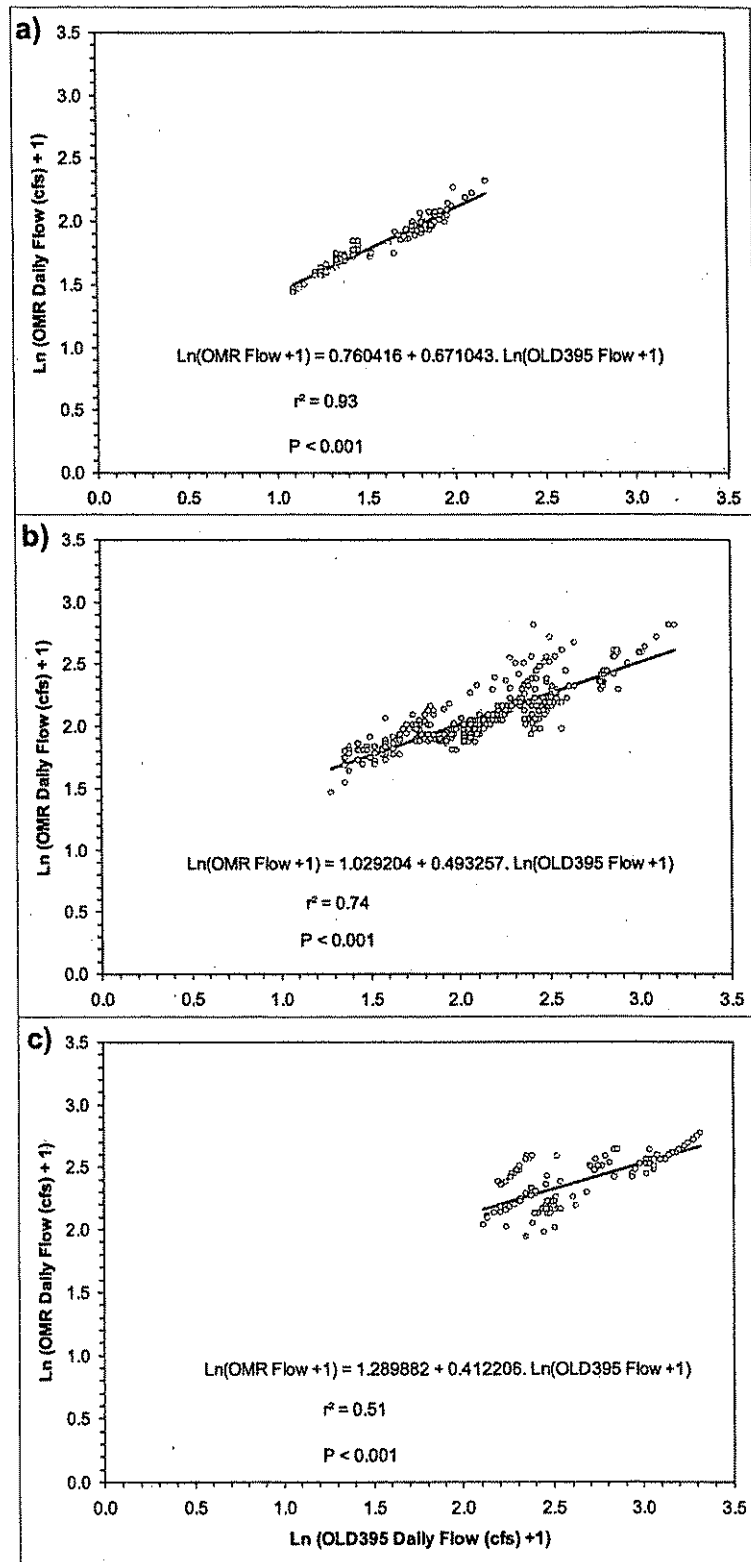


Figure 30. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance (P) of the linear regression used to reconstruct OMR gage daily flows from OLD395 gage daily flows during October for (a) dry, (b) normal, and (c) wet runoff years.

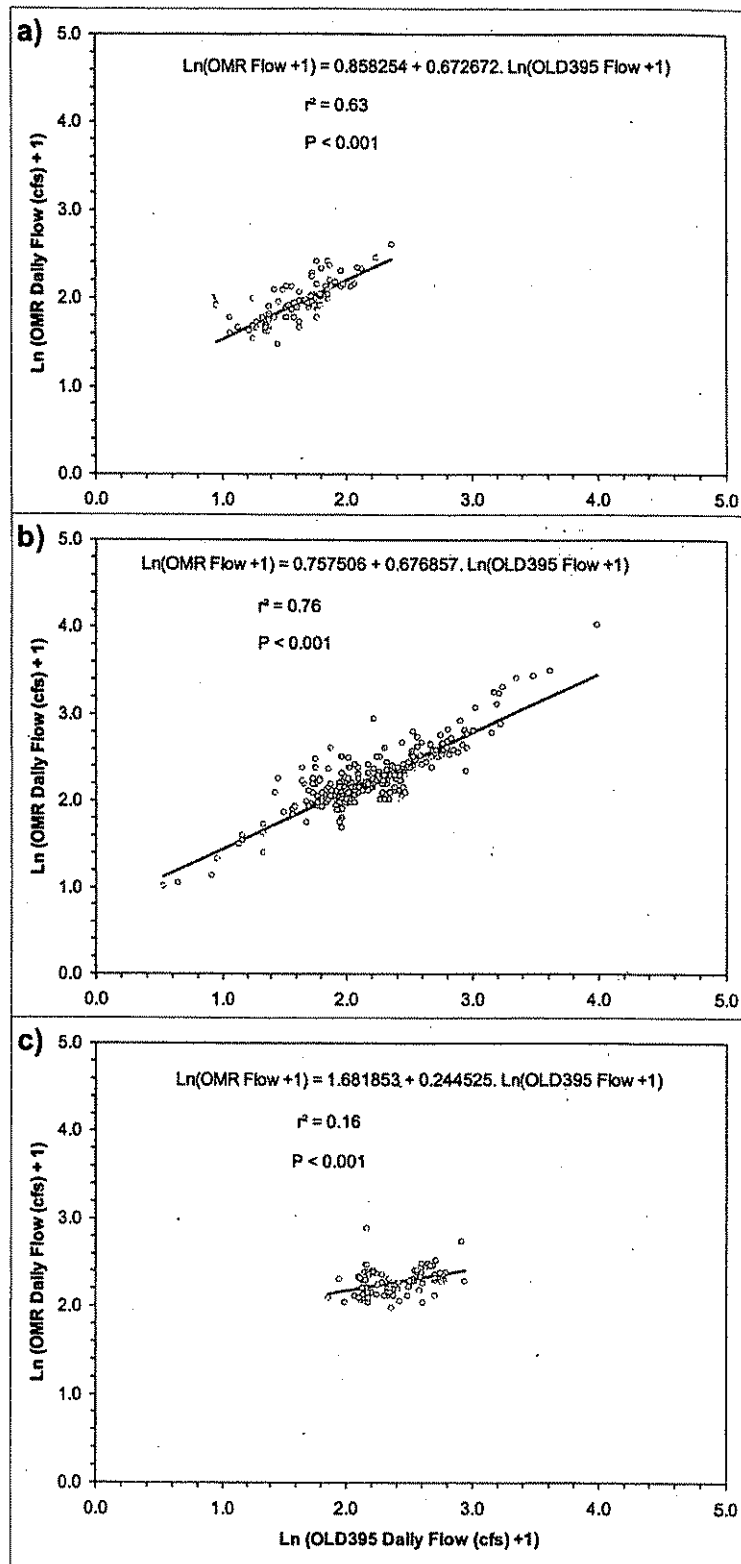


Figure 31. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance (P) of the linear regression used to reconstruct OMR gage daily flows from OLD395 gage daily flows during November for (a) dry, (b) normal, and (c) wet runoff years.

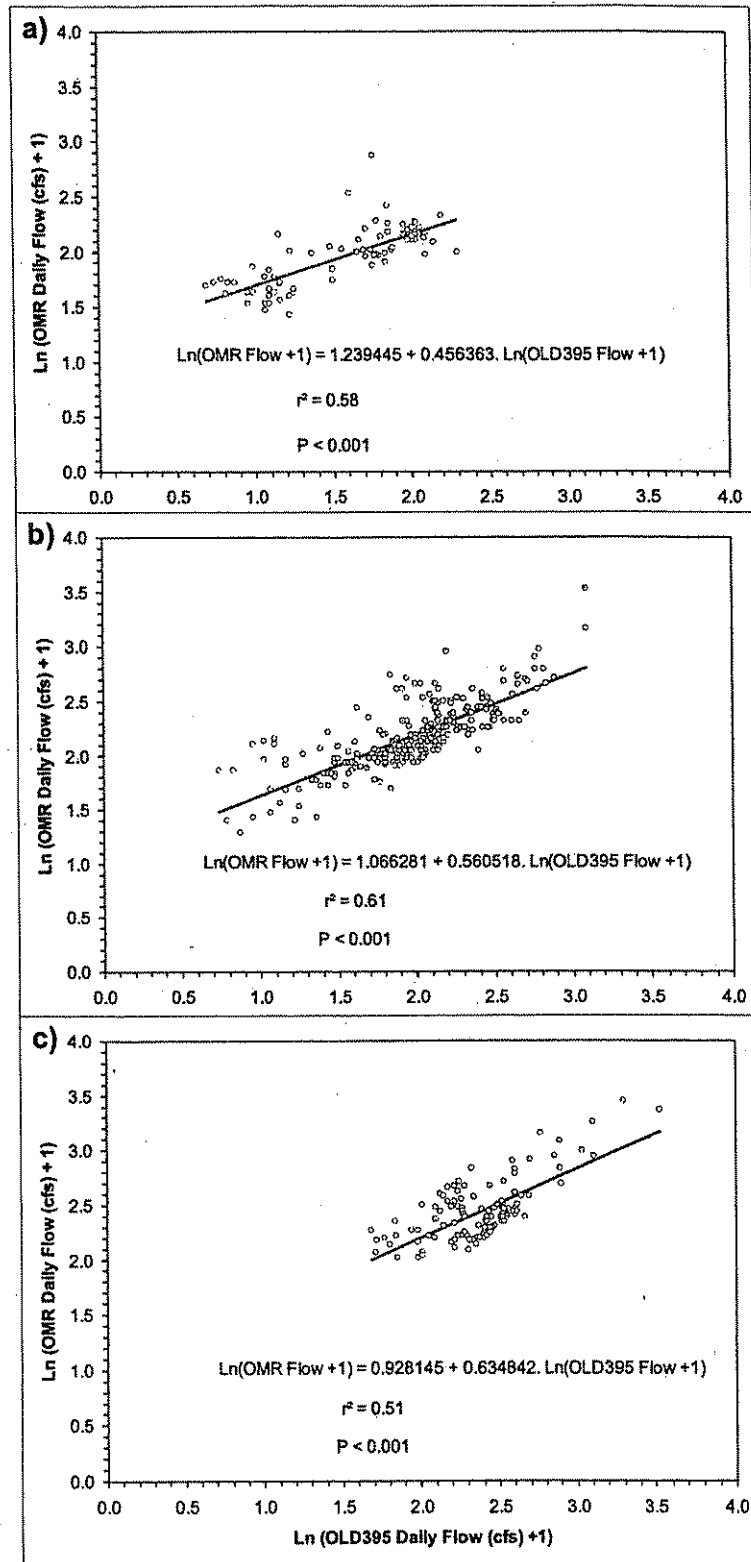


Figure 32. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance ( $P$ ) of the linear regression used to reconstruct OMR gage daily flows from OLD395 gage daily flows during December for (a) dry, (b) normal, and (c) wet runoff years.



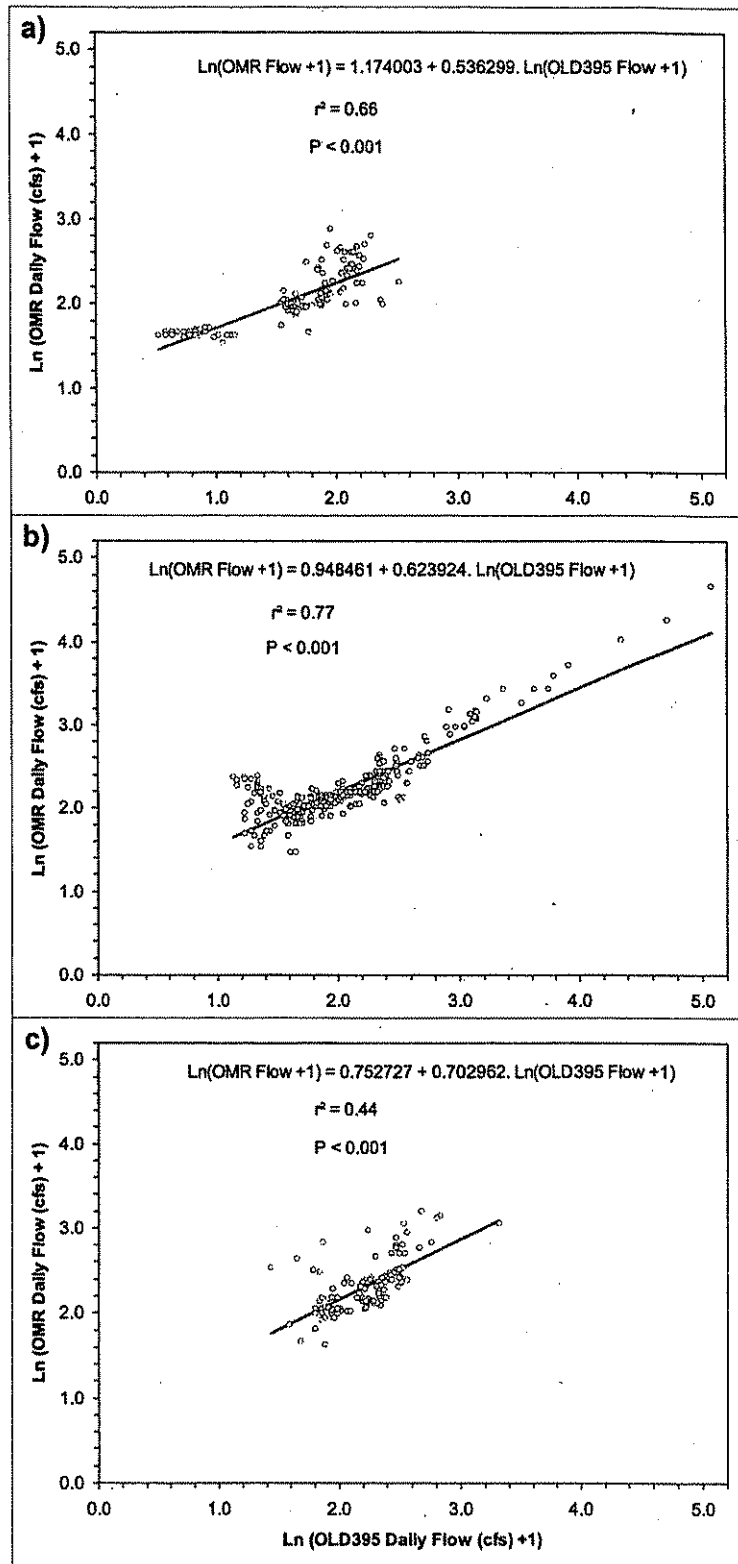


Figure 33. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance (P) of the linear regression used to reconstruct OMR gage daily flows from OLD395 gage daily flows during January for (a) dry, (b) normal, and (c) wet runoff years.

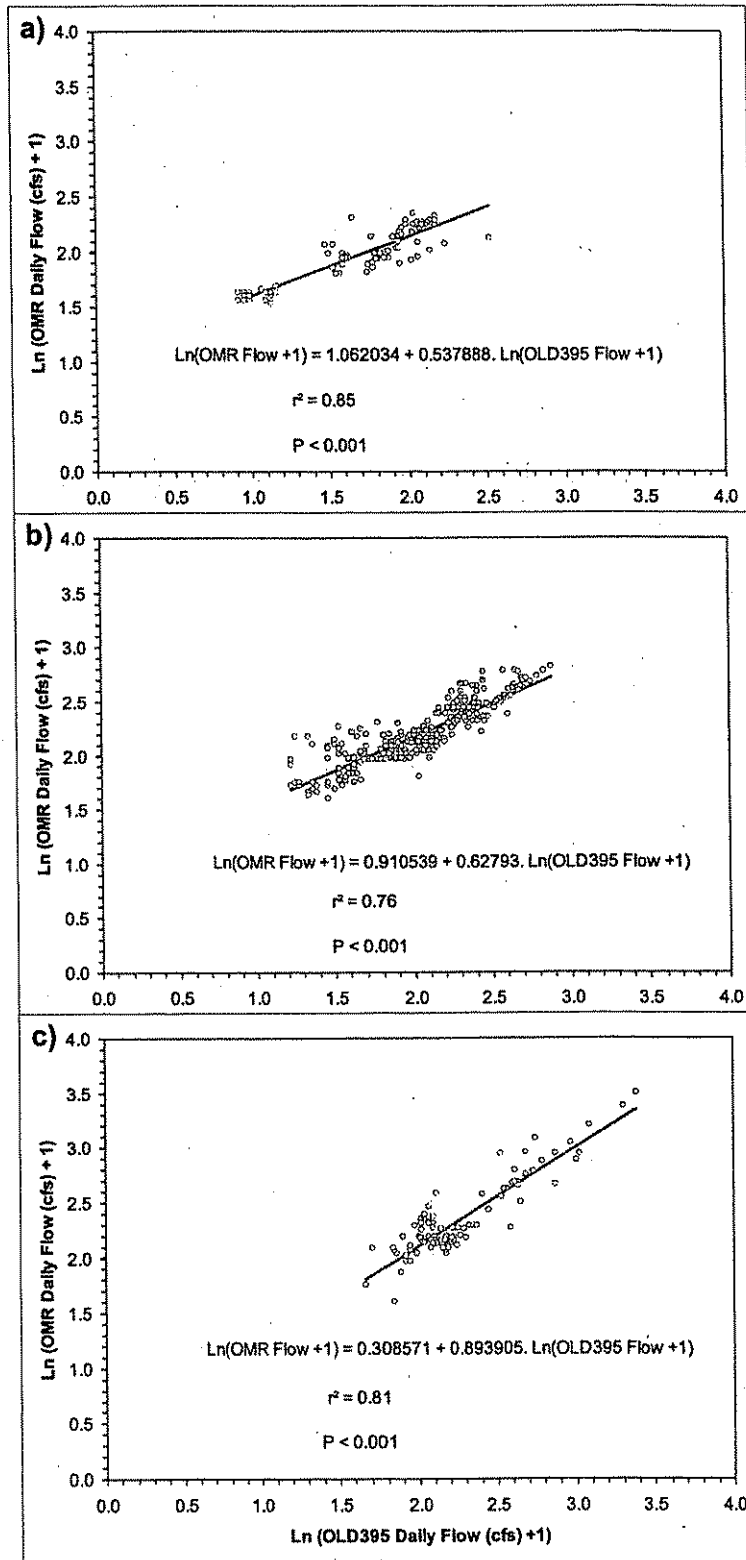


Figure 34. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance (P) of the linear regression used to reconstruct OMR gage daily flows from OLD395 gage daily flows during February for (a) dry, (b) normal, and (c) wet runoff years.

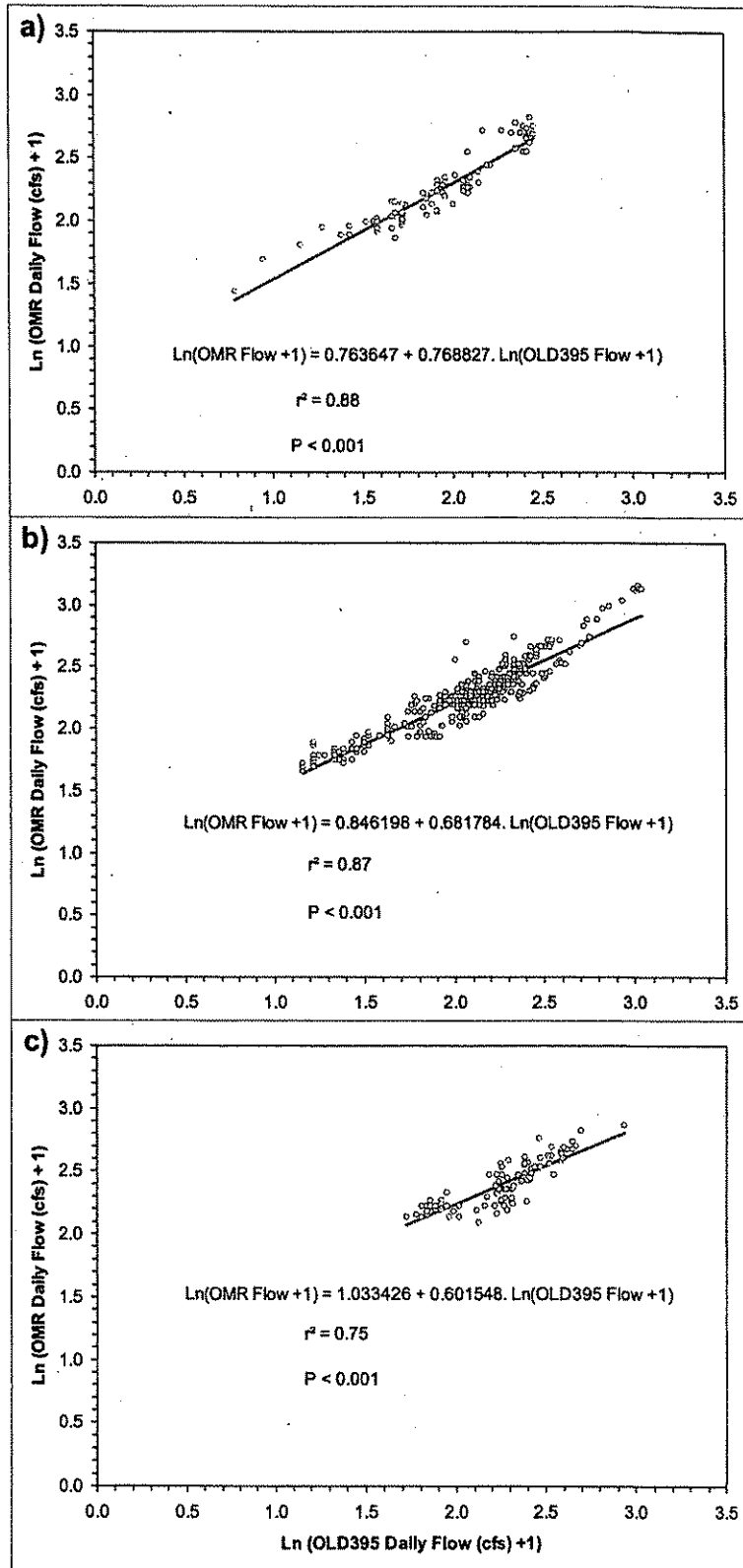


Figure 35. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance (P) of the linear regression used to reconstruct OMR gage daily flows from OLD395 gage daily flows during March for (a) dry, (b) normal, and (c) wet runoff years.

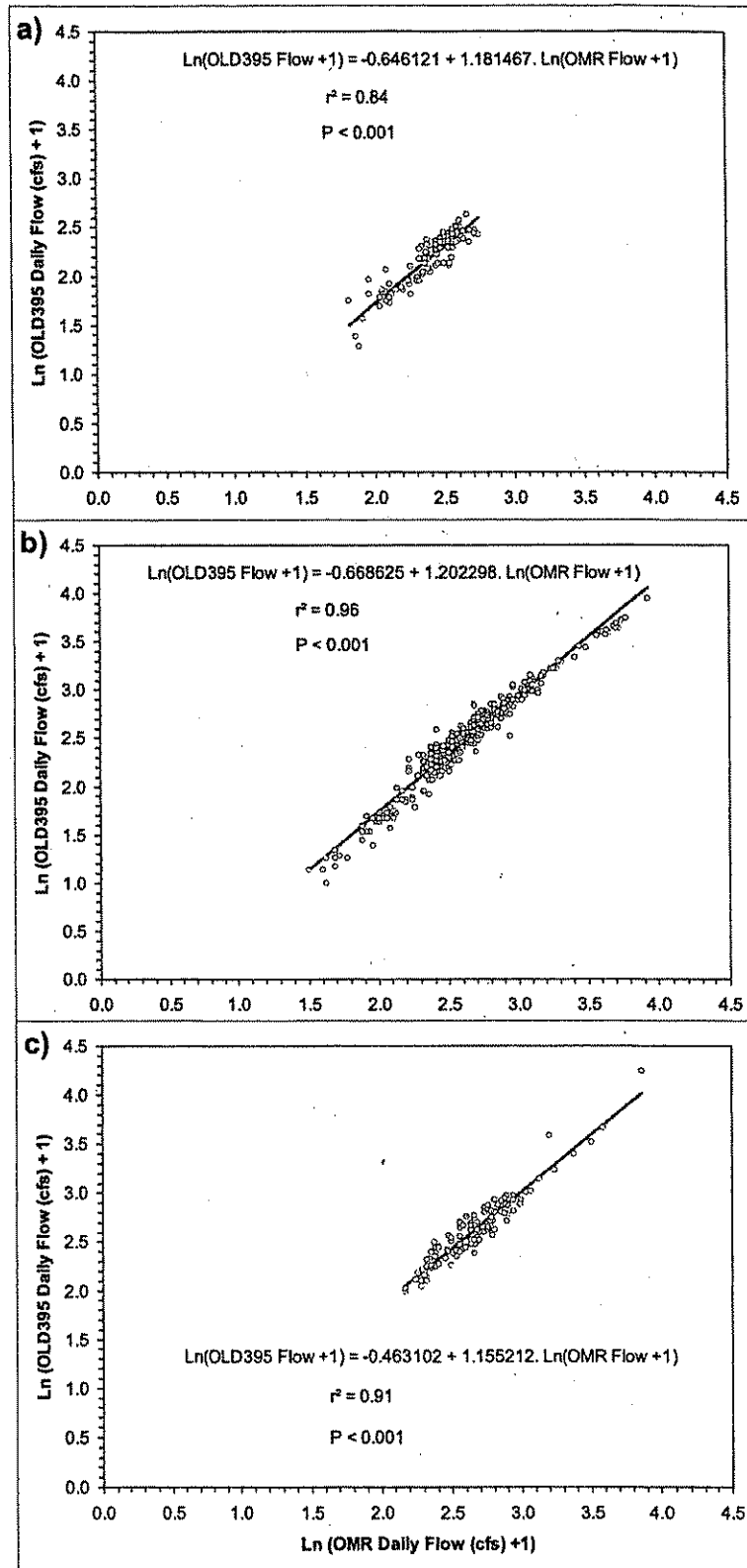


Figure 36. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance ( $P$ ) of the linear regression used to reconstruct OLD395 gage daily flows from OMR gage daily flows during April for (a) dry, (b) normal, and (c) wet runoff years.

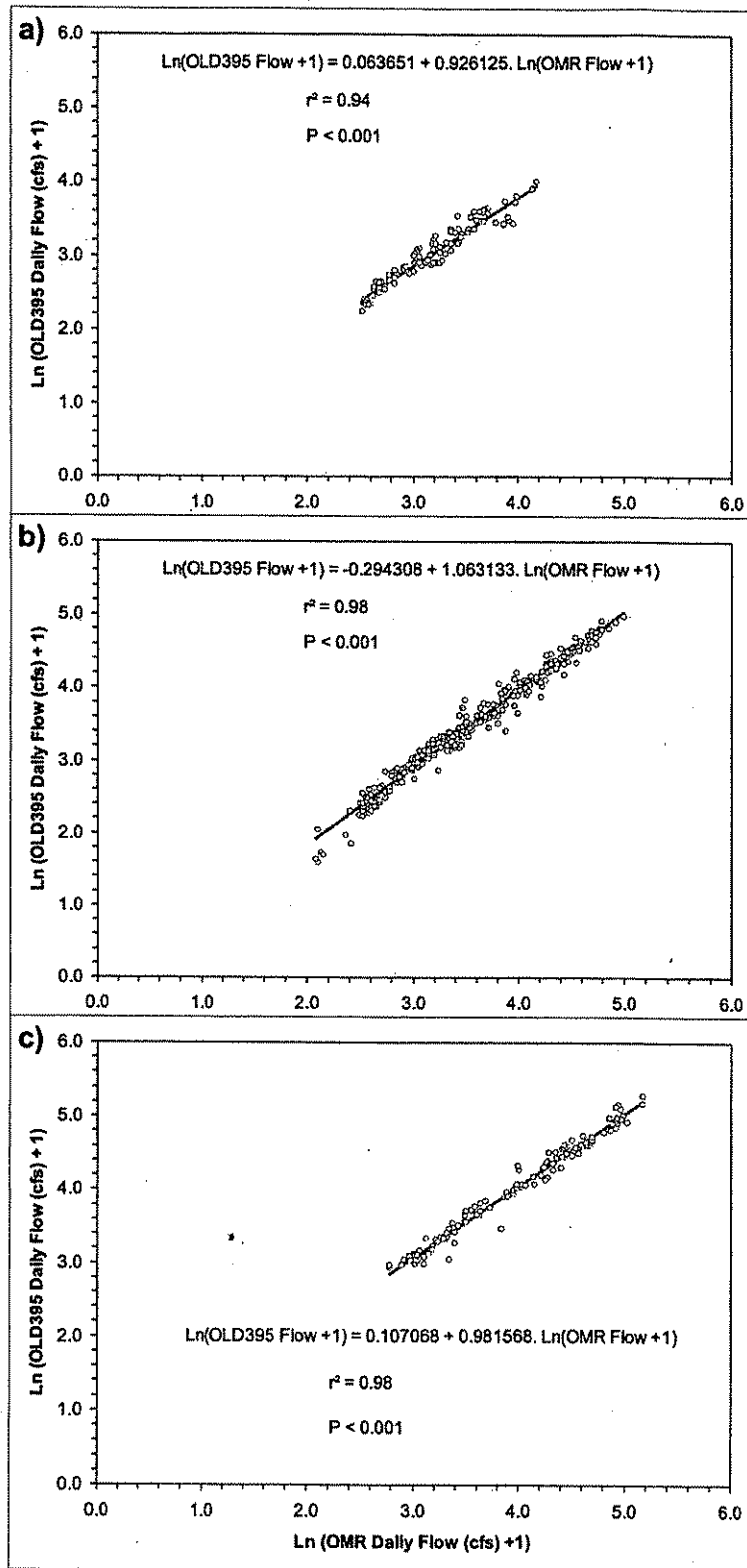


Figure 37. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance (P) of the linear regression used to reconstruct OLD395 gage daily flows from OMR gage daily flows during May for (a) dry, (b) normal, and (c) wet runoff years.

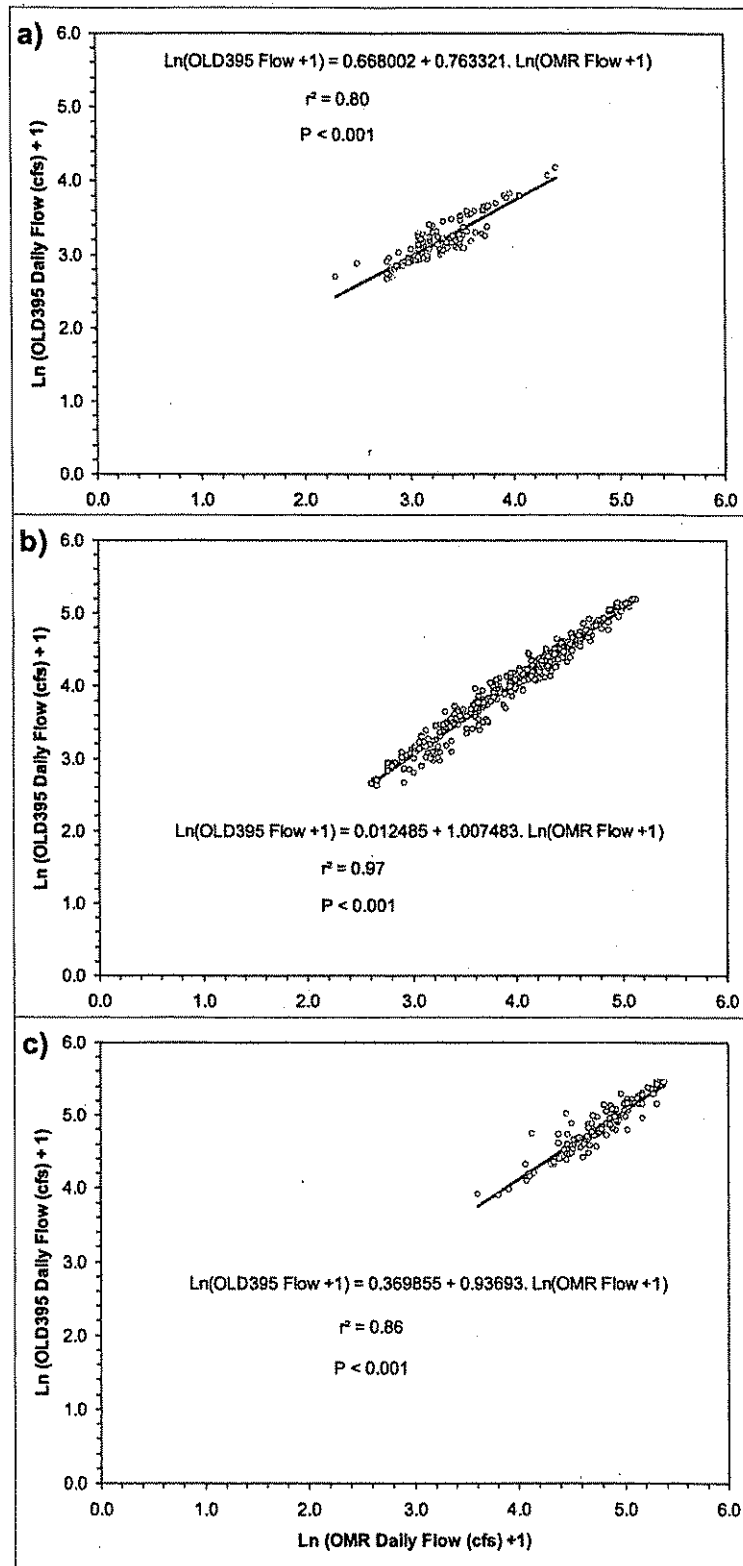


Figure 38. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance (P) of the linear regression used to reconstruct OLD395 gage daily flows from OMR gage daily flows during June for (a) dry, (b) normal, and (c) wet runoff years.

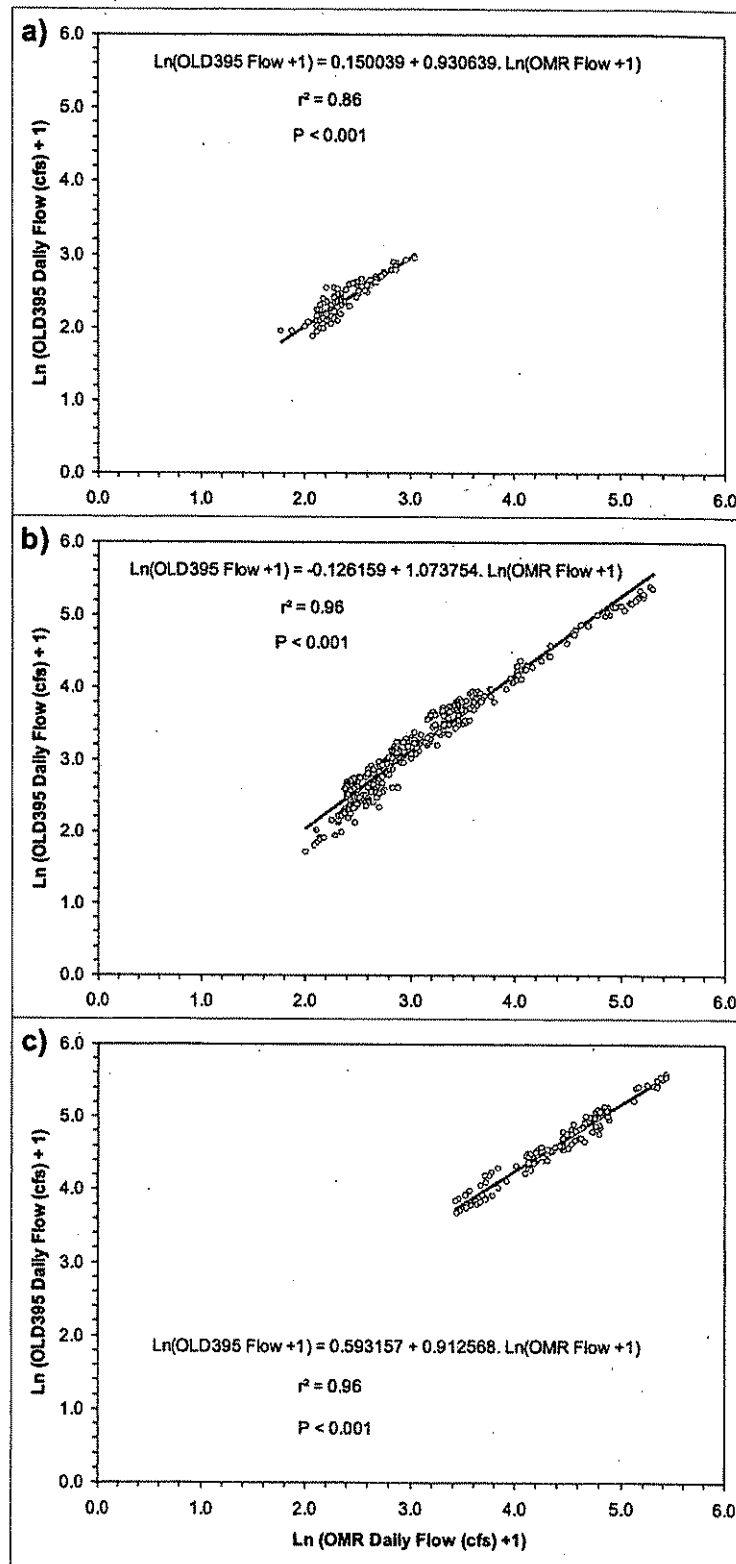


Figure 39. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance ( $P$ ) of the linear regression used to reconstruct OLD395 gage daily flows from OMR gage daily flows during July for (a) dry, (b) normal, and (c) wet runoff years.

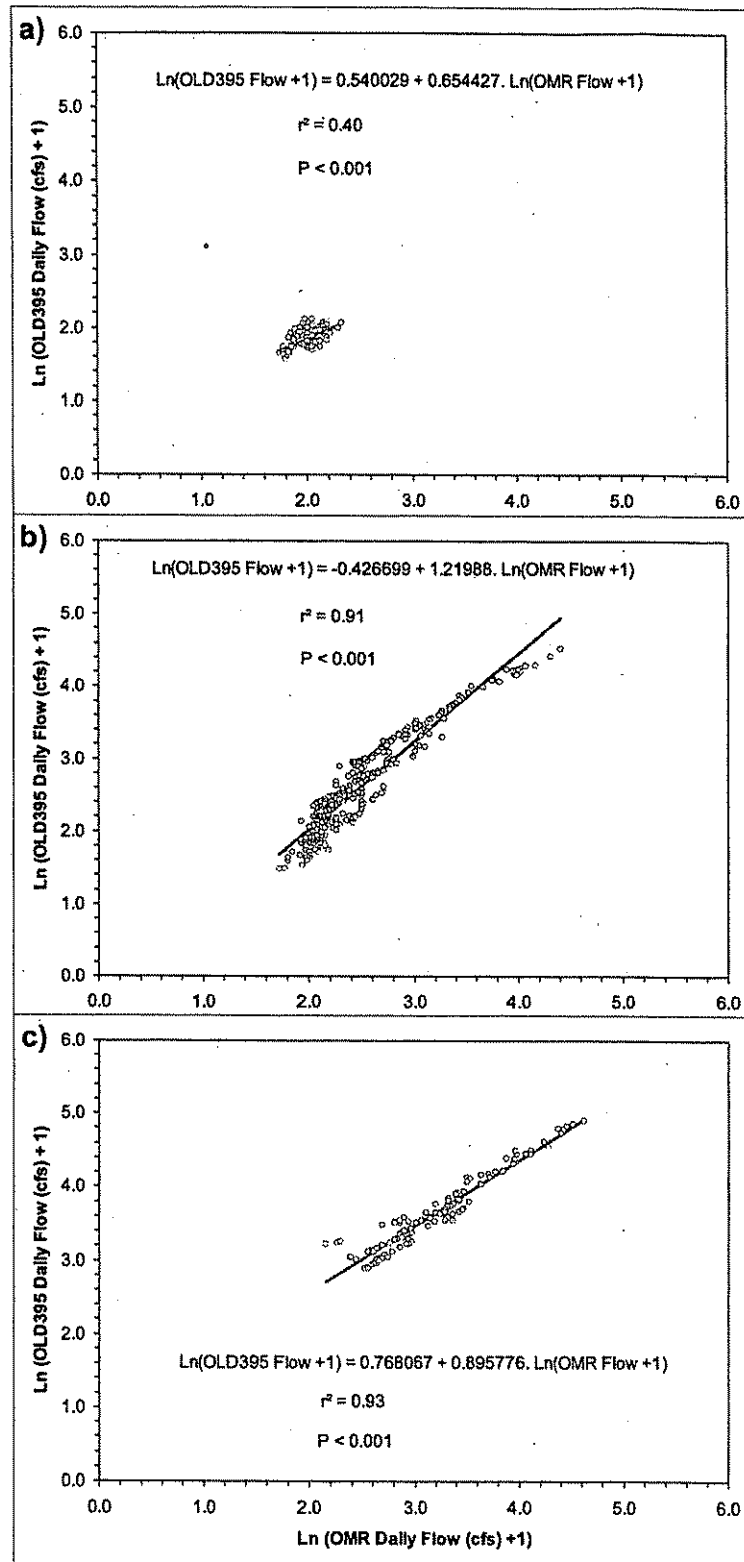


Figure 40. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance ( $P$ ) of the linear regression used to reconstruct OLD395 gage daily flows from OMR gage daily flows during August for (a) dry, (b) normal, and (c) wet runoff years.



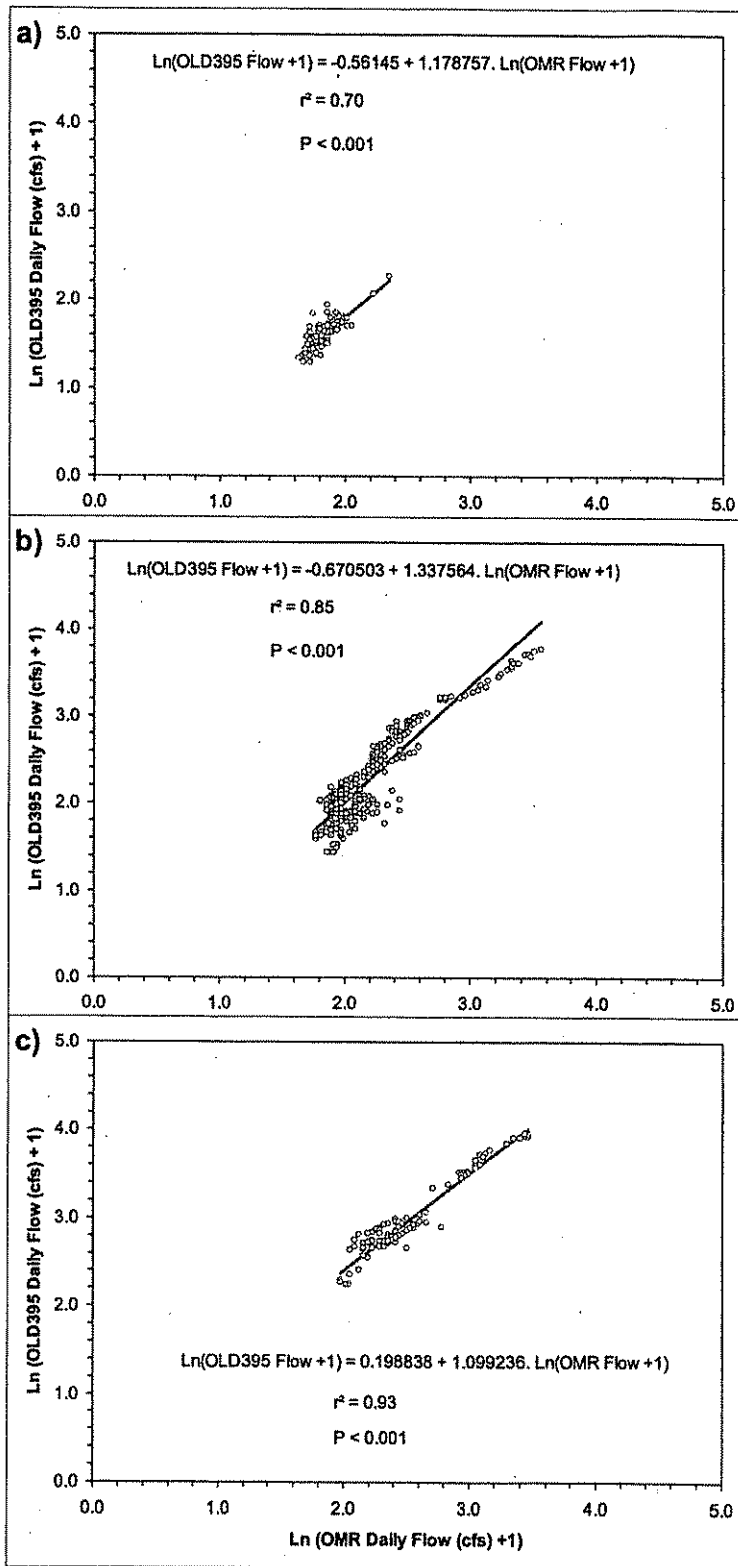


Figure 41. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance (P) of the linear regression used to reconstruct OLD395 gage daily flows from OMR gage daily flows during September for (a) dry, (b) normal, and (c) wet runoff years.

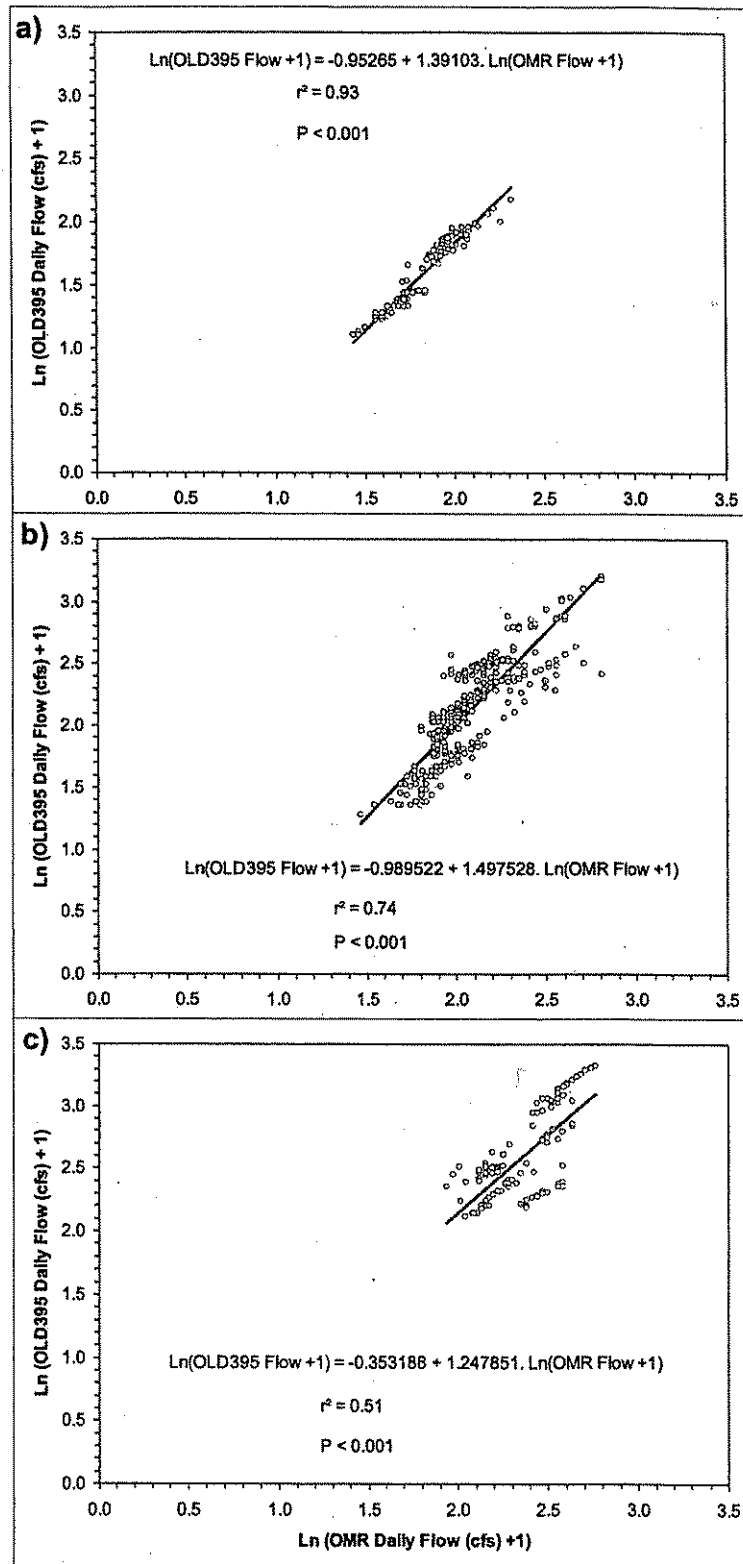


Figure 42. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance (P) of the linear regression used to reconstruct OLD395 gage daily flows from OMR gage daily flows during October for (a) dry, (b) normal, and (c) wet runoff years.

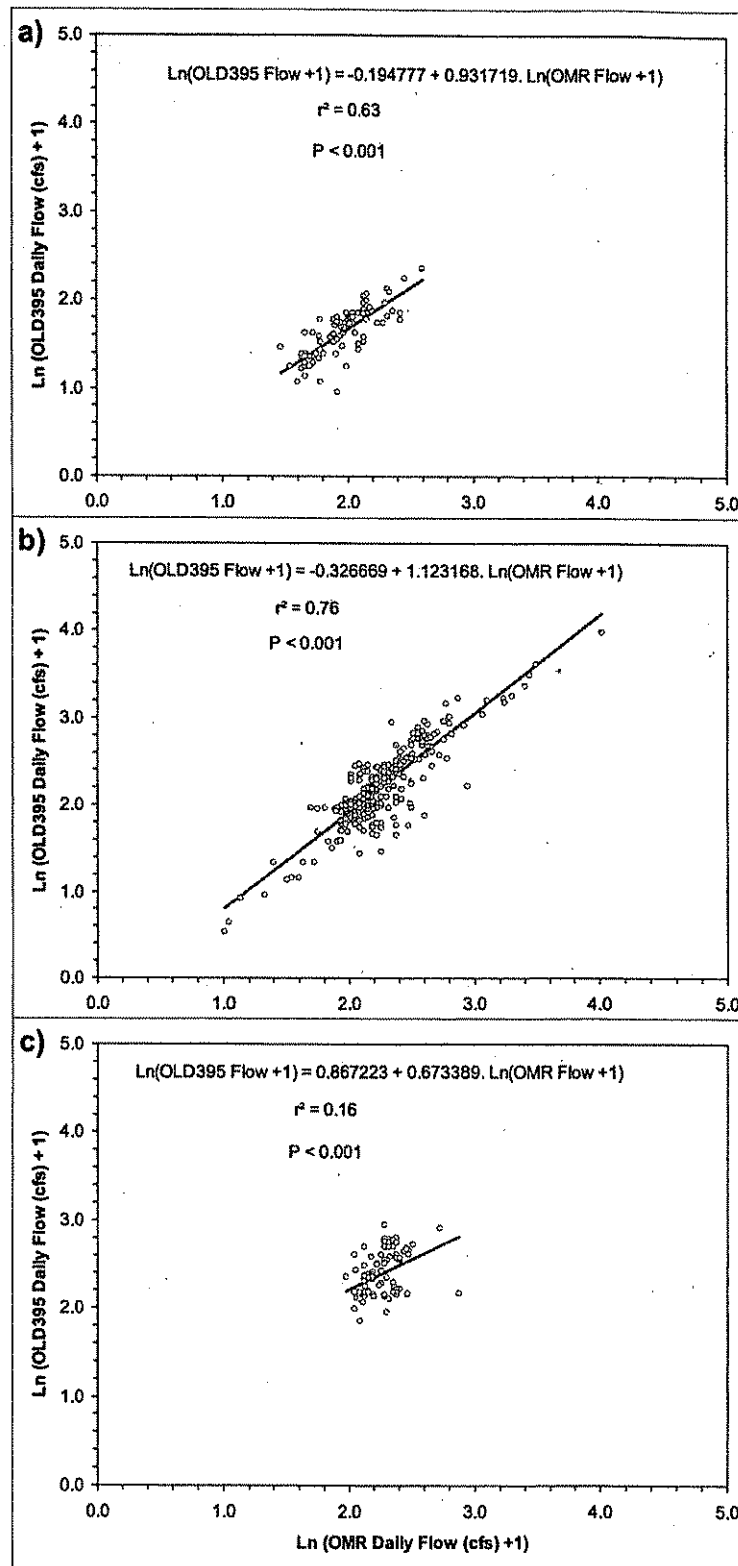


Figure 43. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance (P) of the linear regression used to reconstruct OLD395 gage daily flows from OMR gage daily flows during November for (a) dry, (b) normal, and (c) wet runoff years.

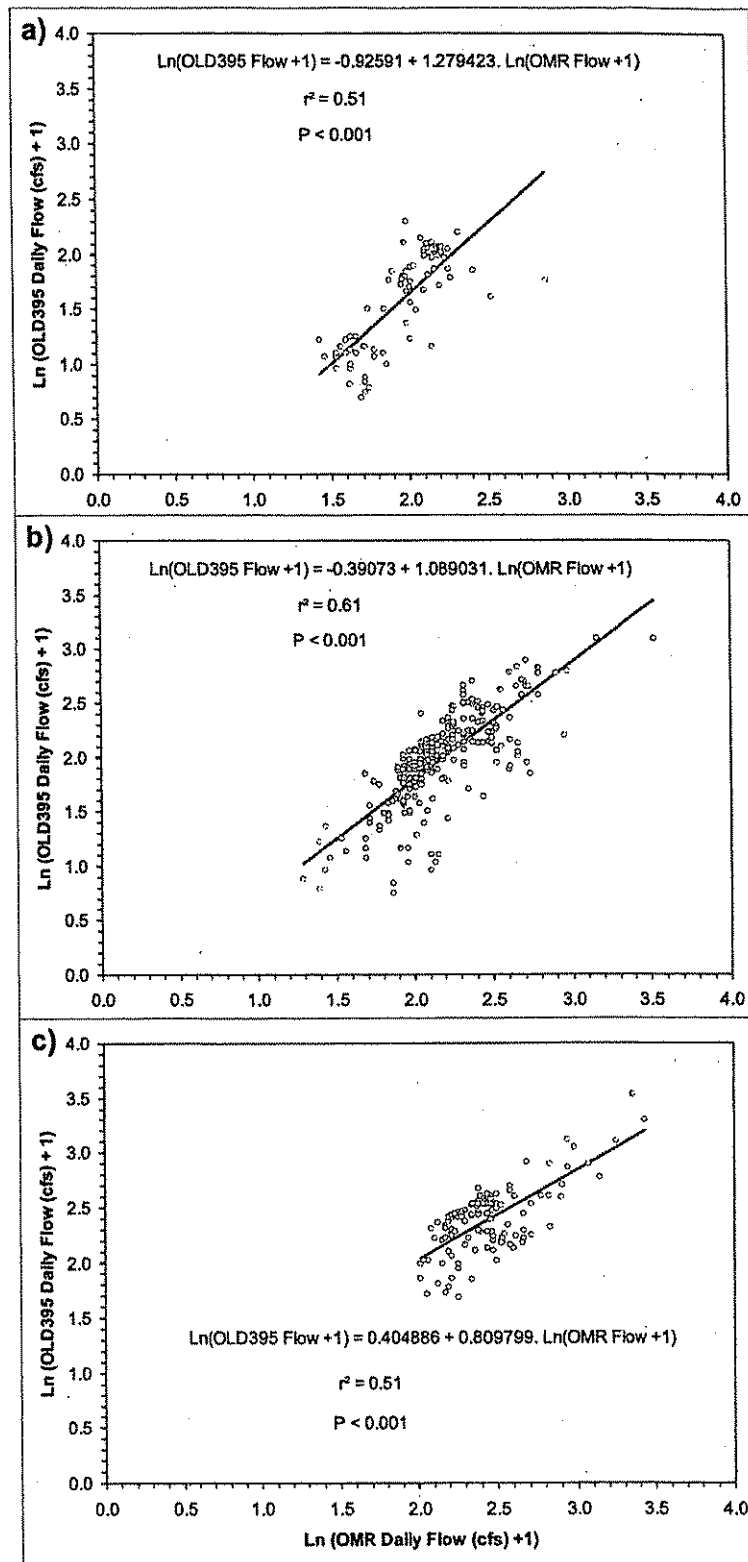


Figure 44. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance ( $P$ ) of the linear regression used to reconstruct OLD395 gage daily flows from OMR gage daily flows during December for (a) dry, (b) normal, and (c) wet runoff years.

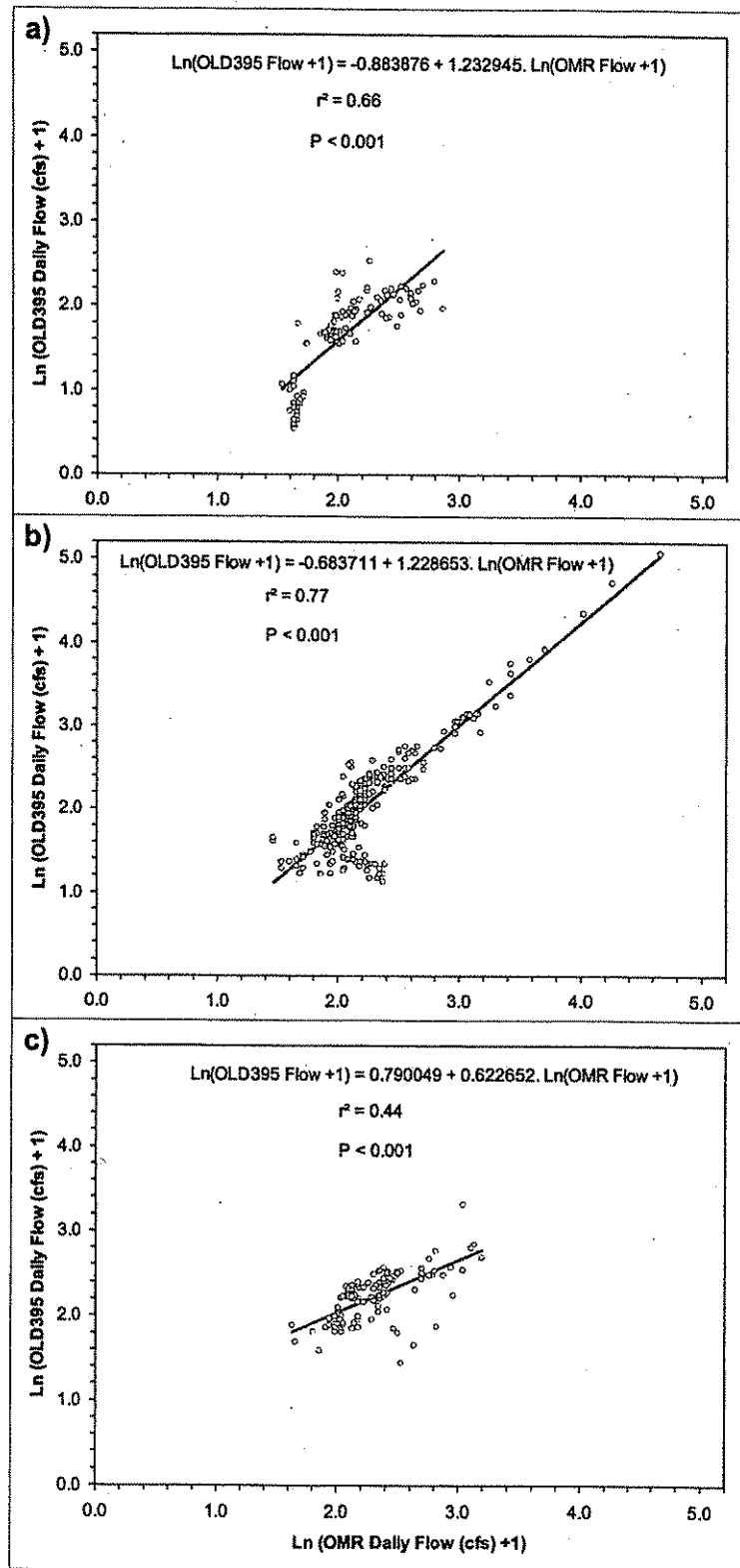


Figure 45. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance (P) of the linear regression used to reconstruct OLD395 gage daily flows from OMR gage daily flows during January for (a) dry, (b) normal, and (c) wet runoff years.

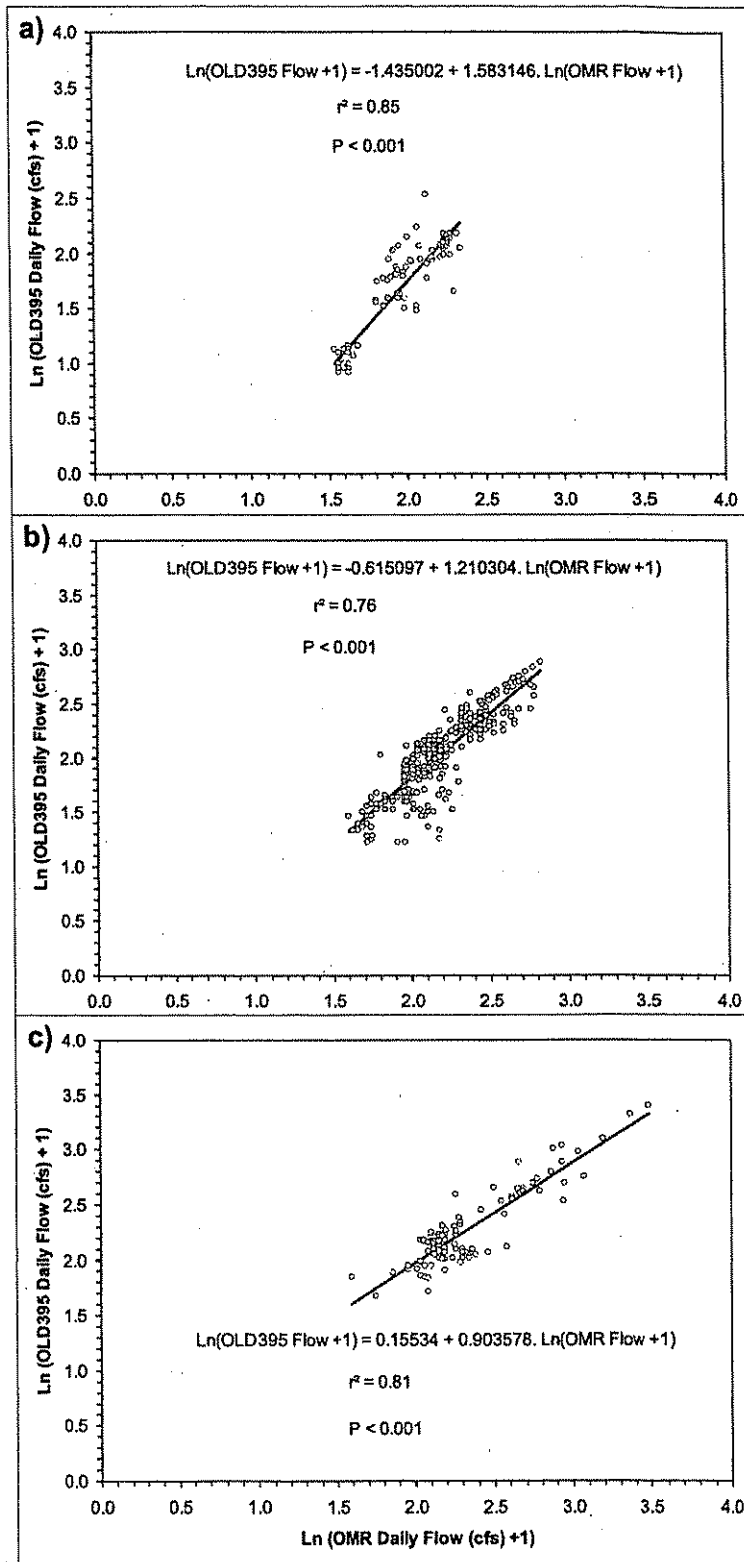


Figure 46. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance ( $P$ ) of the linear regression used to reconstruct OLD395 gage daily flows from OMR gage daily flows during February for (a) dry, (b) normal, and (c) wet runoff years.

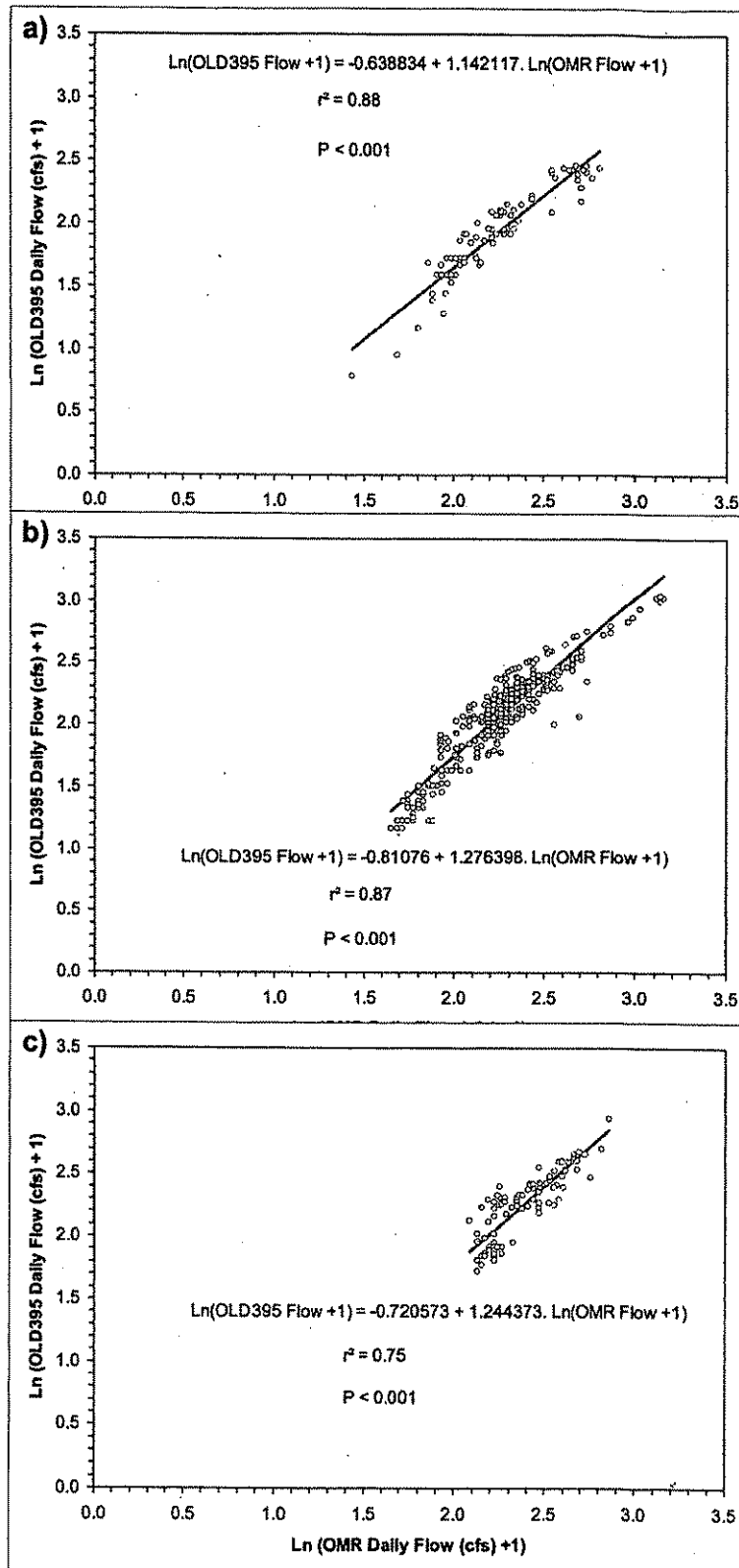


Figure 47. Intercept and slope parameters, coefficient of determination ( $r^2$ ), and level of significance (P) of the linear regression used to reconstruct OLD395 gage daily flows from OMR gage daily flows during March for (a) dry, (b) normal, and (c) wet runoff years.

ORAL TESTIMONY BY  
LOS ANGELES DEPARTMENT OF WATER AND POWER

**"IMPACT OF TREATING STATE PROJECT WATER  
AT THE LOS ANGELES AQUEDUCT FILTRATION PLANT"**

... PRESENTED AT

STATE WATER RESOURCES CONTROL BOARD PUBLIC HEARING

Consideration of a Draft Water Quality Control Plan  
for Salinity and Temperature in the  
Bay-Delta Estuary

THE WATER QUALITY PHASE OF THE BAY-DELTA  
ESTUARY PROCEEDINGS

August 7, 1990

Irvine, California

My name is Bruce Kuebler. I am the Assistant Chief Engineer - Water, and also the Engineer in Charge of the Water Quality Division of the City of Los Angeles Department of Water and Power (LADWP). I am responsible for ensuring that the residents and businesses of Los Angeles receive a safe, reliable supply of water. I am presently serving on the American Water Works Association's Disinfection/Disinfection By-Products Technical Advisory Workgroup.

The Los Angeles Department of Water and Power provides water to over 3.4 million people in the City of Los Angeles. Approximately 700,000 acre feet of water is needed each year. We have historically relied upon three sources of supply: our local groundwater supply, the Owens Valley - Mono Basin, and the Metropolitan Water District of Southern California (MWDSC).



In 1990, as much as 65% of our daily supply has come from the Metropolitan Water District. At times, we treat State Project water, one of MWDSC's sources of supply, at the Los Angeles Aqueduct Filtration Plant, a state-of-the-art water treatment plant which utilizes ozone and direct filtration. It has a capacity of 600 mgd (930 cfs), and was completed in 1986 at a cost of \$146 million.

When over 50% of the influent flow to our Los Angeles Aqueduct Filtration Plant comes from the State Water Project, warm season trihalomethane (THM) levels are 59 ug/l in our distribution system, more than double our normal levels. Normally, warm season THM levels are 28 ug/l when our filtration plant treats our Los Angeles Aqueduct water from the Owens Valley-Mono Basin. These numbers are averages during warm weather months. Daily THM levels with State Project water have been as high as 68 ug/l.

We attribute this sizeable increase in THM to the higher bromide content of State Project water. With State Project water, 93% of the THM content contains bromide. With our Los Angeles Aqueduct water, only 57% of the THM contain bromide.

More importantly, the 59 ug/l THM level generated when State Project water is treated at our filtration plant is above the expected levels at which EPA will set the new standard, 25-50 ug/l.

Chloramines have been utilized successfully by some utilities as an alternative disinfectant to chlorine to control THMs. We have had difficulty in achieving adequate disinfection when chloramines have been used, and find this alternative treatment undesirable, although we are continuing to study this alternative. Furthermore, chloramines in our large open distribution reservoirs may actually accelerate algal growth, which can lead to higher THM levels, as well as aesthetically unpleasant water.

Clearly, State Project water, when treated at a full scale state-of-the-art treatment plant using ozone and direct filtration, is unable to meet the future EPA drinking water standards for THMs. Better source water quality, i.e., lower bromides in State Project water, combined together with state-of-the-art treatment, is essential to meeting these future standards.

We want to emphasize one key point. These THM values reflect only the impact when 50% or more of the water being treated at our filtration plant comes from the State Water Project. It is highly probable that even more State Project water will be treated in the future if the availability of our other sources of supply become more restricted. Litigation regarding the availability of water from our Owens Valley-Mono Basin continues. Also, the availability of our local groundwater supply continues to be restricted by the presence of organic chemicals. If even more State Project water is treated at our filtration plant, THM levels may be considerably

more than twice our normal levels, and may impact our ability to even meet the current THM standard of 100 ug/l.

Our Recommendation:

We recommend that the Board adopt the Delta Municipal and Industrial Workgroup's recommendation of establishing a 50 mg/l chloride water quality objective, when feasible, for Delta Municipal and Industrial water supply intakes for the purpose of maintaining bromide levels below 0.15 mg/l.

Offstream storage facilities and other feasible solutions should be studied to help determine a strategy to best meet this recommended 50 mg/l chloride level.

This concludes my oral comments. Additional written testimony is being provided as well. Thank you for the opportunity to present our agency's comments to you.

WRITTEN TESTIMONY

BY

LOS ANGELES DEPARTMENT OF WATER AND POWER

PRESENTED AT STATE WATER RESOURCES CONTROL BOARD  
PUBLIC HEARING

Consideration of a Draft Water Quality Control Plan  
for Salinity and Temperature in the  
Bay-Delta Estuary

THE WATER QUALITY PHASE OF THE BAY-DELTA  
ESTUARY PROCEEDINGS

August 7, 1990

Irvine, California

The following comments are in response to the Notice of Public Hearing, dated June 19, 1990, for this Plan and are in addition to our oral testimony.

The Los Angeles Department of Water and Power recognizes the difficulty that the State Water Resources Control Board has in developing a water quality control plan for the San Francisco Bay/Sacramento - San Joaquin Delta Estuary. Protecting the environment while trying to satisfy agricultural, municipal, and industrial needs is difficult, especially in dry years.

More recently, drinking water quality considerations have compounded the difficult problem of establishing an equitable balance. For municipal users of the Delta, such as ourselves (through deliveries from the Metropolitan Water District of Southern California), the quality of the Delta's water will significantly affect our ability to meet more and more stringent drinking water quality standards. The distribution of water in the Delta cannot be based solely on quantity considerations any longer.

Clearly, the Board is faced with difficult decisions to decide what is the best plan for the Delta to satisfy all beneficial uses and users.

For your consideration, we offer the following comments to help you understand the needs of the Los Angeles Department of Water and Power:

Table 2. THM Levels in Los Angeles Distribution System  
When No State Project Water is Treated at LAAFP

Location: 6 miles from LAAFP  
Flow condition: LA-25=0, LA-35T=0

Date	CHCl3	CHCl2Br	CHClBr2	CHBr3	TTHM (ug/l)	% MWD
4/20/88	8.2	6.8	7.2	0.6	22.8	0.0
4/21/88	7.9	6.4	6.0	0.4	20.7	0.0
4/22/88	7.2	5.8	5.5	0.4	19.0	0.0
5/2/88	13.0	6.6	5.0	0.3	24.8	0.0
5/3/88	23.3	12.1	5.0	0.2	40.5	0.0
5/4/88	20.6	9.7	3.2	0.1	33.6	0.0
5/5/88	20.8	10.2	9.3	0.5	40.8	0.0
5/6/88	18.6	9.5	3.0	0.3	31.4	0.0
5/9/88	21.0	10.6	3.6	0.0	35.2	0.0
5/19/88	9.5	7.0	8.1	1.0	25.6	0.0
5/16/89	13.0	7.7	5.2	0.6	26.5	0.0
5/17/89	9.5	7.3	5.9	0.9	23.6	0.0
5/18/89	13.0	7.6	5.5	0.8	26.9	0.0
5/19/89	8.9	6.8	5.8	1.0	22.5	0.0
5/22/89	5.5	4.0	4.1	0.7	14.3	0.0
9/21/89	6.0	9.6	9.5	1.4	26.5	0.0
9/22/89	5.8	11.0	11.0	1.3	29.1	0.0
9/25/89	9.2	14.0	13.0	1.4	37.6	0.0
9/26/89	8.0	14.0	13.0	1.3	36.3	0.0
AVE	12.0	8.8	6.8	0.7	28.3	
% of TTHM	42.6	31.0	24.0	2.5	100.0	
% of TTHM Brominated					57.4	

**Letter B1**

Mr. Martin L. Adams  
Water Operations Division  
Los Angeles Department of Water and Power  
111 North Hope Street  
P.O. Box 51111  
Los Angeles, CA 90051-5700

Response to Comment B1 - 1

As a matter of clarification and as more particularly set forth at pages 1-6 to 1-11 of the Draft EIR, the District has been diverting since 1997 consistent with the fishery bypass flow requirements which are a part of the proposed project (with the exception of the proposed additional year-round requirement of 4 cfs at the OLD 395 Gage). Since 1997, the point of compliance for such requirements has been the District's OMR Gage, which is also a part of the proposed project. Therefore, in terms of the fishery bypass flow requirements and the compliance point, the only difference between the proposed project and what has been in existence since 1997 is that the District now proposes an additional requirement of a 4 cfs year-round fishery bypass flow requirement to be measured at the OLD 395 Gage. The Draft EIR fully addresses the proposed project's potential impacts to water quality in Chapter 5 of the Draft EIR, the potential interaction of groundwater and surface water in Chapter 4, potential impacts to hydrology in Chapter 4, and potential impacts to the fishery in Chapter 6. As explained at page 1-12 of the Draft EIR, the fishery bypass flow requirements were developed to protect the Mammoth Creek fishery and have no relevance to the water-right claims of downstream diverters. The proposed fishery bypass flow requirements stem from a 1988 order of the SWRCB in temporary water-right Permit 20250 that the District study and determine flow requirements to protect instream beneficial uses, and are a result of a collaborative effort with California Trout and the California Department Fish and Game.

Response to Comment B1 - 2

The Draft EIR evaluates the proposed project's potential impacts to flow availability below the OLD 395 Gage which is above the diversion points of the water right claimants mentioned by the commenter. (See pages 4-32 to 4-33 of the Draft EIR.) The Draft EIR concluded at the top of page 4-33 that potential impacts to Mammoth Creek hydrology at the OLD 395 Gage location would be less than significant under the proposed project compared to the Existing Condition.

The commenter contends that the District should have evaluated whether or not the proposed project (being the fishery bypass flow requirements) would impact its water right claims and those of other downstream diverters pertaining to Mammoth Creek, Hot Creek, and the Owens River and their tributaries. No authority is provided that such evaluation is required under CEQA.<sup>2</sup> Furthermore, such an evaluation far exceeds the scope of this EIR for several reasons.

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<sup>2</sup> The commenter cites the California Supreme Court Case of Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova (2007) 40 Cal. 4<sup>th</sup> 412, for the propositions that the District's EIR must consider downstream water right claims, and that the District's EIR must contain a proper analysis of a reliable water source. The case does not support either proposition and is inapposite to the present situation. The case involved the approval of a significant land development project and whether or not

First, as noted above, the fishery bypass flow requirements were developed pursuant to a 1988 SWRCB order issued to the District that it evaluate what flows would be necessary to protect instream, not out-of-stream beneficial uses. The latter has no relation to the former. Further, a SWRCB decision on the former will in no way affect whatever rights the downstream diverters have to the waters of the subject watercourses, including but not limited to the priorities of any such rights.

Second, to perform the requested water right impact analysis would require an analysis of the hydrology of Mammoth Creek, Hot Creek, the Owens River and their tributaries. Such would be necessary to determine the amount of water available for appropriation and instream beneficial uses. There would have to be an identification of the various claimants to the waters of these watercourses; and their rates and amounts of diversion, seasons of diversion, purposes of use and places of use would have to be ascertained. Issues of historical use, non-use, and waste and unreasonable use and unreasonable method of use would have to be addressed. The needs of instream beneficial uses would have to be established. Even the relative priority of the various claims would need to be determined as there undoubtedly would be issues of preference of use, area of origin, public trust and other pertinent considerations. Such is beyond the province of the District. Rather, such assessments and determinations are more appropriately addressed in a basin-wide adjudication either through the courts or a SWRCB statutory adjudication pursuant to Water Code sections 2500, *et seq.*, which would be extremely time-consuming and costly. This proceeding, to determine the long-term fishery bypass flow requirements for Mammoth Creek, should not be turned into such an adjudication.

Lastly, the commenter has not demonstrated any information that the fishery bypass flow requirements which have been in effect since January of 1997 have adversely affected its exercise of its water rights, or that such requirements coupled with the added year-round 4 cfs fishery bypass flow requirement measured at the OLD 395 Gage will injure the commenter in the future. Moreover, if in the future the commenter believes that District diversions under the fishery bypass flow requirements are injurious to its water rights, it will not be without a remedy. For example, it could pursue a judicial adjudication of the relative rights of it, the District, and any others that it feels are pertinent to the dispute.

As a matter of clarification, the Mono County Superior Court permanent injunction referenced near the top of page 3 of the commenter's letter was later amended on July 24, 1967, to provide that the riparian water rights of the plaintiffs (Jess W. Chance, *et al.*) were subordinate to those of the District under District water right Permit 11463 (License 12593). The Amended Judgment was entered pursuant to an Agreement for Settlement of Water Rights Dispute between Chance and the District, dated July 17, 1967 ("Chance/District Settlement Agreement"). A copy of the Court's Amended Judgment and the Chance/District Settlement Agreement, together with the associated Stipulation and Order, are found at Appendix A of the Final EIR. In a related action and pursuant to the Chance/District Settlement Agreement, the SWRCB, on June 1, 1978, ordered the removal of Term 8 from Permit 11463 which provided that, "At such times during August and September of each year that flow, in Mammoth (Hot) Creek at or near U.S.

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the EIR for such project adequately evaluated the water supply available for the project. On the other hand, the District's proposed project concerns the establishment of long-term fishery bypass flow requirements for Mammoth Creek.

Highway 395 Crossing in Section 32, T3S, R28E, MDB&M, does not exceed 11.0 cubic feet per second, permittee shall, upon demand of Protestants Chance, release into Mammoth Creek from a nontributary source at any point between Twin Lakes and said highway crossing sufficient water to provide a flow of 11.0 cubic feet per second at said highway crossing; provided, however, permittee shall not be required to release water into Mammoth Creek at a rate in excess of that being diverted by permittee from Twin Lakes.”

Finally, the commenter laments that the “SWRCB may have given away a portion of the City’s water rights” in approving the three appropriative rights for the District. But, the commenter does not mention that it failed to protest any of the District’s three water right applications (Application 12079, License 5715; Application 17770, License 12593; and Application 25368, Permit 17332).

#### Response to Comment B1-3

The Draft EIR at pages 4-32 and 4-33 contains a comparison and analysis of the flows occurring at the OLD 395 Gage under the Existing Condition and under the proposed project. The Draft EIR states at page 4-32: “Flows under the Proposed Project Alternative are somewhat higher (typically about 0.5 to 2 cfs) than those under the Existing Condition over portions or most of the range of flows during May, July, and August. From September through March and during June, the flow distributions are similar under the Proposed Project Alternative and the Existing Condition. During April, the flow distributions oscillate about each other.” The above comparisons and analyses are based on outputs from the MCWD Model. The Model includes extensive analyses of 20 years of daily stream gage data from both the OMR and OLD 395 gages. Regression equations to estimate accretion and depletion conditions were developed for each calendar month, and for each hydrologic year type (wet, dry, normal). The MCWD Model incorporates variations in accretion and depletion within the reach of Mammoth Creek between the OMR Gage and OLD 395 Gage.

Contrary to the commenter’s statement, the fishery bypass flow requirements under the proposed project are not lower than those under the Existing Condition. Rather, they are the same, except that the proposed project contains the additional year-round 4 cfs fishery bypass flow requirement measured at the OLD 395 Gage. Table 2-2 at page 2-14 of the Draft EIR shows that the proposed project implements the same monthly fishery bypass flow requirements using the same compliance measuring point as the Existing Condition, except as noted.

#### Response to B1-4

The Draft EIR at pages 1-5 and 1-6 fully explains why Hot Creek downstream of the USGS Flume Gage and the upper Owens River were excluded from the project area. In fact, at a meeting on December 17, 2009, at the Bishop offices of commenter, a representative of commenter, Gene Coufal, stated that the boundary of concern and evaluation should be the confluence of Mammoth Creek and Hot Creek.

#### Response to Comment B1-5

The Existing Condition is the baseline physical condition against which the potential impacts of the proposed project are evaluated (see pages 2-1 and 3-5 of the Draft EIR; see also CEQA Guidelines section 15125 (a)). The proposed project would provide flows in Mammoth Creek that are equal to, or higher than, those that occur under the Existing Condition. That is in part



because the fishery bypass flow requirements under the proposed project are exactly the same as those under the Existing Condition, except for the additional year-round 4 cfs requirement to be measured at the OLD 395 Gage (see pages 1-1, 1-9, 1-10 and 2-2 of the Draft EIR). Chapter 4 of the Draft EIR on hydrology describes that the proposed project could result in flows that are higher than those under the Existing Condition because of the additional 4 cfs requirement at the OLD 395 Gage.

Response to Comment B1 - 6

See Responses to Comments B1-3 through B1-5.

Response to Comment B1 - 7

See Response to Comment B1-2.

Response to Comment B1 - 8

See Response to Comment B1 - 2.

Response to Comment B1 - 9

The District's proposed fishery bypass flow requirements do not represent a change in point of diversion, place of use or purpose of use. As a consequence, Water Code section 1702 does not apply to such proposal. Rather, subdivision (e) of section 791 of Title 23 of the California Code of Regulations applies.

Response to Comment B1 - 10

See Response to Comment B1 - 2.

Response to Comment B1 - 11

This comment continues the erroneous assumption made in prior comments that the fishery bypass flow requirements under the proposed project will result in decreased Mammoth Creek flows from the Existing Condition. Please refer to Responses to Comments B1 - 3 and B1 - 5 which explain that the fishery bypass flow requirements under the proposed project are the same as those under the Existing Condition with an additional fishery bypass flow requirement of a year-round 4 cfs measured at the OLD 395 Gage. In addition, the Draft EIR discussed water temperature data for Mammoth Creek and concluded that ambient air temperatures have a greater influence on water temperatures than flow rates, that the project alternatives relative to the Existing Condition would not result in significantly lower flows during the summer in the lower creek section, and the Existing Condition has resulted in the fishery resources of Mammoth Creek being in good condition. The discussions and analyses are described at pages 6 - 7 through 6 - 9 and page 5-11 of the Draft EIR.

See also Section 5.1.2.4 at pages 5-11 through 5-14 of the Draft EIR for a detailed summary of the studies indentifying the influence of the Hot Creek Fish Hatchery, natural constituents and thermal input from the Hot Creek Springs complex, as the dominant factors determining both water temperature and constituent loading influencing algae growth. See Section 5.3.3.1 at pages 5-26 and 5-27 of the Draft EIR for a detailed discussion of the relative influence of Mammoth Creek flows on Hot Creek water quality.

Response to Comment B1 - 12

See Responses to Comments B1 - 4, B1 - 5 and B1 - 11. In this comment, the commenter acknowledges that the water from the Owens Valley/Mono Basin is of "high quality." As demonstrated above, flows in Mammoth Creek at the OLD 395 Gage will be somewhat higher or similar under the proposed project compared to the Existing Condition (see Response to Comment B1 - 3). As a consequence, there should be no change to the "high quality" of the water.

Response to Comment B1 - 13

The Draft EIR at pages 4-16 through 4-21 contains an extensive discussion of the various studies that have been conducted over the years by the District and others concerning the potential interaction between District groundwater pumping and streamflows. The District's hydrogeologists have concluded on the basis of numerous studies that District groundwater pumping does not affect Mammoth Creek flows or the headsprings to Hot Creek. Based on his various studies and approximately 18 annual groundwater monitoring reports, Ken Schmidt, one of the District's hydrogeologists, has concluded that the cone of depression due to pumping of District wells does not extend to the east of two District monitor wells (see page 4-20 of the Draft EIR). The groundwater modeling work by Wildermuth (2009) extended to the eastern edge of the groundwater basin, well east of the Town. The commenter has presented no information indicating that District groundwater pumping may affect Hot Creek flows. Please also see the Response to Comment A3 - 3 regarding the hydrogeologic studies in the Mammoth Lakes Basin.

Response to Comment B1 - 14

The comment claims that the Draft EIR does not present a water balance for the basin; however, a discussion of District efforts to develop a Mammoth Basin model is presented at page 4-12 of the Draft EIR. The model included inflow and outflow components in the model development.

Response to Comment B1 - 15

See Response to Comment B1 - 13. The District does not propose any new well development as part of the proposed project. If and when the District proposes to develop new production wells, it will evaluate the effects of pumping such wells on Mammoth Creek flows.

Response to Comment B1 - 16

The District's groundwater monitoring program includes shallow and deep monitoring wells along Mammoth Creek. Please refer to the annual Ken Schmidt & Associates reports (1992 - 2010) available on the District's website, [www.mcwd.dst.ca.us](http://www.mcwd.dst.ca.us).

Response to Comment B1 - 17

To repeat, the fishery bypass flow requirements and point of compliance under the proposed project are the same as those that have been in existence since 1997, except for the lone additional requirement previously noted. See also Response to Comment B1 - 2.

Response to Comment B1 - 18

See Responses to Comments B1 - 1, B1 - 3 and B1 - 5. As set forth at page 4-32 of the Draft EIR, the proposed project and Existing Condition demonstrate generally similar flow magnitude, frequency, duration, timing and rate of change at the OLD 395 Gage.

Response to Comment B1 - 19

A detailed explanation for how the Bypass Flow Requirements Alternative No. 2 was developed and the basis for it appears at pages 2-13 through 2-19 of the Draft EIR. See also Response to Comment B1 - 2.

Response to Comment B1 - 20

The Draft EIR did not rely on an average year or on a 20-year average condition to evaluate potential impacts to fish and other creek dependent resources, as suggested by the comment. (See pages 2-13 through 2-19 and Chapter 6 of the Draft EIR.) As explained at page 2-13 of the Draft EIR, all three of the collaborative alternatives, including the Proposed Project Alternative, were developed to protect fish in all water year types, including dry runoff years when the District's diversions could have their greatest influence.

Response to Comment B1-21

The District has carried out its responsibility to evaluate the management constraints contained in Permit 17332. These evaluations are the basis of the Draft EIR.

Response to Comment B1 - 22

The comment does not correctly characterize the proposed change to the management constraints. The District is proposing to modify the requirements for daily measurements of Lake Mary inflow to weekly beginning on November 2 and ending on March 31<sup>st</sup>; outside this period, daily measurements would occur. This modification addresses staff safety concerns and collection of data that is minimally useful in the winter.

Response to Comment B1 -23

The provisions of Term 25 of Permit 17332 will be made a part of amended Term 20, except that the District proposes to no longer provide the flow measurements to the United States Forest Service.



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November 2, 2010

**SENT VIA EMAIL**

Irene Yamashita, Public Affairs/Environmental Specialist  
Mammoth Community Water District  
1315 Meridian Blvd.  
PO Box 597  
Mammoth Lakes, CA 93546

Re: Comments on behalf of Dave Wood Ranches to MCWD Draft Environmental Impact Report for Mammoth Creek Fishery Bypass Flow Requirements, Watershed Operation Constraints, Point of Measurement and Place of Use

Dear Ms. Yamashita:

1. Chance Ranch Clearly Has Interested Party Status

Dave Wood Ranches (DWR) has operated the historic Chance Ranch for 30 years. The Chance Ranch contains several miles of Mammoth Creek immediately below MCWD's jurisdiction from where the creek crosses U.S. 395 to its intersection with Hot Creek just below the California Department of Fish and Game hatchery.

Some 20 plus years ago, DWR in coordination with LADWP developed a renowned watershed protection project with riparian protection fencing and cattle management controls along the entire reach of Mammoth Creek on the ranch. Protection of the creek has always been a high priority for our operation. The Chance Ranch has historic water rights dating back to 1893, which are far prior and senior to those of MCWD. (See sections 3.A. and 3.B.) DWR is restricted from irrigating in the spring of the year until the Mammoth Creek bypass flow reaches approximately 10 cfs, and, correspondingly in the summer, DWR has to curtail irrigation when flows fall below that level. Often those flow restrictions critically restrict DWR's irrigation even when DWR has not enjoyed utilization of our full water right allocation. Consequently, our senior water rights are impacted by any upstream increased draw from Mammoth Creek, particularly at these times. DWR is, therefore, the most impacted party by MCWD's recent water use in accordance with the court's imposed "interim bypass flows" and will be further impacted by this proposed additional action which seeks more favorable interim flow limits, and seeks a change in point of measurement.

C1-1

C1-2

It is important to recognize that there are two separate but relevant environmental considerations 1) the existing interim flow regime and 2) the newly proposed amendments.

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DWR has actively participated in this CEQA proceeding and we have made our concerns known to the CEQA consultants and MCWD at many times over the last several years and throughout the consideration of this new proposal. The DEIR (page 1-11) acknowledged that the Chance Ranch participated through this particular collaborative process dating back to 2005.

C1-3

2. MCWD's Water Use – A Pattern of Greed

MCWD partially relies on Mammoth Creek water from Lake Mary for urban water supply pursuant to water licenses issued by the State Board not until 1958 and 1990 (12593 and 5715) and a 1978 permit.

C1-4

3. The Competing Water Rights – Clearly Favor the Chance Ranch

A. Dave Wood Ranches Water Rights

1. The Chance Ranch water rights date back to 1893 and are summarized as follows: (A) Helen M. Gifford, Sept. 29, 1893, for 150 inches in Mammoth Creek (Book "C", Page 88, Pre-emption Claims, Records of Mono County); (B) Helen M. Gifford, Oct. 4, 1893, for 200 inches in Mammoth Creek (Book "C", Page 89, Pre-emption Claims, Records of Mono County); (C) SWRCB – D 904, May 14, 1958, for 11 cfs (Application No. 17770, MCWD); (D) SWRCB – D 917, Jan. 9, 1959, restated 11 cfs for Chance Ranch (Application No. 17814), Inyo National Forest); Application No. S001671. These rights are now administered by LADWP for the favor of DWR on the Chance Ranch.

B. MCWD Water Rights

1. MCWD holds water right licenses to approximately 2 cubic feet per second (cfs) of diversion from Mammoth Creek. License 5715 (1958), with a priority date of September 10, 1947, which permits diversion of 0.039 cfs, during the period May through November. License 121593 (1989) with a priority date of August 13, 1957, permits diversion of 2 cfs from Mammoth Creek on a year-round basis. Neither of these licenses contains a minimum instream flow schedule for release into Mammoth Creek.

C1-5

In 1978, the State Water Board issued Permit 17332, which permits diversion of 3 cubic feet per second from Mammoth Creek's source at Lake Mary during the period January 1 to December 31, and it further permits storage of 660 AFA in Lake Mary during the periods April 1 to June 30 and September 1 to 30. The total permitted diversion from Mammoth Creek under all of MCWD's rights is 2,760 AFA.

4. MCWD Efforts to Increase Water Rights

A. MCWD stream flow schedules are the mechanisms by which the town uses to take more Mammoth water.

Between 1987 and 1990 MCWD applied for and was granted several interim flow schedules, all without proper CEQA review, but in 1990, MCWD commissioned a Beak study of various interim flow designs in an effort to take further water from the creek.

C1-6

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B. MCWD has therefore been on a constant course to increase their take of water from Mammoth Creek. In 1991 MCWD again petitioned the SWRCB to modify their interim flow restrictions and thereby increase the water they can withdraw from Mammoth Creek. The State Board rejected any modification of their water rights or interim flows and issued a cease and desist order against MCWD. (Cease and Desist Order, January 29, 1994.)

The State Water Board ruled that MCWD's operational changes based on their analysis of stream flows violated their permit:

"In 1991 MCWD applied for its fourth temporary permit since 1986. The State Water Board denied the application. Its denial was based on several findings, including Finding 16:

"[Water supply] demand within the District will continue to exceed present supplies over the entire period of study [until 2015]."

[U]nless additional supplies are obtained very soon, the gap between supply and demand will increase rapidly. Failure to close this gap will result in either serious water shortages or the need to reduce demand dramatically, which may produce significant adverse impacts on the local economy as well as potential health and safety problems."

The District has at least three alternative sources of additional water supply available. However, all three of these alternatives have significant drawbacks which could either make them difficult to implement or which may limit their effectiveness as an adequate solution to the District's problem..."

In the State Board's Cease and Desist Order of August 29, 1991 (Findings 18-19), the State Water Board further found and expressed: "A potential for chronic shortages of water supply within the District presently exists and will become more severe each year unless the District obtains additional sources of supply or curtails demand. ¶ Issuance of a temporary permit for the fourth time in five years to deal with a chronic problem would not be in the public interest."

5. MCWD Appeals to Mono County Superior Court to Overturn the State Board Decision

After the State Water Board denied MCWD's request for reconsideration of the C&D Order, MCWD petitioned for a Writ of Mandate to instate the interim flow schedule recommended in the 1991 Beak Report which the State Water Board had expressly rejected.

As to the flow schedule, the Court ruled: "Until such time as the State Board amends Permit 17332 to revise the long-term fishery flow requirements for Mammoth Creek, the District shall not divert water to storage or divert water directly from Mammoth Creek for municipal purposes whenever the mean daily instream flows, measured at the Old Mammoth Road Gage, are less than the following amounts (WR 97-01):

<u>Month</u>	<u>Mean Daily Flow (cfs)</u>
January	6.4
February	6
March	7.8
April	9.8
May	18.7
June	20.8
July	9.9
August	7.2
September	5.5
October	5.5
November	5.9
December	5.9

After being rejected by the State's expert agency on their effort to increase their Mammoth withdrawals, MCWD appealed to the Mono County Superior Court (CIV 11159), which granted the above listed increased interim flow schedule, however, only on an interim basis conditioned on further environmental review and consideration by the State Board.

MCWD conveniently seems to ignore that the court order was expressly to be interim during which time the agency was to engage full State Board and CEQA environmental review to assess the possible impacts the interim standard would have on competing water rights, impacts on stream habitat and fish.

C1-6

The court's writ stated: "IT IS ... ORDERED that the Chief of the Division of Water Rights schedule a hearing at an appropriate time to receive evidence regarding establishment of a long-term instream flow requirements applicable to diversions of water from Mammoth Creek by Mammoth Community Water District." (Mono County Superior Court Case No. CIV11159.)

Even though this water right modification application and the subsequent court action transpired years after the State adopted CEQA (CEQA attaches to such discretionary actions by governmental agencies), this interim flow was not based on any CEQA analysis. The reason for this appears to be because the court anticipated that the agency would fully engage CEQA on a timely basis, and bring this matter back to the State Board. MCWD conveniently took full advantage of the court failing to place a time limit on MCWD completing CEQA and taking the matter back to the State Board and did neither for many years.

A. The State Board's response – frustration, benevolence and rejection

Interestingly, the State Board had the following response to the Court decision.

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"The SWRCB does not believe that the holder of a water right permit or license should be allowed to agree to a particular term at the time of applying for a permit, and then challenge the validity of the term of the permit or license in a later proceeding brought to enforce compliance. In this instance, however, the SWRCB has elected not to appeal the Superior Court judgment regarding instream flow requirements. Rather, the SWRCB believes that the public interest in this case will best be served by focusing on establishing long-term instream flow requirements which will apply to the District's diversions of water under all of its water rights on Mammoth Creek." (SWRCB WR 97-01)

Notwithstanding the State Board's finding that these flows were not in the public interest and that the Board had expressly found that the MCWD was operating with unclean hands, they made the benevolent decision not to appeal this interim flow standard anticipating that MCWD would engage environmental review and bring this matter before the State Board for a proper analysis of flow standards. MCWD, however, did not engage a review of the interim flows impacts on water rights, fish or stream habitats.

C1-6

B. MCWD's action – instead of justifying and perfecting the interim flows they propose to expand their take of Mammoth Creek water

MCWD not only failed to perfect its court ordered interim flow regime, it comes now with proposals to further adjust flow regimes and move their point of measurement to their favor. The MCWD delayed from 1996 to 2009 to actually fully commence to engage CEQA.

One of the principle factors in the State Board's evaluation of a water right increase is the impact the application would have on other water right holders. That is also a major focus of any associated CEQA review. Throughout this lengthy delay to appropriately address the existing interim flow the MCWD now brings forth this additional and new proposal to further increase their withdrawals by adjusting the flow standards and moving the point of measurement which would favor their withdrawals from Mammoth Creek. Only now do they advance any attempt at CEQA compliance. The original interim flow as well as each of these new proposed amendments detrimentally impact the senior water rights of the Chance Ranch.

#### 6. Petition to Move the Monitoring Compliance Point

The amended flow regime is also coupled with MCWD's proposal to move the historic compliance point upstream from the Highway 395 gage to the Old Mammoth Road gage. The reach between these points is a losing reach in dry years as a result of evaporation and percolation to groundwater. Thus, if they can move the compliance point upstream, they can withdraw more water. The DEIR pointed out that if the actual flow at the Old Mammoth Road gage is close to the minimum value of 5.5 to 5.9 cfs from September to December, actual flows at Highway 395 will often fall below 4 cfs. Therefore, this change would further detrimentally impact downstream diverters – including the Chance Ranch senior rights.

C1-7

The DEIR also acknowledged that even though in most years there was no difference in the historic monitoring site and the proposed new site (a similar pattern of flows), in dry years there is a detrimental impact to flows if measured at the proposed site (pages 4-31,32). It also observed that in dry



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years at some points the reliability may be as much as 25% less under the proposal (page 4-38,41). In the critical period (for the Chance Ranch), March to August, the proposal may only perform the same as the existing monitoring site 60-80% of the time (page 4-34).

C1-7

This, therefore, is a junior right holder proposing an amendment detrimental to a downstream senior right holder.

## 7. CEQA Finally Engaged

Starting in about 1994, MCWD finally commenced an EIR review with notice and scoping meetings. The draft EIR identifies the project area as extending down to the Hot Creek flume which encompasses the entirety of Chance Ranch, however, the document makes only passing reference (pages 19-4; 180-1) to Chance Ranch, but does not discuss any impact on our water rights either generally or the impact of MCWD's increased daily withdrawal (less by-pass flow) in dry years specifically.

There was not even any reference to the impact on the Chance Ranch or other downstream water right holders (i.e., LADWP, Cashbaugh) in the Cumulative Effects section of the DEIR.

The DEIR identified four alternatives with the MCWD water rights (17332 of 1977) being an alternative and the Mono County court decision being another. We have been waiting a long time for the environmental review and water right analysis which the court decision called for between those "alternatives," however, that has not been engaged even in this present review because the DEIR's "proposed project" is the newly proposed plan to get MCWD even more water than the existing program dictated by the Superior Court, and far more than MCWD's actual water rights.

C1-8

The environmental review which was designed by MCWD, however, was strategically narrowly scoped on both the issues reviewed and the geography focused upon. It was limited to only the flow limit impacts on fish and only in the areas through the town and downstream only to U.S. 395. This totally ignored the impacts on senior water rights and any impacts below US 396 which would include the Chance Ranch, LADWP, Cashbaugh and the Indian lands. The Chance Ranch, however, is the only other water right holder below MCWD in the area the DEIR declares as the "project scope" as the others are completely ignored.

### A. Interested parties' reaction to the preferred alternative

Such issue avoidance, improper under CEQA, has remained the situation even though several of us fully participated in the scoping meetings. Even the CDFG requested that the DEIS/R analyze certain additional potential impacts created by the proposed action:

"The proposed streamflow modifications could impact Mammoth Creek in the Chance Meadow area ... This reach of the creek ... is within the direct area of influence of District activities. Additionally, Mammoth Creek is the major tributary to Hot Creek ... Hot Creek is also a major tributary to the Upper Owens River ... Potential impacts to the aquatic and riparian resources of these waters which should be addressed include chemical, biological, and physical (including thermal) changes which could occur as a result fo the proposed project.

C1-9

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"The monthly or seasonal rate of MCWD's diversion may increase at particular periods even though MCWD does not propose to increase its total annual water withdrawal from Mammoth Creek.

"Changing the location of the compliance gage may reduce the quantity of flow released from Lake Mary, given the flow accretion that naturally occurs between the gages.

"As District activities to provide water for the Town of Mammoth Lakes have potential impacts to the entire watershed, justification for the proposed change in point of measurement of the IER/EIS should be dependent upon impacts of District activities on the entire and actual instream flow conditions, including downstream impacts to Mammoth, Hot Creek and potentially the Owens River." *See* Letter from Bruce Kinney, DFG, to John Moynier, MCWD (April 29, 1997).

C1-9

In addition to CDFG, the State Water Board, LADWP, Dave Wood Ranches/Chance Ranch and other downstream water right holders all weighed in against MCWD's proposed amendments. LADWP stated:

"LADWP holds riparian rights used for ranchland irrigation. LADWP holds such rights in Mammoth creek as a result of its ownership of lands now leased to Chance ranch. Chance Ranch is located along several miles of lower Mammoth Creek to its confluence with Hot Creek. These rights are estimated at 11 cfs. LADWP's pre-1914 appropriative rights are for municipal water supply." *See* SWRCB, "Memorandum Report of the Water Supply of the Mono and Owens Basins with Relationship to the Proposed Second Barrel of the Los Angeles Aqueduct" (Dec. 1963).

MCWD's licenses and permit are junior to LADWP's appropriative water rights for diversion of Owens Basin waters for municipal use and hydropower generation.

C1-10

In issuing these junior rights, the State Water Board did not make specific findings whether water was available for appropriation from Mammoth Creek, or how these new applications affect LADWP's senior appropriative rights for municipal water supply and other uses.

"The State Water Board did consider a protest that Application 17770 (which became License 12593) would impair riparian rights of Chance Ranch, which was then privately owned. In response to Chance's protest, the State Water Board conditioned the permit on the condition that MCWD would not divert during August and September when flow of Hot Creek at the Highway 395 crossing did not exceed 11 cfs.

"The State Water Board has not reexamined whether MCWD's junior rights may impair LADWP's senior appropriative rights." *See* SWRCB, Decision No. D 904, "In the Matter of Application 17770 by MCWD" (May 14, 1958).

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Dave Wood Ranches and LADWP have objected to the existing interim flows established by the Court and reinforced those concerns and augmented them once faced with the new proposal for MCWD to increase their draw from the creek by further revised flows and changing the point of measurement.

On January 30, 2001, some 10 years ago, each LADWP and DWR submitted comments objecting to the interim flows and change of measurement (attached). Those comments, among other key issues, pointed out that the impacts on the downstream senior right holders is not due to Mammoth taking a total amount of water beyond their permit – that is totally irrelevant to either the court's interim flow standards or this new proposal. The impacts are the result of flow rate, time of use and point of measurement.

Once the CEQA process was finally joined, DWR had participated in many discussions, meeting, and scoping sessions. Attached is a January 27, 2005 submittal to that process, again reinforcing concerns relative to the Superior Court's interim flow order, encouraging CEQA review thereof and objecting to the new proposals.

"We, therefore, were disappointed, but fully recognize the Mono County Superior Court action which afforded MWD a conditional interim right to take additional diversions then those specifically authorized in 17332 pending their completion of a full environmental document which would support their taking the additional interim water as having no impact on other parties and the environment. We had looked forward to MWD's drafting and completing such a full EIR to justify their interim increase in water and have been frustrated for several years at how long it has taken them to undertake, complete and comply with the court-order which conditionally increase their interim use. It is unfortunate that the court had not mandated a compliance schedule because it has allowed MWD to intentionally drag this out while they continued to enjoy the increased benefits that a full environmental review would not have justified.

"We also oppose the more recent MWD petition to change points of diversion, points of measurement, and place of use which are presently before the Board, however, we likewise support a full discussion of those requests in the collaborative process which you are contemplating."

#### 8. Settlement Discussions

Notwithstanding the extensive inputs and involvement of LADWP, Chance Ranch and others, the "proposed settlement" referred to in the DEIR was only between MCWD, Cal Trout and CDFG. Those considerations only involved issues relating to fish. The impacted water right holders were not part of that settlement.

Throughout the evaluation of MCWD's proposed amendments to increase their water rights, the Chance Ranch has pointed out that any increase water take by MCWD on a daily basis in the spring (April/May) and summer (July) when we are waiting to start irrigating (spring) or trying to extend irrigation (summer) will detrimentally impact the senior water right holder, the Chance Ranch. This has been pointed out throughout this issue since the court order and on through 2001 and again when we clarified that to the State Board in the January 27, 2005 memorandum (attached) to the State Water Resources Control Board, and in all meetings since:

C1-10

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C1-12

Irene Yamashita  
November 2, 2010  
Page 9

"We manage the Chance Ranch around conservation, water quality and riparian/stream bank restoration principles, as well as cattle husbandry and business considerations.

"We are only allowed to divert irrigation water when Mammoth Creek is at a minimum flow established for fish protection. This flow is calculated annually based on snow pack and water content, but usually we cannot divert water to put the Creek below 10 cfs. Consequently, the commencement of our irrigation season is delayed until the spring runoff exceeds that level and our irrigation terminates when the Creek drops down below that level. Those limitations delay our ability to irrigate and grow feed in the Spring, and they terminate our seasonal irrigation and feed growth at critical mid-summer times. Our irrigation season, therefore, generally runs from May into July or August or for only about four months, or one-third of the year.

C1-12

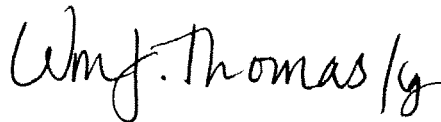
"We are also limited in the total amount of water we can use and spread for irrigation. We cannot exceed a total of five-acre foot seasonal distribution, and in many years we do not approach that number due to limited water and limited diversions."

We have continued to point out the nature of our impacts in several settlement discussions with MCWD suggesting there were possible solutions for such impacts. However, MCWD never embraced any such recommendations. The DEIR is clearly deficient in that it not only did not even identify these direct impacts to the Chance Ranch, but did not discuss any impacts on other (and senior) water right holders.

Summary: This DEIR does not respond to the court order to engage a review to justify the existing flows. It also is grossly insufficient in its project scope, identification of impacts on senior right holders, ignoring growth inducing impacts, relative to the additional proposal to take more Mammoth Creek Water.

C1-13

Sincerely,



William J. Thomas  
for BEST BEST & KRIEGER LLP

WJT:img

Attachments

Cc: David E. Wood  
Gene Coufal  
Brian Tillemans

DHS

STATE OF CALIFORNIA  
STATE WATER RIGHTS BOARD

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In the matter of Application )  
17770 by Mammoth County Water )  
District )

Source: Twin Lakes  
County: Mono

Decision No. D 904

Decided: May 14, 1958

oOo

In attendance at conference held by the staff of the State Water Rights Board in Bishop on April 3, 1958:

L. M. Butler	President, Mammoth County Water District
Hugh J. O'Connell	Secretary, Mammoth County Water District
N. Edward Denton and Vern Summers	Attorneys for Applicant
Jess W. Chance, Sr.	Protestant
Mildred F. Chance	Protestant
Willis Smith	Attorney for Protestants
Jess W. Chance, Jr.	Interested party
Gerald Chance	Interested party
Howard Arcularius	Interested party
K. L. Woodward	Supervising Hydraulic Engineer, representing State Water Rights Board

oOo

## DECISION

### Substance of the Application

Application 17770 was filed by Mammoth County Water District on August 13, 1957, for a permit to appropriate 2 cubic feet per second (cfs) of unappropriated water, year-round, from Twin Lakes on Mammoth Creek tributary to Owens River via Mammoth Creek thence Hot Creek in Mono County for municipal and domestic purposes. Water is to be diverted by a wood and concrete dam approximately 3 feet high by 40 feet long, at the outlet of Twin Lakes within the SW $\frac{1}{4}$  of SW $\frac{1}{4}$  of Section 4, T4S, R27E, MDB&M\* and will be conveyed through about 11,000 feet of 8" steel pipe for use within the District boundaries in Sections 33, 34 and 35, T3S, R27E. According to the application, the present population of the place of use is 1,188 persons, with an expected increase to 12,000 persons by 1980. It is further estimated that use will eventually extend to about 200 acres of domestic lawns and gardens in addition to household use.

### Protest and Answer

A written protest against approval of Application 17770 is of record from Jess W. Chance, Sr., and Mildred F. Chance, doing business as Jess Chance and Sons, based upon riparian rights and continuous and uninterrupted use since prior

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\* Hereinafter all township references are to Mount Diablo Base and Meridian (MDB&M).

to 1900. The protestants allege there is insufficient water at present for irrigation, livestock and domestic use on approximately 400 acres owned by them; that they irrigate 360 acres from April to October of each year; that all water in Mammoth Creek is necessary for their present requirements, and that during many dry years there is not sufficient water to complete the irrigation season.

In reply to the protest, the applicant states that there is a sufficient water supply for both the reasonable use of the riparian protestant and the applicant.

#### Proceedings in Lieu of Hearing

The applicant and protestants, with the approval of the State Water Rights Board, stipulated to the proceedings in lieu of hearing as provided for by Section 737 of the Board's rules, and a conference was held by K. L. Woodward, an engineer of the Board, with all record interested parties in the City Council Chambers, City Hall, Bishop, California, on April 3, 1958.

#### Records Relied Upon

The records relied upon in support of this decision are Application 17770 and all relevant information on file there-with with particular reference to a memorandum dated April 7, 1958, of the conference held on April 3, 1958; streamflow records of City of Los Angeles, Department of Water and Power, at Station "Hot Creek-Highway" for the period October, 1946 through

September, 1957; a publication of the Division of Water Resources entitled "Report on Water Supply and Use of Water on Middle Fork of Feather River and Tributaries, Plumas and Sierra Counties, California", dated August, 1937; Division of Water Resources, "Report on Investigation and Water Master Service on Middle Fork of Feather River Above Beckwith, Sierra and Plumas Counties, California, During Season of 1937", dated April, 1938; United States Geological Survey, Devils Post, California and Mt. Morrison, California, quadrangles, both 15-minute series, dated 1953; and United States Weather Bureau, Climatological Data, California.

#### Source and Watershed

Mammoth Creek heads on the eastern slope of the Sierra Nevada at Barney and Woods Lakes near the Mono-Fresno County line. The creek flows in a northwesterly direction for about 3 miles through Skelton and Arrowhead Lakes into Lake Mary, thence in a northerly direction for about  $1\frac{1}{2}$  miles through Lake Mamie into Twin Lakes, the proposed point of diversion under Application 17770. Overflow from Twin Lakes continues in a northeasterly direction for about one mile thence easterly about 5 miles to U. S. Highway 395 crossing where a stream gaging station of the City of Los Angeles is located. Below the highway, the water course (called Hot Creek on the Mt. Morrison quadrangle) continues for about 9 miles in a northeasterly direction to the confluence with Owens River. The point of diversion of protestants Chance as described in their protest is located on Hot Creek about



one-half mile downstream from the highway crossing. Sherman Creek, the principal tributary of Mammoth Creek downstream from Twin Lakes, joins the latter stream from the south at a point about two miles above the aforementioned gaging station.

The drainage area above the applicant's proposed point of diversion scales about 11 square miles ranging from a maximum elevation of 11,772 feet to about 8,600 feet.

#### Protestants' Project

According to the memorandum of the April 3, 1958, conference, Protestants Chance claim to be irrigating each year approximately 360 acres of pasture (seeded clover and natural grasses) within Sections 34 and 35, T3S, R28E, under an appropriate right initiated prior to the effective date of the Water Commission Act and by virtue of riparian ownership. From the legal description given in the protest, this property as plotted on the Mt. Morrison quadrangle is contiguous to Hot Creek. The protestants also claim to have under lease from the City of Los Angeles, Department of Water and Power considerable acreage of pasture land in Sections 4, 5, 6, 7, 8, and 9, T4S, R28E, and Sections 32, 33, 34, and 35, T3S, R28E, which is susceptible of irrigation; that the City owned land is likewise claimed riparian to the stream; that except during extremely dry years (when use of water on the City owned land is allegedly disallowed by order of the City) the protestants also irrigate some 300 acres of the leased property; and that more land would be irrigated if the water supply during the critically dry months were adequate.

The protestants claim to divert by gravity from Hot Creek at one or more of four points along the stream; that the water is applied to the land by flooding; that their irrigation season extends from about May 1 to about October 1 of each year; that no shortage is usually experienced prior to July 15; that August and September are usually months of deficient supply; that except for a limited by-pass for the maintenance of fish life the entire flow is diverted during August and September; and that even during years of unusually large runoff the entire flow reaching the protestants' property is put to beneficial use during August and September.

#### Water Supply

The flow of Mammoth Creek (Hot Creek) is measured at a point near U. S. Highway 395 by the City of Los Angeles, Department of Water and Power. The point of measurement scales about one-half mile upstream from protestants' Chance point of diversion. As there is reportedly no intervening use of water, the flow passing the City's gage, less channel losses, represents the flow reaching the protestants' property. Except during extremely low flows such losses are probably within the accuracy of the measurements and will be disregarded in the following discussion. Table I sets forth in cubic feet per second the monthly mean flow of Hot Creek covering the period from October, 1946, through September, 1957, as measured by the City of Los Angeles. As shown in Table I, flow during the months of August and September, the months of primary concern, has varied during

the above-mentioned period from a maximum and minimum, respectively, of 42.0 cfs and 6.26 cfs during August and 19.9 cfs and 2.6 cfs during September. Median monthly flow for the period was 8.6 cfs during August and 5.0 cfs during September.

#### Estimated Water Requirements of Protestants

Present use of water by the protestants from Hot Creek (except during extremely dry years when use on 300 acres of leased property is prohibited) is for the irrigation of 660 acres of pasture, for stockwater and for incidental domestic purposes. As no information is apparently available as to the reasonable water requirements for land being served by the protestants, it is necessary that an estimate be made from the findings of water requirements in other areas of similar physiography.

In 1936 and 1937 the Division of Water Resources made an extensive study of water requirements of Sierra Valley in Plumas and Sierra Counties in connection with the Middle Fork Feather River Adjudication. The results of the investigation are contained in publications by that agency entitled "Report on Water Supply and Use of Water on Middle Fork of Feather River and Tributaries, Plumas and Sierra Counties, California", dated August, 1937, and "Report on Investigation and Water Master Service on Middle Fork of Feather River Above Beckwith, Sierra and Plumas Counties, California, during Season of 1937", dated April, 1938.

TABLE I

Monthly Mean Flow-Mammoth (Hot) Creek  
at U. S. Highway 395

Quantities expressed in Second-feet

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Mean	
													Sec.-Feet	Acre Ft.
1946-47	8.71	9.49	7.51	4.47	5.12	7.64	13.18	57.8	40.5	20.5	6.26	4.07	15.5	11210
1947-48	5.0	4.8	3.6	5.2	3.6	4.3	11.6	30.4	56.6	28.9	8.6	2.6	13.8	9981
1948-49	4.7	3.1	4.3	3.4	2.9	3.2	12.5	34.7	56.8	20.1	8.3	2.7	13.1	9460
1949-50	4.0	4.9	4.1	5.9	5.4	5.1	12.4	36.4	49.9	22.5	6.4	5.5	13.6	9811
1950-51	4.1	27.9	35.1	12.5	10.4	8.2	12.5	38.3	57.2	30.2	16.2	8.0	21.8	15744
1951-52	7.1	5.7	10.5	9.9	8.4	6.1	11.9	61.6	103.5	93.1	42.0	19.3	31.7	22992
1952-53	12.2	7.1	8.7	10.6	6.4	6.7	13.8	16.6	50.1	44.3	10.0	5.0	16.0	11580
1953-54	5.0	5.0	4.1	3.5	5.0	8.5	18.3	50.8	42.0	19.9	6.4	4.4	14.4	10447
1954-55	2.4	5.6	4.8	5.3	4.0	4.4	8.4	19.8	71.3	22.0	7.5	3.3	13.2	9559
1955-56	4.5	4.6	25.3	13.2	7.7	7.1	15.9	54.1	143.3	95.5	37.1	19.9	35.7	25933
1956-57	16.6	12.8	9.4	9.2	10.3	8.7	11.8	26.7	106.6	40.2	13.1	7.0	22.7	16408

Sierra Valley is a mountain valley in the northeastern part of California at an elevation of about 5,000 feet. The winters are moderately severe with the monthly minimum temperature remaining below freezing during the period from November through March. The summers are warm throughout the day, but are cool during the night. During the period from June through September the monthly mean maximum temperature ranges from about 76 to 85 degrees. The highest recorded temperature at Sierraville in a 27-year record was 104 degrees and the lowest was a minus 30 degrees, a range of 134 degrees.

The protestants' property is located at an elevation of about 7,000 feet and although the mean annual precipitation is undoubtedly somewhat less in that vicinity than in Sierra Valley, the summer precipitation and temperatures are believed reasonably comparable. Table II and Table III set forth the monthly temperatures and total precipitation for May through September, 1957, at the United States Weather Bureau Station, Sierraville in Sierra Valley, elevation 4,975 feet; Mono Lake in Mono Valley, elevation 6,520 feet (about 25 miles north of the protestants' property); and Bishop in Owens Valley, elevation 4,108 (about 30 miles southeast of the protestants' property). Relative to the water requirements in Sierra Valley, the aforementioned 1937 report states as follows:

"By reference to studies made on other streams of similar characteristics in mountain valleys in Northeastern California it appears that the return flow from meadow grass irrigation is ordinarily approximately one-third of the gross diversions, where a proper spread and penetration of irrigation water has been obtained, i.e., it is necessary

to divert and apply to meadow grass about 50 per cent more water than is actually consumed in order to secure an adequate and proper irrigation. Such additional water is utilized as a vehicle for spreading. If such an allowance is made for a spreading head over and above the consumptive duty on upper Smithneck Creek, the resultant gross duty of water is calculated to be one cubic foot per second to about 80 acres of irrigated land."

According to Table 84 of the aforementioned report, the gross duty of water for land irrigated from Middle Fork Feather River and its tributaries within Sierra Valley varies from 1 cfs per 47 acres to 1 cfs per 160 acres as computed on a continuous flow basis. Further investigation and study during the 1937 irrigation season, as described in the aforementioned 1938 report, revealed that one cubic foot per second for 80 acres for the area was inadequate and that one cubic foot per second for 60 acres appeared to be more realistic of requirements. The Board concludes that a gross duty of one cfs for each 60 acres irrigated is a reasonable duty for the area in the vicinity of the protestants' place of use in view of the findings of water requirements in Sierra Valley. On that basis, irrigation of 660 acres of pasture will require a continuous flow of 11.0 cubic feet per second.

#### Discussion

Inspection of Table I shows that for the past eleven years flow of water in Mammoth Creek on a monthly mean flow basis has been inadequate to meet the protestants' estimated water requirements during August of 6 years and during September

TABLE II

Average Temperature - Long-Term Mean  
in °F

Station	May	June	July	Aug.	Sept.
Sierraville	50.6	56.8	62.9	61.7	55.8
Mono Lake	51.7	59.8	67.7	66.6	61.9
Bishop	62.6	69.4	75.5	72.7	67.3

TABLE III

Total Precipitation - Long-Term Mean  
in Inches

Station	May	June	July	Aug.	Sept.
Sierraville	0.92	0.57	0.32	0.15	0.48
Mono Lake	0.83	0.21	0.81	0.14	0.41
Bishop	0.20	0.10	0.10	0.14	0.19

of 9 years. As irrigation in that area usually does not extend outside the period from about the first of May to the end of September, diversion under Application 17770 between October 1 and July 31 may be allowed without qualification.

According to the applicant, the period of its greatest demand for water from Twin Lakes will be during those months of surplus flow, and that during August and September the District believes that its present well will produce an amount equal to the District's anticipated future needs. A water supply for a development such as contemplated under Application 17770 must be available year-round. Unlike most irrigation projects, it cannot be designed on a possible deficiency basis without undue hardship to the users. Furthermore, the District may be required from a public health standpoint to provide certain water treatment facilities which could not be conveniently operated should the District, due to the requirements for downstream prior rights, be forced to resort to an alternate supply during periods of low streamflow. On the other hand, Application 17770 is for a permit to appropriate "unappropriated" water and use of water thereunder must be subject to vested rights.

Under the circumstances heretofore discussed, approval of Application 17770 can be allowed year-round provided adequate protection is afforded to the downstream prior right users. The applicant has suggested that during such times as a deficiency exists in Mammoth Creek for downstream users that the District release into the creek from its well water supply an amount equal



to that diverted by it from Twin Lakes. Such a proposal appears fair to all parties and the Board believes that the physical circumstances are such that a provision to this effect can be inserted in the permit which will not be an unreasonable burden on the applicant.

#### Conclusion

The information before the Board indicates and the Board finds that there is unappropriated water in Twin Lakes which water may be appropriated to a substantial extent in the manner proposed under Application 17770 and that the application may be approved and permit issued, if appropriately conditioned, without injury to downstream existing rights.

ORDER

Application 17770 for a permit to appropriate unappropriated water having been filed, a protest having been submitted, the parties having stipulated to proceedings in lieu of hearing, a conference with all record interested parties having been held, the Board having considered all available relevant information, and said Board now being fully informed in the premises:

IT IS HEREBY ORDERED that Application 17770 be, and the same is hereby approved and that a permit be issued to the applicant subject to vested rights and to the following terms and conditions to wit:

1. The amount of water appropriated shall be limited to the amount which can be beneficially used and shall not exceed 2.0 cubic feet per second to be diverted from January 1 to December 31 of each year.

2. The maximum amount herein stated may be reduced in the license if investigation so warrants.

3. Actual construction work shall begin on or before September 1, 1958, and shall thereafter be prosecuted with reasonable diligence, and if not so commenced and prosecuted, this permit may be revoked.

4. Said construction work shall be completed on or before December 1, 1959.

5. Complete application of the water to the proposed use shall be made on or before December 1, 1965.

6. Progress reports shall be filed promptly by permittee on forms which will be provided annually by the State Water Rights Board until license is issued.

7. All rights and privileges under this permit including method of diversion, method of use and quantity of water diverted are subject to the continuing authority of the State Water Rights Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use or unreasonable method of diversion of said water.

8. At such times during August and September of each year that flow of Mammoth (Hot) Creek at or near U. S. Highway 395 Crossing in Section 32, T3S, R28E, MDB&M, does not exceed 11.0 cubic feet per second, permittee shall, upon demand of Protestants Chance, release into Mammoth Creek from a nontributary source at any point between Twin Lakes and said highway crossing sufficient water to provide a flow of 11.0 cubic feet per second at said highway crossing; provided however, permittee shall not be required to release water into Mammoth Creek at a rate in excess of that being diverted by permittee from Twin Lakes.

9. This permit is conditioned upon full compliance with Section 5937 of the Fish and Game Code.

Adopted as the decision and order of the State Water Rights Board at a meeting duly called and held at Fresno, California, on the 14th day of May, 1958.

/s/ Henry Holsinger  
Henry Holsinger, Chairman

/s/ W. P. Rowe  
W. P. Rowe, Member

/s/ Ralph J. McGill  
Ralph J. McGill, Member

STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Water Right )  
Permit 17332 and Water Right )  
Licenses 5715 and 12593 ) ORDER: WR 97-01  
(Applications 25368, 12079, )  
and 17770) ) SOURCE: Mammoth Creek  
)  
MAMMOTH COMMUNITY WATER ) COUNTY: Mono  
DISTRICT, )  
)  
Permittee and Licensee. )  

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ORDER AMENDING PRELIMINARY CEASE AND DESIST ORDER NO. 9P.2  
AS DIRECTED BY MONO COUNTY SUPERIOR COURT  
AND AMENDING LICENSE 5715 TO COMPLY WITH  
FISH AND GAME CODE SECTION 5946

BY THE BOARD:

1.0 INTRODUCTION

The Mammoth Community Water District (District) diverts water from Mammoth Creek for municipal purposes pursuant to Water Right Licenses 5715 and 12593, and Water Right Permit 17332. On January 20, 1994, the State Water Resources Control Board (SWRCB) entered Cease and Desist Order No. 9P.2 which directed, among other things, that the District comply with the minimum instream flow requirements specified as a condition of Water Right Permit 17332. Following an appeal by the District, the Superior Court for Mono County entered a writ of mandate dated October 21, 1996, which directs the SWRCB to establish interim instream flow requirements applicable to Permit 17332 as set forth below.<sup>1</sup>

This order amends the interim instream flow requirements applicable to water diversions under Permit 17332 as directed by the Superior Court. This order also amends License 5715 to

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<sup>1</sup> The writ of mandate was served on the SWRCB on November 7, 1996.

require compliance with section 5937 of the Fish and Game Code.<sup>2</sup> The subject of long-term instream flow requirements governing all diversions of water by the District will be addressed in a future order following appropriate proceedings.

## 2.0 FISH AND GAME CODE PROVISIONS GOVERNING INSTREAM FLOW REQUIREMENTS IN DISTRICT 4½

Fish and Game Code section 5946 requires that all water right permits and licenses in Fish and Game District 4½ which are issued after 1953 be conditioned upon full compliance with Fish and Game Code section 5937. Section 5937 requires the owner of any dam to allow sufficient water at all times to pass through a fishway, or over, around or through the dam, to keep in good condition any fish that may be planted or exist below the dam. The SWRCB has a ministerial duty to condition permits and licenses issued after 1953 to require compliance with Fish and Game Code Section 5937. (*California Trout Inc. v. State Water Resources Control Board* (1990) 218 Cal.App. 187 [266 Cal.Rptr. 788].)

The SWRCB complies with section 5946 in one of two ways. In some instances, the SWRCB includes specific minimum instream flow requirements for protection of fish as a condition of a water right permit or license. In other instances, the SWRCB has included a more general condition requiring bypass of water to maintain fish in good condition. In recent years, the SWRCB has included Standard Permit Term 66 in all permits and licenses issued in District 4½ which do not contain more specific quantified flow requirements. Term 66 provides:

"In accordance with the requirements of Fish and Game Code Section 5946, this permit [license] is conditioned

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<sup>2</sup> Water Right License 12593 already contains a general condition requiring compliance with Fish and Game Code section 5937.

upon full compliance with Section 5937 of the Fish and Game Code."

### 3.0 INSTREAM FLOW REQUIREMENTS APPLICABLE TO WATER RIGHTS HELD BY MAMMOTH COMMUNITY WATER DISTRICT

Permit 17332 contains a condition establishing quantified instream flow requirements. The District agreed to the condition in negotiations with a party who dismissed its protest against the District's water right application as part of the agreement. On December 23, 1991, the District submitted a petition to change the instream flow requirements applicable to diversions under Permit 17332. No action has been taken on that change petition because the District has not completed an environmental document in accordance with the California Environmental Quality Act. ("CEQA," Public Resources Code section 21000, et seq.)<sup>3</sup> Pending review and possible revision of the flows specified in Permit 17332, Preliminary Cease and Desist Order No. 9P.2 directed the District to comply with the established flow requirements as a condition of diverting water under the permit.

In considering the District's petition for review of Order No. 9P.2, the Superior Court for Mono County concluded that the original flow requirements established in Permit 17332 were the result of a very limited study. The court also stated that the weight of the evidence supports establishing a different schedule of minimum flow requirements, as proposed by the District and its consultants, to apply for an interim period pending amendment of Permit 17332 to establish revised long-term fishery flow requirements. By order dated October 21, 1996, the court directed the SWRCB to amend paragraph 2 of page 7 of Order

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<sup>3</sup> On September 30, 1994, the District submitted a schedule to the SWRCB which called for completion of an environmental document by March 22, 1995, if a negative declaration was prepared, and by December 29, 1995, if a full environmental impact report was prepared. The District has since advised the SWRCB that it will prepare a full environmental impact report, but the document has not yet been prepared.

No. 9P.2 to require compliance with the instream flow requirements proposed by the District and its consultants.

The SWRCB does not believe that the holder of a water right permit or license should be allowed to agree to a particular term at the time of applying for a permit, and then challenge the validity of the term of the permit or license in a later proceeding brought to enforce compliance.<sup>4</sup> In this instance, however, the SWRCB has elected not to appeal the Superior Court judgment regarding interim flow requirements. Rather, the SWRCB believes the public interest in this case will be best served by focusing on establishing long-term instream flow requirements which will apply to the District's diversions of water under all of its water rights on Mammoth Creek. This order amends Preliminary Cease and Desist Order No. 9P.2 to establish interim flows applicable to water diversion under Permit 17332 as directed by the Superior Court.

Water Right License 5715 does not include the standard term requiring compliance with section 5937. Until such time as quantified long-term flow requirements are established, License 5715 should be amended to include Standard Term 66 as discussed in Section 2.0 above.

Water Right License 12593 was issued on April 13, 1990. The license includes Standard Term 66 as set forth in Section 2.0 above. Until such time as the SWRCB conducts appropriate proceedings to establish quantified instream flow requirements

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<sup>4</sup> The SWRCB recognizes that in some instances immediate compliance with the conditions of a permit may be impossible and it may be in the public interest to adopt a schedule of compliance which includes a less stringent condition on an interim basis until such time as full compliance is possible. The SWRCB also recognizes that the terms of a permit are subject to review and modification following compliance with applicable procedures. The SWRCB does not believe, however, that an enforcement action provides the proper avenue for relaxing an established requirement for an indefinite period without regard to the permittee's ability to comply with the existing requirement.



applicable to the District's diversions from Mammoth Creek, no amendment of License 12593 is necessary.

Pending the establishment of quantified long-term instream flow requirements in a separate proceeding, neither License 5715 nor License 12593 will contain a condition specifying quantified minimum instream flows. In accordance with the direction of the Superior Court, this order provides that the District's water diversions under Permit 17332 are subject to the interim flow requirements recommended by the District's consultants. At the evidentiary hearing preceding Order No. 9P.2, the District's position was that the flows recommended by its consultants are the flows needed to maintain fish in good condition. Therefore, the SWRCB expects that the District will regulate all its diversions of water from Mammoth Creek to comply with the interim instream flow requirements applicable to Permit 17332.

#### 4.0 CONCLUSION

The issue of maintaining sufficient instream flows for protection of the fish in Mammoth Creek has been before the SWRCB repeatedly in recent years. In 1987, 1988, and 1989, the District requested, and the SWRCB approved, issuance of temporary permits which allowed the District to divert water at times when otherwise applicable minimum flow requirements were not being met. The temporary permits were issued in order to allow the District to meet municipal water demands when it had very limited alternative supplies. As a result of the District's well construction program, the District's dependence upon diversion of surface water from Mammoth Creek has decreased in recent years. The subject of instream flow requirements governing diversions from Mammoth Creek, however, has not been resolved.

This order amends Preliminary Cease and Desist Order No. 9P.2 to establish interim instream flow requirements governing water diversions under Permit 17332. The order also amends License

5715 to comply with Fish and Game Code section 5946. As discussed previously, however, it still is necessary to establish long-term instream flow requirements governing the District's diversion of water from Mammoth Creek. Therefore, the order below directs the Chief of the Division of Water Rights to schedule a hearing at an appropriate time for the Board to receive evidence regarding establishment of long-term instream flow requirements for Mammoth Creek.

**ORDER**

IT IS HEREBY ORDERED that Paragraph 2 on page 7 of Preliminary Cease and Desist Order No. 9P.2 is amended to read as follows:

2. Until such time as the State Board amends Permit 17332 to revise the long-term fishery flow requirements for Mammoth Creek, the District shall not divert water to storage or divert water directly from Mammoth Creek for municipal purposes whenever the mean daily instream flows, measured at the Old Mammoth Road Gage, are less than the following amounts:

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IT IS ALSO ORDERED that the Chief of the Division of Water Rights schedule a hearing at an appropriate time to receive evidence regarding establishment of long-term instream flow requirements applicable to diversions of water from Mammoth Creek by the Mammoth Community Water District.

**CERTIFICATION**

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on January 8, 1997.

AYE: John P. Caffrey  
John W. Brown  
Marc Del Piero  
James M. Stubchaer  
Mary Jane Forster

NO: None.

ABSENT: None.

ABSTAIN: None.

  
Maureen Marché  
Administrative Assistant to the Board

# DAVE WOOD RANCHES

25366 W. Dorris  
Coalinga, CA 93210

Respond to:  
William J. Thomas  
1201 K Street, Suite 1100  
Sacramento, CA 95814

January 30, 2001

John Moynier  
Public Affairs Manager  
Mammoth Community Water District  
P.O. Box 597  
Mammoth Lakes, CA 93546

Jeff Bailey  
United States Forest Service  
Inyo National Forest  
873 N. Main Street  
Bishop, CA 93514

**Re: Preliminary Comments On Draft Environmental Impact  
Statement/Environmental Impact Report Re: Proposed Changes in Mammoth  
Creek Instream Flow Requirements, Point of Measurement, and Place of Use**

Dear Mr. Moynier and Mr. Bailey:

As the Town of Mammoth Lakes, the Mammoth Community Water District (Water District) and the United States Forest Service (USFS) know, we ranch immediately adjacent to the town, below the Water District offices. That part of our Mono/Mammoth operation is known as the Chance Ranch, through which several miles of Mammoth Creek runs. We are well known to each of these three entities.

A few days ago, our landlord, the Los Angeles Department of Water and Power (DWP) was kind enough to forward a one-inch thick, 120-page draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) concerning the Water District's desire to change instream flow requirements, place of use, and place of diversions, all designed to give the Town/Water District more water than they are presently entitled. This can only come about by depriving existing downstream water right holders and water users from water that they have been entitled and committing to beneficial use.

Mammoth Creek falls off the mountain from the lakes through a couple of miles of residential area (Town of Mammoth), and then through approximately five miles of our range and

meadow ranch. At the bottom of our ranch, Mammoth Creek converges with Hot Creek. It is very apparent to all interested parties that the principle users of Mammoth Creek are the lakes/mountain, the Town of Mammoth Lakes and our ranch. We are the users of the oldest and largest water rights on Mammoth Creek. We were, however, not noticed as to these proceedings, not referenced in the EIR/EIS, and our direct and indirect impacts resulting from this application are not identified or considered. It is beyond question that there has been a design to avoid noticing or evaluating the impact on our operations. The procedural requirements of water right application amendments and those of each, the State and Federal environmental laws have been breached. Secondly, our due process rights have been ignored and violated. Thirdly, the "environmental" analysis reflected in this EIR/EIS is wholly inadequate, as it did not identify or evaluate the direct, indirect and cumulative impacts on our ranching operation, which is the greatest, most apparent, and most severe impact of the project.

We intend to fully challenge this inadequate EIR/EIS and water right modification. We have not had the full opportunity to review and evaluate this extensive document or to concur with the DWP, so further comments will be forthcoming. We, however, hereby briefly submit the following points so as to comply with the specified January 31, 2001 response date.

I. Specific Areas of Concern:

**S.1 Introduction**

We would appreciate copies of the referenced water rights and the USFS Memorandum of Agreement.

The existing instream flow requirements have been working satisfactorily for environmental and fish protection purposes. The issue does not have to do with an increase of the Water District's maximum diversion levels, but has to do with the daily rate and timing of diversion and resulting impact on bypass flows. This critical issue is not even addressed in the report, as it attempts to hide the potential impact on other downstream users, which is principally our ranch.

Another major impact will be that caused by the change in point of measurement. This too is only casually mentioned, and the impact thereof is totally unevaluated. The proper place to measure is at the water gauge at old Highway 395, which is historic, adequate, and preserves harmony. The proposed change is merely a way for the Town to extract more water and deprive others therefrom.

The project also expands the place of use, further impacting downstream right holders/users. This project does not just make the long existing flow requirements permanent (as it asserts), it significantly changes the water availability.

## **S.2 Background**

The document evaluates the fish situation in Mammoth Creek. It should point out two important components. First, the trout are not native, but they are worthy of protecting for recreational purposes; and second, the majority of Mammoth Creek below the Town is part of a major riparian restoration project designed for stream, riparian habitat and fish protection. This is a highly acclaimed project which runs throughout our Chance Ranch across the Chance Meadow. Our Chance Ranch Meadow is referenced but not: a) our ranch; b) our impact; or c) our fish protection riparian project. This protection project dominates the key lengths and use of Mammoth Creek, but it escaped the notice of the environmental preparers hired and paid by the Water District.

The document kindly references that our water diversions are both senior and greater than that of the Water District. It states, "none of the other water rights to Mammoth Creek, including those hold by the DWP, include instream flows." First, this is about the only direct reference to grazing use, yet the impacts of this project on grazing are not evaluated. Secondly, it is untrue that we do not observe minimum instream flows. It is such restrictions that will severely limit our water diversions if the Town is successful in expanding their use and moving the point of monitoring to favor their usage.

Please provide us with a copy of Permit 17332.

The alternatives are biased in favor of the application. There is no designated alternative to maintain the existing system. That is not what the "no action" alternative is.

Table S-1 does not reflect existing numbers versus the proposed project. The "no action" reference may best reflect the status quo, and when one evaluates the critical period of April through August, the table shows considerable disparity in those numbers. This table is, however, very unclear, and the document is void of any analysis of how other major users (we are that major user) would be effected.

## **S.4 Comparison of Effects**

### **A. Fisheries**

We appreciate the reference to the good fishery condition. That is heavily attributable to our riparian restoration project and our maintenance of no public access/fishing on the majority of the favorable stream habitat of Mammoth Creek.

### **B. Water Supply**

The project states it will provide from 8% to 40% more water to the Water District. The purpose of the EIR/EIS is to identify impacts. It should indicate that this water would have to

be given up by someone, and, as the Water District knows, we are that someone. They have secreted this project from us and took great drafting care to omit any analysis of such impacts.

C. Other Resources

Our impacts are not even listed as an impacted resource. We are the major water users of the Creek and we put that water to a protected beneficial use.

Please provide us with a copy of the USFS Biological Evaluation (Appendix G). We were not provided any appendix materials, and even though we are the local USFS grazing permit holder, the USFS did not notify or consult with us.

D. Cumulative Impacts

The report is devoid of any analysis of cumulative impacts as is required of qualifying EIR/EIS documents.

**S.6 Areas of Known Controversy**

This section is completely inadequate as compliant with the California Environmental Quality Act (CEQA) guidelines. It merely lists huge global issues and does not really identify the specific areas of controversy.

Examples of this are:

- “potential effects on peak flows”
- “potential impacts to wetland and riparian habitat conditions”
- “potential impacts to water availability”
- “Mammoth Creek is fully appropriated”

It did not state, in this section or elsewhere, as it should, that “This project would increase water diverted by the District and thereby impact the ability of senior downstream water right holders/users, namely the Chance Ranch, to divert their historic irrigation water, the results of which will severely economically impact the historic grazing/ranching beneficial use of water in the basin and thereby deprive the area of its the associated riparian and wetland habitat.”

That would be identifying an impact, resource and controversy. The EIR/EIS does not do so, and is generally a poor example of an environmental evaluation. It has no chance of upholding the project to a challenge on substantive grounds, much less against challenges over the serious procedural shortcomings.



**S.7 Issues to Be Resolved**

As stated above, this document does not inform decision makers and is not a full disclosure document. This document creates issues, it does not resolve issues. This document is so inadequate that it can either go back for a timely full and fair evaluation and rewrite or risk losing the entire project to a challenge.

Conclusion

If we had more time, we would evaluate specific troubling features in the extensive body of the document. Those largely appear in Section 1.4.1: Change of Flow Requirements; Section 1.4.2: Change in Point of Measurement; Section 2.6: Comparison Alternatives; Section 3.2.1 Hydrology in Lower Mammoth Creek; Section 3.4.1: Beneficial Uses; Section 3.5.1: Aquatic Habitat, Reach E; Section 3.5.3: Fisheries; Section 3.5.5.: Aquatic Invertebrates; Section 4.1.3, Alternative 2; Section 4.9.1, Mammoth Creek Diversions and others.

We reserve the right to submit additional comments. We are available to meet with the Water District, the U.S. Forest Service, the Town of Mammoth Lakes or your consultants at any time.

Respectfully submitted,



WILLIAM J. THOMAS  
Dave Wood Ranches

WJT:ad

cc: Dave Wood  
Dennis Erdman  
Mammoth Community Water District



RICHARD J. RIORDAN  
Mayor

Commission  
KENNETH T. LOMBARD, *President*  
JUDY M. MILLER, *Vice president*  
RICK J. CARUSO  
MICHAEL I. KESTON  
DOMINICK W. RUBALCAVA  
JOHN C. BURMAHLN, *Secretary*

S. DAVID FREEMAN, *General Manager*

January 30, 2001

Mr. John Moynier  
Public Affairs Manager  
Mammoth Community  
Water District  
P.O. Box 597  
Mammoth Lakes, CA 93546-0597

Dear Mr. Moynier:

Response to the  
Draft Environmental Impact Statement /Environmental Impact Report for  
Changes in Mammoth Creek Instream Flow Requirements,  
Point of Measurement, and Place of Use (SCH #1997032082)

This is in response to the *Draft Environmental Impact Statement/Environmental Impact Report for Changes in Mammoth Creek Instream Flow Requirements, Point of Measurement, and Place of Use* (DEIS/EIR). The City of Los Angeles Department of Water and Power (DWP) has several concerns, particularly regarding the potential ecological effects in years of below-normal runoff. It is the position of DWP that the DEIS/EIR does not adequately address the impacts the proposed action could have to downstream water users, downstream water quality, and fish survival. In addition, moving the point of measurement from the DWP gaging station at Old Highway 395 to the Mammoth Community Water District (District) gaging station at Old Mammoth Road will induce a discrepancy in the readings, which was not accounted for during the initial studies submitted in support of this proposal.

The DEIS/EIR indicates that under the proposed action, the mean daily flow values would be similar to dry years due to increased water diversion during the summer months. This implies that dry year conditions will be simulated in Mammoth Creek on a continual basis if the proposed action is approved. In wet years, resource conflict potentials are rare; it is the dry years that put great demand on a limited water resource. In addition, under the proposed action and all alternative actions, interim flow requirements are to be met on a mean daily basis, with no instantaneous flow requirement. Since no instantaneous flow requirement is required, the potential exists for extremely low flows in Mammoth Creek during the summer in dry years. Downstream water users, water quality, and fish populations are likely to be impacted by this action, particularly in years of below-normal runoff.

The DEIS/EIR does not adequately address impacts the proposed action would have on downstream water users. Downstream water use includes irrigation by public and private interests. The DWP has instream flow requirements that must be met below the gaging station at Old Highway 395. Downstream water use is dictated by flows recorded at this station. The studies conducted during the development of the DEIS/EIR in support of the proposed action used measurements of instream flow collected at the DWP gaging station. If the section of Mammoth Creek between the District's gaging station and the current point of measurement is a losing reach; this will induce a discrepancy not fully

Water and Power Conservation... a way of life

Bishop, California mailing address: 300 Mandich Street, Bishop, CA 93514-3449 Telephone: (760) 872-1104 FAX: (760) 873-0266  
111 North Hope Street, Los Angeles, California Mailing address: Box 51111, Los Angeles 90051-0100  
Telephone: (213) 367-4211 Cable address: DEWAPOLA FAX: (213) 367-3287



accounted for in the DEIS/EIR. The result could be downstream flows so reduced in the summer months that irrigation needs by downstream users could not be met, nor could fishery needs be accounted for.

Potential impacts to downstream water quality and the resultant effects on fish have also not been adequately addressed. Low flows during the summer, especially in low runoff years, are likely to result in an increase in water temperature downstream of the diversions. Increases in water temperature can cause direct fish kills. In recent years, due to reduced flows in Mammoth Creek, the thermal influence of Hot Creek on the Upper Owens River has increased significantly. The resulting increase of water temperatures along the Upper Owens River caused fish kills near Benton Crossing bridge (Brian Tillemans, DWP staff). Low water levels, combined with an increase in stream temperatures, may also encourage the growth of algae. Subsequent algae dieoff would consume dissolved oxygen in the creek and could further impact fish survival. In addition, an increase in water temperatures in the Upper Owens River, which flows into Crowley Lake, could favor the growth of algae in Crowley Lake and affect reservoir water quality in the summer, when water quality is an issue.

The DEIS/EIR states that there have been no significant changes in trout populations in Mammoth Creek since 1996, when the District began operating under the modified flow requirements on an interim basis. It should be pointed out that years 1995 through 1998 were years of above-average runoff. In addition, instream flows were measured at the DWP gaging station, not the proposed gaging station, and this may induce a bias as discussed above. As stated in the DEIS/EIR, differences in instream flow between the proposed action and the no action regime would be greatest in dry years. Therefore, it seems premature to state that the interim flow requirements that have been in effect since 1996 demonstrate that no significant impacts will occur to the fisheries population if accepted on a permanent basis.

In conclusion, it is the position of DWP that the cumulative downstream impacts of the proposed action have not been adequately addressed. Downstream users must balance human needs as well as fishery and stream needs, just as District has been asked to do. The concern is that the District is proposing to restrict the amount of water at critical times, significantly inhibiting downstream users ability to balance human and resource needs during peak demands.

Sincerely,

**ORIGINAL SIGNED BY**

GENE L. COUFAL  
Manager  
Aqueduct Business Group

c: Mr. Jeff Bailey  
State of California  
Water Resources Control Board

## DAVE WOOD RANCHES

25366 W. Dorris  
Coalinga, CA 93210

Respond to:  
William J. Thomas  
1201 K Street, Suite 1100  
Sacramento, CA 95814

January 27, 2005

VIA HAND-DELIVERY & ELECTRONIC MAIL ([DRiddle@waterboards.ca.gov](mailto:DRiddle@waterboards.ca.gov))

Diane Riddle  
Environmental Scientist  
Division of Water Rights  
State Water Resources Control Board  
1001 I Street, 15th Floor  
P.O. Box 944213  
Sacramento, CA 94244-2130

**RE: MAMMOTH CREEK/HOT CREEK WATER ISSUE**

Diane:

I thought you organized and ran a very efficient meeting regarding the long-standing disputes on Mammoth Creek/Hot Creek. The meeting flowed well, however, discussions did not turn to the impacts that will occur to other water right holders on Mammoth Creek, should the interim water and other applications of the Mammoth Water District be approved by the State Board. There was only the briefest of comments by the Hot Creek Fish Ranch and the LADWP, and it did not seem that further comments by those impacted parties or ourselves would have contributed to the main discussion thrust of the meeting which was about procedures to arrive at a collaborative settlement, so I did not make any such comments from our Chance Ranch perspective. However, I do not want any of the parties to misunderstand the severity of the impacts this may have on us and others, so I thought I would share our position with you in this memo and ask if you could distribute it to your party/service list.

### **I. Background**

The Chance Ranch is situated such that Mammoth Creek flows onto us shortly after crossing U.S. 395, and flows through our ranch for several miles until it is joined by Hot Creek, just off the bottom end of our ranch. Therefore, we are the users of the Creek for several of the few miles that it runs from the town of Mammoth Lakes until its intersection with Hot Creek, where it changes its character. The Chance Ranch is one of

the historic livestock meadow ranches of the Eastern Sierra and had its origins back when there were only a few structures in Old Mammoth. When the State Water Board issued Mammoth Water District their existing water permit, No. 17332, the Chance Family were protestants because of concerns that allowing upstream junior diverters taking that appropriative water would impact the ranch's existing water rights. These water rights are now owned by the LADWP by virtue of their purchase of the Chance Ranch, and we are long-time leasees of the Chance Ranch, and thereby enjoy the use of the historical water rights afforded the Chance Ranch. Our Ranch operations are the principle business interest on Mammoth Creek, and we put this water to lawful agricultural beneficial use.

## **II. Position In Respect To Water Permit 17332 and Suggested Modifications**

Since the issuance of Water Permit 17332, we have come to understand and acknowledge the rights and limits the permit afforded MWD for municipal use of the Creek water, but we full well recognize that they are far junior water right holders to the water rights connected with the Chance Ranch. We and LADWP are, therefore, downstream senior water right holders as compared MWD's upstream junior water rights afforded per 17332. We also strongly support the position the Water Board, Fish and Game, and others took in resisting MWD's petition to increase their 17332 water rights, and we believe nothing has changed to lessen the valid reservations that the State Board and Fish and Game had as to those applications.

We, therefore, were disappointed, but fully recognize the Mono County Superior Court action which afforded MWD a conditional interim right to take additional diversions then those specifically authorized in 17332 pending their completion of a full environmental document which would support their taking the additional interim water as having no impact on other parties and the environment. We had looked forward to MWD's drafting and completing such a full EIR to justify their interim increase in water and have been frustrated for several years at how long it has taken them to undertake, complete and comply with the court-order which conditionally increase their interim use. It is unfortunate that the court had not mandated a compliance schedule because it has allowed MWD to intentionally drag this out while they continued to enjoy the increased benefits that a full environmental review would not have justified.

Consequently, we have read and reviewed the petition filed by CalTrout and the National Heritage Institute and fully embrace its claims and arguments. At the same time, we do support the proposition of an all-hands collaborative effort to appropriately modify 17332 so as not to cause jeopardy to senior water right holders, downstream water diverters and instream uses, and yet respond to the needs of MWD.

We also oppose the more recent MWD petition to change points of diversion, points of measurement, and place of use which are presently before the Board, however, we likewise support a full discussion of those requests in the collaborative process which you are contemplating.

### III. Chance Ranch Operations

We manage the Chance Ranch around conservation, water quality and riparian/stream bank restoration principles, as well as cattle husbandry and business considerations.

We are only allowed to divert irrigation water when Mammoth Creek is at a minimum flow established for fish protection. This flow is calculated annually based on snow pack and water content, but usually we cannot divert water to put the Creek below 10 cfs. Consequently, the commencement of our irrigation season is delayed until the spring runoff exceeds that level and our irrigation terminates when the Creek drops down below that level. Those limitations delay our ability to irrigate and grow feed in the Spring, and they terminate our seasonal irrigation and feed growth at critical mid-summer times. Our irrigation season, therefore, generally runs from May into July or August or for only about four months, or one-third of the year.

We are also limited in the total amount of water we can use and spread for irrigation. We cannot exceed a total of five-acre foot seasonal distribution, and in many years we do not approach that number due to limited water and limited diversions.

In coordination with LADWP, we have installed several new weir and diversion structures expressly designed so that we can more precisely control water diversions and efficiently distribute irrigation water into our ditch system. These controls and limitations on the amount of water that goes into our distribution ditches not only avoids waste, maintains our capacity of our five-acre foot quota, but also avoids excessive irrigation which would result in return flow back to the creeks which could possibly give rise to water quality issues.

Approximately 15 years ago, in cooperation with LADWP, we embarked on what I believe was the largest streambank restoration project in the West. The project, at that time, involved our ranches down around Crowley Lake, which included McGee and Convict Creeks, in addition to Mammoth Creek through the Chance Ranch. Mammoth Creek is fenced into riparian corridor pastures with very limited grazing within some of the pastures each year. During such use, there are grazing utilization limits of 35 and 50%, which means that cattle only have access to the meadow areas adjacent to the creek for a few days each summer, and much of the Creek has been in total exclusion with no cattle grazing along the Creek for in excess of the last 15 years. These riparian pastures and the cattle management programs were designed expressly to benefit the streambanks, fish habitat and water quality. The specific benefits that derive from such project include streambank stabilization, willow enhancement, point bar development, stream sinuosity, increased wetland areas, stream shading, pool and ripple enhancement, and water temperature moderation.

These projects have received local, regional and national acclaim from each range, grazing and conservation groups, including the Society of Range Management, National Cattlemen's Beef Association, and the LADWP was given Cal Trout's "Golden Trout" environmental award.

As a further effort of stream enhancement, we terminate all irrigation during each year's high peak flow period. As such peak flows are commencing to be achieved: 1) we ramp down our irrigation turnouts on a schedule all the way to zero, so that fish can return to the stream; 2) we allow no irrigation for several days to allow for the full stream flow scouring effect to improve the gravel beds for fish habitat; and 3) we then ramp up to resume our normal irrigation diversions.

We have always gone out of our way to coordinate with the LADWP, Hot Creek Fish Ranch, CalTrout, Mammoth Water District, the town of Mammoth Lakes and other conservation groups. Our attempts to coordinate with Mammoth Water District have expressly included their past efforts for tertiary water treatments and the use of gray-water for golf courses thereby reducing flow to Laurel Pond (which is on our livestock permit); however, they have apparently abandoned such plans for such alternative water use.

We also attended many meetings regarding their initial CEQA EIR draft. We, like all parties, are of the opinion that their EIR which did not even attempt to evaluate impacts on senior water right holders, downstream diverters and fish below U.S. 395 was categorically inadequate. Nonetheless, we attended meetings and in fact, made suggestions how that EIR could be salvaged, but we have had no recent response thereto.

#### **IV. Summary**

In summary, Mammoth Creek, through the meadow areas, is in far better environmental shape in recent years, than it ever has been, and it has served as a model for other riparian and water quality protection projects. No question Mammoth Creek is limited on water and, therefore, the proposals of MWD need to be tested against the water demands in the driest of years. You can never measure impacts on competing water uses on anything other than dry years. It should also be recognized that Mammoth Creek has virtually no aquatic weeds, although once it is joined by Hot Creek the aquatic weed situation on the Hot Creek Fish Ranch, well below our operations, are significant, and no doubt effected by the flow of Mammoth Creek.

Sincerely,



WILLIAM J. THOMAS  
On Behalf of Dave Wood Ranches

cc: David E. Wood

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**Letter No. C1**

Best Best & Krieger  
William J. Thomas  
400 Capitol Mall, Suite 1650  
Sacramento, CA

Response to Comment C1 - 1

Thank you for the information regarding your 20-year restoration efforts on Mammoth Creek. We would appreciate receiving copies of any reports and data on the restoration project efforts. The water right issues raised will be addressed in Response to Comment C1 - 5 below.

Response to Comment C1 - 2

There seems to be some confusion respecting the District's proposed project. It does not include any request to increase the District's direct diversion or storage rights. Rather, with one change, the District proposes the continuation of the exact same fishery bypass flow requirements which have been in existence since 1997 (for the fishery bypass flow requirements that have been in effect since 1997, please see the 1996 Mono County Superior Court Judgment attached as Appendix A to the Final EIR; and for the proposed fishery bypass flow requirements, please see page 2-2 of the Draft EIR). The singular change is to add a year-round 4 cfs fishery bypass flow requirement at the OLD 395 Gage. As the Draft EIR notes at page 4-32, flows at the OLD 395 Gage will be somewhat higher under the proposed project than under the Existing Condition over portions or most of the range of flows during May, July and August. From September through March, and during June, the flow distributions will be similar. Other than this singular change, there are no other proposed changes to the existing fishery bypass flow regime. There also is no change to the point at which compliance is measured. It remains, as it has been since 1997, at the District's OMR Gage, except for the compliance point for the proposed additional 4 cfs fishery bypass flow requirement.

Response to Comment C1 - 3

Comment noted.

Response to Comment C1 - 4

Comment noted.

Response to Comment C1 - 5

The District is without sufficient information to comment on the accuracy of the discussion concerning the claimed water rights related to Chance Ranch. A complete and accurate summary of the District's surface water rights appears at page 1-2 of the Draft EIR.

Throughout its letter, the commenter asserts that the Draft EIR should have evaluated the potential impacts of the proposed fishery bypass flow requirements on the water rights of downstream diverters, "... which would include the Chance Ranch, LADWP, Cashbaugh and the Indian lands." (See page 6 of the comment letter.) No authority is provided that such evaluation is required under CEQA. Furthermore, the requested evaluation far exceeds the scope of this EIR for several reasons. First, as noted above, the fishery bypass flow requirements were developed pursuant to a 1988 SWRCB order issued to the District that it



evaluate what flows would be necessary to protect instream, not out-of-stream beneficial uses. The latter has no relation to the former. Further, a SWRCB decision on the former will in no way affect whatever rights the downstream diverters have to the waters of the subject watercourses, including but not limited to the priorities of any such rights.

Second, to perform the requested water right impact analysis would require an analysis of the hydrology of Mammoth Creek, Hot Creek, the Owens River and their tributaries. Such would be necessary to determine the amount of water available for appropriation and instream beneficial uses. There would have to be an identification of the various claimants to the waters of these watercourses; and their rates and amounts of diversion, seasons of diversion, purposes of use and places of use would have to be ascertained. Issues of historical use, non-use, and waste and unreasonable use and unreasonable method of use would have to be addressed. The requirements of instream beneficial uses would have to be ascertained. Even the relative priority of the various claims would need to be determined as there undoubtedly would be issues of preference of use, area of origin, public trust and other pertinent considerations. Such is beyond the province of the District. Rather, such assessments and determinations are more appropriately addressed in a basin-wide adjudication either through the courts or a SWRCB statutory adjudication pursuant to Water Code sections 2500, *et seq.*, which would be extremely time-consuming and costly. This proceeding, to determine the long-term fishery bypass flow requirements for Mammoth Creek, should not be turned into such an adjudication.

Lastly, the commenter has not demonstrated that the fishery bypass flow requirements which have been in effect since 1997 have adversely affected its exercise of its water rights, or that such requirements coupled with the added requirement of a year-round 4 cfs fishery bypass flow requirement measured at the Old 395 Gage will injure the commenter in the future. Moreover, if in the future the commenter believes that District diversions under the fishery bypass flow requirements are injurious to its water rights, it will not be without a remedy. For example, it could pursue a judicial adjudication of the relative rights of it, the District, and any others that it feels are pertinent to the dispute.

#### Response to Comment C1 - 6

The commenter's attempt to recount the historical background regarding the development of the fishery bypass flow requirements is inaccurate in various respects. An accurate presentation of such history appears at pages 1-6 through 1-11 of the Draft EIR. The comment does not address any impacts to environmental resources. As explained in Response to Comment C1 - 2 and contrary to the commenter's assertions, the District does not seek to increase its currently authorized direct diversion rights or diversion to storage rights. It also does not seek to change the fishery bypass flow requirements which currently exist and have been in existence since 1997 or their compliance point, except to add a year-round fishery bypass flow requirement of 4 cfs to be measured at the OLD 395 Gage. With respect to any potential impacts to the commenter's claimed water rights, please see Response to Comment C1 - 5. For a more complete description of the proposed project, please see pages 1-1 to 1-2, and 2-1 to 2-11 of the Draft EIR. The commenter incorrectly summarizes the District's environmental review process on the proposed project. See pages 1-10 to 1-11 of the Draft EIR for an accurate summary of that review.

### Response to Comment C1 - 7

A complete description of the proposed project's compliance point(s) for measuring the fishery bypass flow requirements and the reasons therefore appear at pages 1-1 and 2-2 of the Draft EIR. Over the past 20 years, the proposed project's compliance point at the District's OMR Gage has been used to measure compliance with the fishery bypass flow requirements for approximately 17 years, and ever since 1997. The District's proposed project also proposes to add the OLD 395 Gage to measure compliance with the additional year-round 4 cfs fishery bypass flow requirement. The District's OMR Gage is preferable because it allows the District to operate the system more efficiently and allows the District to respond more quickly in adjusting its diversions to ensure compliance with the fishery bypass flow requirements.

A comparison and analysis of the flows occurring at the OLD 395 Gage, which is immediately above the commenter's point(s) of diversion, under the Existing Condition and under the proposed project appear at pages 4-32 and 4-33 of the Draft EIR. The Draft EIR states at page 4-32: "Flows under the Proposed Project Alternative are somewhat higher (typically about 0.5 to 2 cfs) than those under the Existing Condition over portions or most the range of flows during May, July, and August. From September through March, and during June, the flow distributions are similar under the Proposed Project Alternative and the Existing Condition. During April, the flow distributions oscillate about each other."

With respect to any potential impacts to downstream diverters, including the commenter, please see Response to Comment C1 - 5.

### Response to Comment C1 - 8

The history of the District's environmental review of the fishery bypass flow requirements appears at pages 1-10 to 1-11 of the Draft EIR. The project area is more fully described at pages 1-2 to 1-6 of the Draft EIR. With respect to any impacts to the commenter's claimed water rights or those of other downstream interests, see Response to Comment C1 - 5. The commenter cites certain pages in the Draft EIR where references to Chance Ranch are supposedly made. Those pages do not exist in the Draft EIR. An accurate description of each of the project alternatives evaluated appears at pages 2-1 to 2-13 of the Draft EIR. The Draft EIR evaluated the potential impacts of the proposed project and each of the project alternatives on each of the environmental resources of concern in the reach of Mammoth Creek from the OLD 395 Gage downstream to the USGS Flume Gage on Hot Creek.

### Response to Comment C1 - 9

The quoted language from the CDFG appears in a 1997 CDFG scoping letter to the District regarding what should be addressed in the draft environmental impact report which was to be prepared at that time (see page 1-10 of the Draft EIR for a discussion of that prior draft EIR). CDFG did not make similar comments on the current Draft EIR and as explained at page 1-1 of the Draft EIR, CDFG believes that the proposed project complies with relevant environmental requirements.

### Response to Comment C1 - 10

The matter of potential impacts to the water right claims of the commenter and others is addressed in Response to Comment C1 - 5. As a point of information, LADWP did not protest any of the District's water right applications (Applications 12079, 17770 and 25368). Contrary to

the commenter's assertions, the District's diversions under License 12593 (Application 17770, Permit 11463) are not junior to the riparian rights associated with Chance Ranch. Pursuant to an Agreement for Settlement of Water Rights Dispute between Jess W. Chance, et al. and the District, dated July 17, 1967 ("Chance/District Settlement Agreement"), an Amended Judgment was entered on July 24, 1967, in *Jess W. Chance, et al. v. Mammoth County Water District* (Mono County Superior Court Case No. 3244), whereby the riparian rights of Jess W. Chance, et al. to the waters of Mammoth Creek were made subordinate to the diversion rights of the District under Permit 11463 (now License 12593). The Amended Judgment and Chance/District Settlement Agreement, together with the associated Stipulation and Order, are found at Appendix A of the Final EIR. In a related action and pursuant to the Chance/District Settlement Agreement, the SWRCB, on June 1, 1978, ordered the removal of Term 8 from Permit 11463 which provided that, "At such times during August and September of each year that flow, in Mammoth (Hot) Creek at or near U.S. Highway 395 Crossing in Section 32, T3S, R28E, MDB&M, does not exceed 11.0 cubic feet per second, permittee shall, upon demand of Protestants Chance, release into Mammoth Creek from a nontributary source at any point between Twin Lakes and said highway crossing sufficient water to provide a flow of 11.0 cubic feet per second at said highway crossing; provided, however, permittee shall not be required to release water into Mammoth Creek at a rate in excess of that being diverted by permittee from Twin Lakes."

To reiterate, the only difference between the fishery bypass flow requirements ordered by the Mono County Superior Court in 1996 and the proposed project is the addition of a new year-round fishery bypass flow requirement of 4 cfs measured at the OLD 395 Gage.

#### Response to Comment C1 - 11

As set forth on page 1-1 of the Draft EIR, there is a finally approved and executed Settlement Agreement among the District, CalTrout and the CDFG. The Settlement Agreement addresses more than just the proposed fishery bypass flow requirements, but also groundwater monitoring, Mammoth Creek trout enhancement activities and water conservation (see response to comment C2 - 1 and Chapter 3 of this Final EIR). With respect to the issue of impacts to "water right holders," see Response to Comment C1 - 5.

#### Response to Comment C1 - 12

The District is not seeking to "increase their water rights" as part of the proposed project (please see the description of the proposed project at pages 1-1 to 1-2 and 2-1 to 2-11 of the Draft EIR). With respect to the matter of potential impacts to the water right claims of the commenter, please see Response Comment C1 - 5.

#### Response to Comment C1 - 13

The Draft EIR evaluates the potential impacts of the proposed project on all environmental resources of concern. In addition, growth inducing impacts are covered at pages 10-13 to 10-20 of the Draft EIR. The proposed project does not include any increase in the authorized annual diversions from Lake Mary or Mammoth Creek.

Letter C2



January 6, 2011

To: Greg Norby,  
General Manager  
Mammoth Community Water District

From: Mark Drew  
Program Manager  
California Trout, Eastern Sierra Program

**RE: Mammoth Creek Draft EIR: Mammoth Creek Fishery Bypass Flow Requirements, Watershed Operation Constraints, Point of Measurements, and Place of Use.**

Dear Mr. Norby:

California Trout (CalTrout) is pleased to submit the following comments regarding the Mammoth Community Water Districts' Draft Environmental Impact Report titled *Mammoth Creek Fishery Bypass Flow Requirements, Watershed Operation Constraints, Point of Measurements, and Place of Use* (DEIR). CalTrout recognizes the extensive resources put forth to complete the DEIR. Moreover, CalTrout is appreciative that such a comprehensive and concerted effort to comprehensively complete the DEIR was made. Our comments are brief and as follows:

1. CalTrout requests that the District supplement the DEIR to address the related programs described in Section 2.2.1 of the Agreement. As described in your November 23, 2010 email, the supplement should address the related actions of the groundwater program, Trout Habitat Enhancement Program, and Water Conservation Program. | C2-1
2. Chapter 5, Page 10. The section titled California Trout-Eastern Sierra Program should be eliminated. Unfortunately, the Water Watchers Program was temporary and acquired limited data. | C2-2
3. We understand that the final EIR will appropriately address all stakeholder comments. | C2-3

CalTrout looks forward to working with the District as the CEQA process continues towards closure.

Sincerely,

A handwritten signature in black ink, appearing to be 'Mark Drew', written in a cursive style.

Mark Drew

PO Box 3442  
Mammoth Lakes, CA 93546

**Letter No. C2**

Mark Drew, Program Manager  
California Trout  
Eastern Sierra Program  
P.O. Box 3442  
Mammoth Lakes, CA 93546

**Response to Comment C2 - 1**

Comment noted. Additional text for Chapter 1 of the Draft EIR has been included at Chapter 3, Corrections and Additions to the Draft EIR in the Final EIR which addresses the related actions mentioned. The text will read as follows:

***1.3.13 RELATED PLANS AND PROGRAMS***

*As part of the settlement agreement among CDFG, CalTrout and the District referenced in the opening of the Introduction, the District has agreed to undertake several plans and programs if the SWRCB approves amendments to the District's two water right licenses and permit in substantial conformance with those amendments outlined in Appendix 2 to the settlement agreement. The related plans and programs are:*

***1.3.13.1 GROUNDWATER***

*The District has an ongoing groundwater monitoring program in accordance with a 1993 settlement agreement with CDFG and produces annual reports on such groundwater monitoring for the purpose of evaluating potential impacts of District water supply wells on flows in Mammoth Creek. This program is described in Section 4.1.2.4 of the Draft EIR. The District will involve CalTrout as an additional party in the review of the groundwater monitoring data.*

***1.3.13.2 TROUT HABITAT ENHANCEMENT PROGRAM***

*The District will participate in a collaborative program with CDFG and CalTrout to enhance the brown trout habitat in Mammoth Creek from Twin Lakes outfall to the confluence of Mammoth and Hot Creeks below the state fish hatchery. The Trout Habitat Enhancement Program will consist of cost-effective enhancement projects which support and sustain existing natural systems and ecological processes. A project which is a regulatory or other legal obligation of a party to the settlement agreement or a third party will not be eligible for selection. A governance committee (as described below) will adopt selection criteria, reflecting the recommendations of a technical committee.*

*The criteria may include: (i) financial feasibility, including opportunity to secure non-District funding, (ii) overhead and other indirect costs, (iii) compliance with local, state and federal regulatory and permitting requirements, (iv) schedule for implementation, (v) measurability of outcomes, and (vi) local community support. The governance committee will apply the adopted selection criteria and in its discretion select projects that will be cost-effective to achieve the stated purpose. All information on program implementation will be available to the public.*

*The District will contribute \$10,000 per year for 20 years, to be adjusted for inflation or deflation, to support appropriate projects selected for implementation under the Trout Habitat Enhancement Program. CDFG and CalTrout will seek matching grants, as needed, from other public and private sources. By further agreement of the parties, the program may continue after the expiration of the District's funding obligation.*

*The Enhancement Program will be governed as follows to assure transparency and accountability. A governance committee will consist of one representative each from the District, CDFG, and CalTrout. It will: (i) provide overall coordination of the Program, (ii) designate members of the technical committee and the fiscal agent, and (iii) select projects to fund and implement. The governance committee will act by consensus.*

*A technical committee, appointed by the governance committee, will include representatives from state and federal resource agencies as well as other stakeholders with relevant experience and interests. It will: (i) screen and rank potential projects for the purpose of recommendations to the governance committee and (ii) oversee design, solicitation and selection of contractors, permitting, implementation, and monitoring of selected projects. A fiscal agent will be designated by the governance committee. It will: (i) act as repository for funds committed or received for the Trout Habitat Enhancement Program and (ii) develop and administer contracts for third party support. Qualified, interested parties will be allowed to submit projects for consideration and possible support by the Program.*

### **1.3.13.3 WATER CONSERVATION PROGRAM**

*The District will develop and publish a Water Conservation Program Plan. This plan will: (i) document District policy supporting conservation as well as existing water conservation actions, (ii) assess the effectiveness of existing actions, (iii) set planning goals and priorities for the Water Conservation Program, and (iv) state a long-term plan to continue and expand existing actions which feasibly improve the efficiency of uses. To the extent applicable and feasible, the District will incorporate into this plan those Best Management Practices (BMP) for urban water conservation measures described in the California Urban Water Conservation Council's ("CUWCC") "Memorandum of Understanding regarding Urban Water Conservation" (Dec. 2008), as may be updated from time to time. The District's current water conservation efforts are described in Section 1.5.2.2 and Appendix B of the Draft EIR.*

*Within 12 months from the publication of the Water Conservation Program Plan, and every 12 months thereafter for 10 consecutive calendar years, the District will publish an annual Water Conservation Program Report. This will (i) describe the implementation of the Program and (ii) to the extent applicable and feasible, apply CUWCC standards and metrics for measuring implementation and explain variances, and (iii) assess the need for future revisions to the Program. After the 10<sup>th</sup> annual report, the District will incorporate the Water Conservation Program Report into its Urban Water Management Plan updates which are submitted every 5 years to DWR. The District will implement revisions to the Water Conservation Program at its discretion, taking into consideration regulatory requirements, cost-benefit, implementability, and other appropriate considerations.*

### **1.3.13.4 FULLY APPROPRIATED STREAM STATUS**

*The District, CalTrout and CDFG will prepare a joint petition to the SWRCB to designate Mammoth Creek from the outlet of Twin Lakes to the confluence with Hot Creek below the state fish hatchery as a fully appropriated stream pursuant to Water Code section 1205. These parties will consult with Chance Ranch, Valentine Reserve, Los Angeles Department of Water and Power and other appropriate entities, including the U.S. Forest Service, in the course of preparing such petition. In any hearing held on such petition, CalTrout, CDFG and the District will support such designation.*

#### Response to Comment C2 - 2

Comment noted. The section titled, California Trout-Eastern Sierra Program, at page 5-10 of the Draft EIR has been deleted for the reasons provided. The deletion appears in the Final EIR at Chapter 3, Corrections and Additions to the Draft EIR, and will read as follows (strikethrough shows deleted text):

#### ~~CALIFORNIA TROUT-EASTERN SIERRA PROGRAM~~

~~As part of the Sierra Watershed Alliance, CalTrout and the Eastern Sierra Water Watchers have recently implemented a community based volunteer program to monitor water quality in Mammoth Creek (e.g., ambient conditions including water temperature, DO, pH, electrical conductivity and turbidity, BML, and stream walk surveys to conduct visual assessments for use as screening tools to help focus more detailed investigations). Published reports regarding this water quality monitoring program are pending.~~

#### Response to Comment C2 - 3

Thank you for your comments. All comments received on the Draft EIR have received the appropriate response and are contained in Chapter 2, Comments and Responses, in this Final EIR.



## **CHAPTER 3**

### **CORRECTIONS AND ADDITIONS TO THE DRAFT EIR**

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This chapter provides changes or additions made to the Draft EIR in part based on comments received during the public review period. Other changes and additions provide clarification of matters in the Draft EIR. Deletions are shown with ~~striketrough~~ and additions are shown with underline. Some of the changes to the Draft EIR are indicated below under the respective EIR Chapter and section heading. At the end of this chapter, a minor change to the proposed project is addressed which is a District petition for extension of time respecting District water right Permit 17332. There also is a discussion of the matter of recirculation.

#### **A. CHAPTER 1.0 INTRODUCTION**

On page 1-11, section 1.3.13 is added to read:

##### **1.3.13 RELATED PLANS AND PROGRAMS**

As part of the settlement agreement among CDFG, CalTrout and the District referenced in the opening of the Introduction, the District has agreed to undertake several plans and programs if the SWRCB approves amendments to the District's two water right licenses and permit in substantial conformance with those amendments outlined in Appendix 2 to the settlement agreement. The related plans and programs are:

##### **1.3.13.1 GROUNDWATER**

The District has an ongoing groundwater monitoring program in accordance with a 1993 settlement agreement with CDFG and produces annual reports on such groundwater monitoring for the purpose of evaluating potential impacts of District water supply wells on flows in Mammoth Creek. This program is described in Section 4.1.2.4 of the Draft EIR. The District will involve CalTrout as an additional party in the review of the groundwater monitoring data.

##### **1.3.13.2 TROUT HABITAT ENHANCEMENT PROGRAM**

The District will participate in a collaborative program with CDFG and CalTrout to enhance the brown trout habitat in Mammoth Creek from Twin Lakes outfall to the confluence of Mammoth and Hot Creeks below the state fish hatchery. The Trout Habitat Enhancement Program will consist of cost-effective enhancement projects which support and sustain existing natural systems and ecological processes. A project which is a regulatory or other legal obligation of a party to the settlement agreement or a third party will not be eligible for selection. A governance committee (as described below) will adopt selection criteria, reflecting the recommendations of a technical committee.

The criteria may include: (i) financial feasibility, including opportunity to secure non-District funding, (ii) overhead and other indirect costs, (ii) compliance with local, state and federal regulatory and permitting requirements, (iv) schedule for implementation, (v) measurability of outcomes, and (vi) local community support. The governance committee will apply the adopted selection criteria and in its discretion select projects that will be cost-effective to achieve the stated purpose. All information on program implementation will be available to the public.

The District will contribute \$10,000 per year for 20 years, to be adjusted for inflation or deflation, to support appropriate projects selected for implementation under the Trout Habitat Enhancement Program. CDFG and CalTrout will seek matching grants, as needed, from other public and private sources. By further agreement of the parties, the program may continue after the expiration of the District's funding obligation.

The Enhancement Program will be governed as follows to assure transparency and accountability. A governance committee will consist of one representative each from the District, CDFG, and CalTrout. It will: (i) provide overall coordination of the Program, (ii) designate members of the technical committee and the fiscal agent, and (iii) select projects to fund and implement. The governance committee will act by consensus.

A technical committee, appointed by the governance committee, will include representatives from state and federal resource agencies as well as other stakeholders with relevant experience and interests. It will: (i) screen and rank potential projects for the purpose of recommendations to the governance committee and (ii) oversee design, solicitation and selection of contractors, permitting, implementation, and monitoring of selected projects. A fiscal agent will be designated by the governance committee. It will: (i) act as repository for funds committed or received for the Trout Habitat Enhancement Program and (ii) develop and administer contracts for third party support. Qualified, interested parties will be allowed to submit projects for consideration and possible support by the Program.

### **1.3.13.3 WATER CONSERVATION PROGRAM**

The District will develop and publish a Water Conservation Program Plan. This plan will: (i) document District policy supporting conservation as well as existing water conservation actions, (ii) assess the effectiveness of existing actions, (iii) set planning goals and priorities for the Water Conservation Program, and (iv) state a long-term plan to continue and expand existing actions which feasibly improve the efficiency of uses. To the extent applicable and feasible, the District will incorporate into this plan those Best Management Practices (BMP) for urban water conservation measures described in the California Urban Water Conservation Council's ("CUWCC") "Memorandum of Understanding regarding Urban Water Conservation" (Dec. 2008), as may be updated from time to time. The District's current water conservation efforts are described in Section 1.5.2.2 and Appendix B of the Draft EIR.

Within 12 months from the publication of the Water Conservation Program Plan, and every 12 months thereafter for 10 consecutive calendar years, the District will publish an annual Water Conservation Program Report. This will (i) describe the implementation of the Program and (ii) to the extent applicable and feasible, apply CUWCC standards and metrics for measuring implementation and explain variances, and (iii) assess the need for future revisions to the Program. After the 10<sup>th</sup> annual report, the District will incorporate the Water Conservation Program Report into its Urban Water Management Plan updates which are submitted every 5 years to DWR. The District will implement revisions to the Water Conservation Program at its discretion, taking into consideration regulatory requirements, cost-benefit, implementability, and other appropriate considerations.

#### **1.3.13.4 FULLY APPROPRIATED STREAM STATUS**

The District, CalTrout and CDFG will prepare a joint petition to the SWRCB to designate Mammoth Creek from the outlet of Twin Lakes to the confluence with Hot Creek below the state fish hatchery as a fully appropriated stream pursuant to Water Code section 1205. These parties will consult with Chance Ranch, Valentine Reserve, Los Angeles Department of Water and Power and other appropriate entities, including the U.S. Forest Service, in the course of preparing such petition. In any hearing held on such petition, CalTrout, CDFG and the District will support such designation.

The second paragraph under Section 1.5.2.1 on page 1-12 has been revised as follows:

Other commenters, during the scoping process, expressed concern about whether or not the fishery bypass flow requirements would impact senior downstream water rights. The fishery bypass flow requirements in Permit 17332, as explained above, were developed to protect the Mammoth Creek fishery and have no relevance to senior downstream water rights. The proposed fishery bypass flow requirements stem from the SWRCB order in the temporary water right Permit 20250 for the District to study and determine flow requirements to protect instream beneficial uses. Therefore, downstream water right claims were not considered in analyses to determine appropriate fishery bypass flow requirements described in Chapter 6 - Fisheries and Aquatic Resources. However, senior water rights are protected in the District's water right Permit 17332 and Licenses 5715 and 12593, as they are subject to prior vested rights. Furthermore, the SWRCB adoption of the proposed project, and principally the proposed fishery bypass flow requirements, will not affect any priorities that may pertain to the water right claims of the downstream diverters or the extent of their claimed rights. Also, whether or not the particular water right claim(s) of any downstream diverter has priority over the District's appropriative rights and the extent of that claim are appropriately addressed through an adjudication where issues of public trust, waste and unreasonable use and unreasonable method of use, nonuse, municipal preference, area of origin and other potential pertinent considerations are evaluated and determined. Such evaluations and

determinations far exceed the scope of this proceeding. Accordingly, the matter of protection of senior downstream water rights is outside the scope of this Draft EIR.

Page 1-19, section 1.7.3 has been revised to read:

### **1.7.3 LAHONTAN REGIONAL WATER QUALITY CONTROL BOARD**

The SWRCB is responsible for both the appropriation of surface water, and through the Regional Water Quality Control Boards, for ensuring compliance with State and Federal water quality laws, including the Porter-Cologne Act and the Clean Water Act. For the Project Area, the Lahontan Regional Water Quality Control Board (Lahontan RWQCB) serves as a responsible agency. Regional Water Quality Control Boards protect surface water and groundwater bodies or geographical features within the boundaries of the state. Quality of the water refers to chemical, physical, biological, bacteriological, radiological, and other properties and characteristics of water which affect its use. Beneficial uses of the waters of the State that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

## **B. CHAPTER 5.0 - WATER QUALITY**

The section titled, California Trout-Eastern Sierra Program, on page 5-10 of the Draft EIR has been deleted.

### ~~CALIFORNIA TROUT-EASTERN SIERRA PROGRAM~~

~~As part of the Sierra Watershed Alliance, CalTrout and the Eastern Sierra Water Watchers have recently implemented a community based volunteer program to monitor water quality in Mammoth Creek (e.g., ambient conditions including water temperature, DO, pH, electrical conductivity and turbidity, BMI, and stream walk surveys to conduct visual assessments for use as screening tools to help focus more detailed investigations). Published reports regarding this water quality monitoring program are pending.~~

## **C. CHAPTER 7.0 - WILDLIFE AND BOTANICAL RESOURCES**

The following text has been added as the second paragraph to the Draft EIR section heading 7.1.5.6 Critical Habitat on page 7-71:

CDFG Senior Biologist of the Inland Desert Region Office, Steve Parmenter, has informed the District that the USFWS has been notified that the Owens tui chub critical habitat map should be considered for revision based on the written

description of the critical habitat area and his knowledge of area. Figure 7-3a, Potential Corrections to the USFWS Critical Habitat Map for the Owens Tui Chub, is the same map as Figure 7-3 with the addition of three roman numerals and associated explanations from Mr. Parmenter regarding the need to potentially revise the Owens tui chub critical habitat map. His explanations are as follows:

I. This polygon encloses a waterway that is traditionally known as Mammoth Creek; however, this section of Mammoth Creek is labeled Hot Creek on the USGS map. Locally, Hot Creek begins at the confluence of the waterway comprised of the outflow from the hot springs with Mammoth Creek. The Owens tui chub are not in this northernmost polygon and have not been there since well before the listing date. The area described in the recovery plan as the “two spring provinces at Hot Creek Hatchery” is outside of the northernmost polygon. The spring provinces where the tui chub occur are well known and have not changed since well before listing and critical habitat designation. These are shown in light blue highlight on the map, and are labeled “AB Spring” and “CD Spring.”

II. This blue line depicts the approximate location of the spring channel known as AB Supply, one of the two spring provinces where Owens tui chub are known to occur.

III. This blue line depicts the spring channel known as CD Supply, one of the two spring provinces where Owens tui chub are known to occur.

Figure 7 - 3a has been inserted to follow Figure 7-3 on page 7-72.

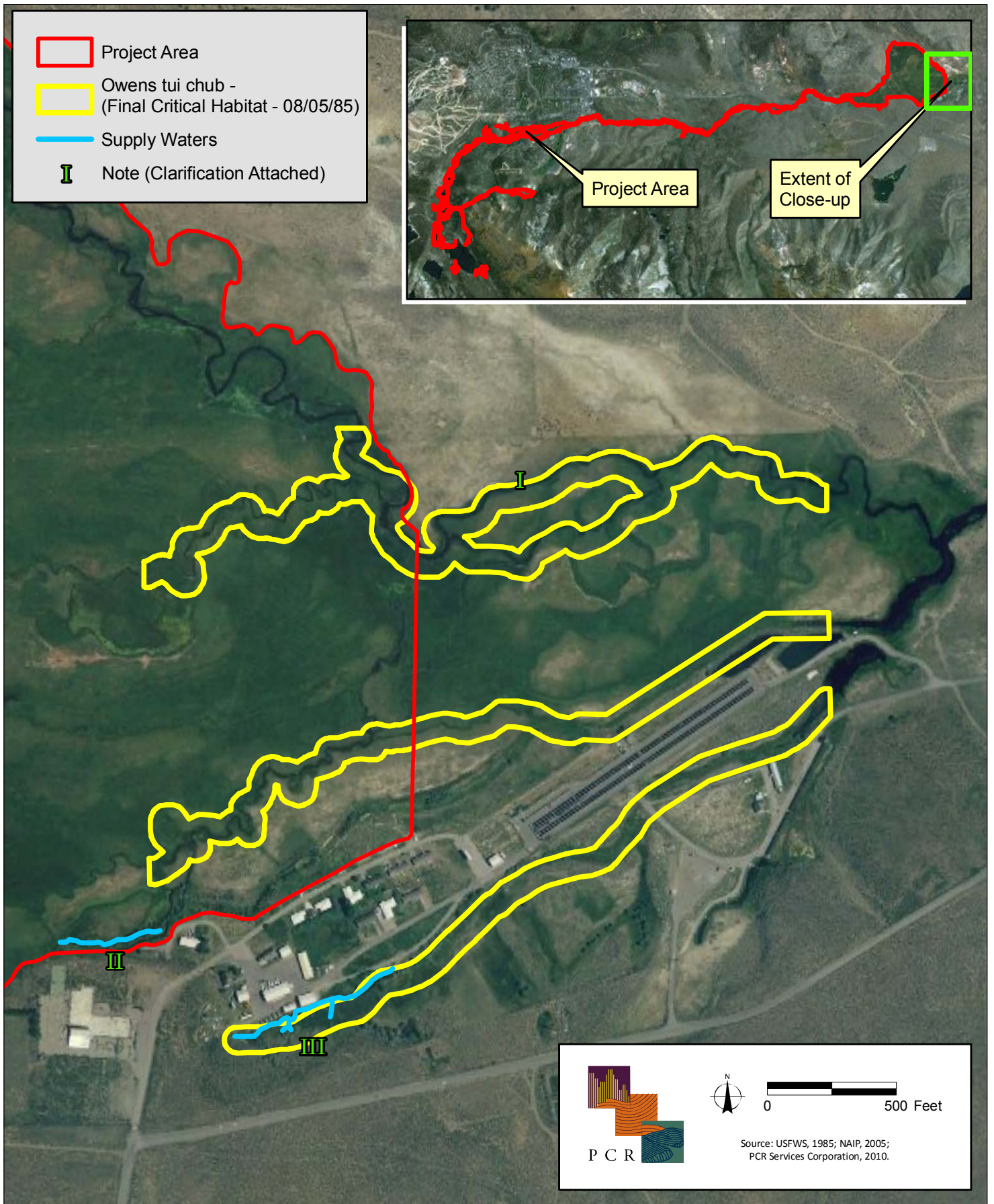


Figure 7-3a Potential Considerations Regarding the USFWS Critical Habitat Map for the Owens Tui Chub

The first paragraph following the heading, Riparian and Wetland Monitoring and Adaptive Management Program, in section 7.3.3.2 at page 7-82, has been revised to read:

As discussed above, riparian and wetland vegetation, including a number of obligate and facultative hydrophytic plant species, have established themselves along the banks of Bodle Ditch and surrounding areas since it was constructed in the late 1880s to supply water to mining camps that existed in the area. In addition, several sensitive plant species may be present in locations supported by Bodle Ditch flows. The ~~riparian and wetland~~ hydrophytic vegetation along the ditch is supported by rain, snowmelt runoff, input from several natural seeps and springs along its length, natural accretion, and by the direct diversion of water from Lake Mary into the ditch between May 1 and November 1, although the specific amount and timing of water released is dependent on the availability of water in Lake Mary. It is not known what percentage of water flow in the ditch annually comes from “natural” sources and what percentage comes from Lake Mary. In addition, determining the amounts, by source, of water flowing into Bodle Ditch, and its relationship to the health of hydrophytic plant species, would require several years of data and installation of additional gauges, where the data ultimately collected could be difficult to interpret given seasonal variations and other factors. While it is suspected that the riparian vegetation and habitat found along Bodle Ditch is supported primarily by inputs other than the diversions from Lake Mary, the potential for impacts associated with the Proposed Project Alternative’s cessation of direct diversion from Lake Mary into Bodle Ditch cannot be accurately determined based on available information. Due to this uncertainty, a Riparian and Wetland Monitoring and Adaptive Management Program (RWMAMP) is proposed as part of the Proposed Project Alternative.

A new subsection has been added to follow the heading, Measurement of Woody Species Regeneration, at page 7-83. The new subsection will read:

#### **SURVEY AND MONITORING OF SENSITIVE PLANT SPECIES**

Prior to cessation of managed diversions from Lake Mary into Bodle Ditch, a sensitive plant survey for scalloped moonwort, Kern milk-vetch, scalloped-leaved lousewort, and slender-leaved pondweed will be conducted for the Bodle Ditch area between mid-June and mid July (or as otherwise determined appropriate) in 2011. If populations of these species are found to be present, CDFG and the Inyo National Forest botanist shall be consulted and the populations shall be monitored in accordance with the regime described below. If the monitoring biologist detects any adverse effects on the population(s), the need for responsive measures and how they will be carried out will be documented.

The paragraph following the heading, Monitoring Stations and Monitoring Regime, at page 7-83 to 7-84 has been revised to read:



### **MONITORING STATIONS AND MONITORING REGIME**

To best elucidate the relationship between diversions from Lake Mary to the maintenance, health and vigor of riparian vegetation along Bodle Ditch, as well as the role of rain, snowmelt runoff, input from several natural seeps and springs along its length, and natural accretion in supporting riparian vegetation along Bodle Ditch, three to four monitoring stations will be established: (1) just below the point of current discharge from Lake Mary; (2) just downstream of the LADWP weir; ~~and~~, (3) just downstream of the spring at the base of Red Mountain; and (4) sensitive plant populations, if located during the 2011 survey. These ~~three~~ stations represent a woody riparian community, a lodgepole pine dominated riparian community, ~~and~~ a woody riparian community, and potentially, populations of sensitive plant species, respectively. The measurement of baseline, or starting conditions, following the methods outlined above, will be conducted in mid- to late July (corresponding to the middle of the growing season) in the beginning year of the RWMAMP. Monitoring at these stations, following the methods outlined above, will take place in mid to late July during each following year of monitoring. Monitoring will be conducted annually for the first three years in order to discern the potential, but unanticipated loss of riparian vegetation along Bodle Ditch, and implement responsive measures if necessary, as set forth below. Following year three of monitoring, if no loss of riparian communities is detected due to the cessation of diversions from Lake Mary, monitoring will take place at year six following the cessation of diversions. If, at the end of the entire 6-year monitoring program no significant loss of riparian communities is detected, the monitoring program will be terminated.

The paragraph following the heading, Adaptive Management Measures, at page 7-84 to 7-85 has been revised to read:

### **ADAPTIVE MANAGEMENT MEASURES**

The adaptive management strategy for identified degradation and/or loss of riparian and wetland communities and/or sensitive plant populations shall include creation, restoration and/or enhancement of riparian and/or wetland habitat. The adaptive management shall be accomplished in one or more of the following ways: (a) creation, restoration and/or enhancement of habitat within the Mammoth Creek riparian zone; (b) creation, restoration and/or enhancement outside the Mammoth Creek riparian zone, but within the Mammoth Creek watershed; ~~and~~ (c) payment of in lieu fees to an existing riparian mitigation/conservation bank and/or existing Inyo National Forest habitat management and/or enhancement program; and (d) through such actions as "set asides" and transplantation receiver site(s), including the recordation of a conservation easement or deed restriction and related best management practices such as protective fencing. The site(s) will be chosen with an emphasis placed on both ecological suitability to allow for maximum survival rate of transplants as well as the minimization of impacts to existing quality habitat. The selection of a site or program to which adaptive management measures will be applied should set a priority for locations where the highest benefit to habitat can be realized



while also enhancing the quality of public views and the enjoyment of trail experiences by the public. The payment of in lieu fees, if such a program exists, shall fulfill these requirements, in part or in full. For adaptive management entailing habitat creation, restoration and/or enhancement, a Habitat Management and Monitoring Plan shall be prepared for review and approval by MCWD and trustee agencies, as appropriate (for example, CDFG). The plan shall stipulate success criteria for the habitat being created, restored and/or enhanced and shall be monitored by a qualified restoration ecologist for five years or until such time as the success criteria are met, but no sooner than one year following cessation of all inputs (e.g., soil amendments, irrigation, etc.) to the creation, restoration and/or enhancement project. The success criteria will address requirements for no significant net loss of riparian and/or wetland habitat and will focus on habitat replacement to the extent practicable and satisfactory to the participating trustee resource agencies.

The second paragraph on page 7-94 in the Draft EIR, under the heading Impact Consideration 7.3.3.3-7 Potential Adverse Effects on Sensitive Biological Resources, has been revised as follows:

The species listed in the preceding paragraph (except alkali tansy-sage, smooth saltbush, Lemmon's milk-vetch, alkali ivesia, and Inyo County star tulip which occur in alkali areas not present within Bodle Ditch) have a potential to occur within Bodle Ditch. A sensitive plant survey was conducted by PCR in August 2009 which covered the blooming period of all potential sensitive plant species in Bodle Ditch except scalloped moonwort (blooming period of June to July), Kern milk-vetch (blooming period of June to July), scalloped-leaved lousewort (blooming period of June to July), and slender-leaved pondweed (May to July). Sensitive plant surveys ~~are recommended~~ shall be conducted for the Bodle Ditch area between mid-June and mid-July (or as otherwise determined appropriate) in 2011 prior to the cessation of managed diversions from Lake Mary into Bodle Ditch in July of next year to determine the status of these species in the Bodle Ditch riparian and wet meadow habitats. If populations of these species are found to be present, CDFG and the Inyo National Forest botanist shall be consulted and the populations shall be monitored as part of the Riparian and Wetland Monitoring and Adaptive Management Program with adverse effects avoided through adaptive management strategies. If the monitoring biologist detects any adverse effects on the population(s) the need for responsive measures and how they will be carried out will be documented. As trustee agencies, the CDFG and USFS, and other agencies, as appropriate, shall be provided copies of the annual reports and related documentation concerning the survey findings and any responsive measures for their review and comment. ~~If present in substantial numbers, their loss would be considered a potentially significant impact.~~

## **D. PETITION FOR EXTENSION OF TIME RESPECTING DISTRICT WATER RIGHT PERMIT 17332**

A petition for extension of time respecting District water right Permit 17332 is added to the proposed project description. The following discussion of the petition and its environmental evaluation are added to the Draft EIR:

The District filed a Petition for Extension of Time with the SWRCB to complete full beneficial use of the water authorized under water right Permit 17332 at the end of 1991. That Petition was noticed by the SWRCB; and no protests were filed against that petition. No action has been taken by the SWRCB on the petition. The District intends to file a new Petition for Extension of Time with the SWRCB requesting that it be provided until 2025 to complete full use of the authorized amount which coincides with the projected build-out of the Town of Mammoth Lakes, as set forth in Table 10-1 at page 10-14 of the Draft EIR. The maximum amount of water diverted under Permit 17332, together with its two licenses (Licenses 5715 and 12593), within the last authorized period for completion of full beneficial use was 2,451 acre-feet in 1984. In accordance with Term 17 of Permit 17332, the maximum amount that the District may divert under all three appropriative rights is 2,760 acre-feet per year. Accordingly, the incremental amount which could be additionally diverted by the District during the period of extension is 309 acre-feet.

The Draft EIR already addresses the potential environmental effects of diverting such incremental amount. In each resource chapter of the Draft EIR (Chapter 4 - Hydrology; Chapter 5 - Water Quality; Chapter 6 - Fisheries and Aquatic Resources; Chapter 7 - Wildlife and Botanical Resources; Chapter 8 - Recreational Resources; Chapter 9 - Visual Resources; and Chapter 10 - Other CEQA Considerations), the Draft EIR evaluated the proposed project at a future level of demand, meaning full utilization of the District's surface water rights. In each chapter under such evaluation, no significant effects to the environment were identified. In addition, in Section 10.3 of the Draft EIR, the subject of growth inducement was discussed and evaluated. Such evaluation also was premised on the District's full utilization of its surface water rights. At page 10-15 of the Draft EIR, it is concluded that, "Since the project alternatives would not increase water supplies over existing conditions, the project alternatives would not remove obstacles to growth based on water supply availability, or have an effect on the population growth and development envisioned under the Town of Mammoth Lakes General Plan."

Accordingly, based on the evaluations set forth in the Draft EIR regarding potential impacts to the various resources of concern resulting from full utilization of the District's surface water rights, it is concluded that approval of the District's petition for extension of time would have less than significant effects on the environment.

## **E. RECIRCULATION**

The District has reviewed whether the changes and additions to the Draft EIR set forth in this chapter should be circulated for review and comment pursuant to

Section 15088.5 of the CEQA Guidelines. For the reasons set forth below, the District has determined that recirculation under Section 15088.5 is not required.

The new information, except for the project description change, merely clarifies, confirms or amplifies information contained in the Draft EIR. Such new information does not disclose that a new significant environmental impact would result from the proposed project, does not disclose that a substantial increase in the severity of any previously identified environmental impact would result unless mitigation measures were adopted that reduced the impact to a level of insignificance, and does not propose any new feasible project alternative or mitigation measure different from those previously analyzed which would clearly lessen the significant environmental effects of any of the project alternatives. Rather, the new information makes insignificant modifications to the Draft EIR.

In addition, with respect to the change in the proposed project description by adding a petition for extension of time relative to District water right Permit 17332, the potential environmental effects of the approval of such petition already were thoroughly evaluated in the Draft EIR as explained above.

In conclusion, the new information added to the Draft EIR is not significant and does not deprive the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the proposed project or a feasible way to mitigate or avoid such an effect.

## APPENDIX A

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Mono County Superior Court Judgment  
Concerning Preliminary Cease and Desist Order No. 9P.2

ENTERED  
VOL. 19 PAGE 204-205 FILED

JUDGMENT & DECREES  
OCT 30 1996

OCT 21 1996

MONO COUNTY  
Superior Court

MONO COUNTY  
SUPERIOR COURT  
BY JILL L. NELSON

JILL L. NELSON

SUPERIOR COURT OF THE STATE OF CALIFORNIA  
COUNTY OF MONO

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MAMMOTH COMMUNITY WATER DISTRICT	)	No. 11159
	)	
Petitioner,	)	JUDGMENT GRANTING
	)	PEREMPTORY WRIT OF
v.	)	MANDATE
	)	
STATE WATER RESOURCES CONTROL BOARD	)	
	)	
Respondent.	)	
	)	

This matter came regularly before this court on May 22, 1996 for hearing.

Alan B. Lilly, of Bartkiewicz, Kronick & Shanahan, P.C., appeared as attorney for the petitioner. Christine Sproul, Deputy Attorney General, appeared as attorney for the respondent. The record of the administrative proceedings having been received into evidence and examined by the court, arguments having been presented, the matter having been submitted for decision, and the court having made a statement of decision, which has been signed and filed,

IT IS ORDERED that:

1. A peremptory writ of mandate shall issue from this court, commanding the respondent to amend paragraph 2. on page 7 of its January 20, 1994 Preliminary Cease and Cease Order 9P.2 to read as follows:

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2. Until such time as the State Board amends Permit 17332 to revise the long-term fishery flow requirements for Mammoth Creek, the District shall not divert water to storage or divert water directly from Mammoth Creek for municipal purposes whenever the mean daily instream flows, measured at the Old Mammoth Road Gage, are less than the following amounts:

<u>MONTH</u>	<u>Mean Daily Flow (cfs)</u>
January	6.4
February	6.0
March	7.8
April	9.8
May	18.7
June	20.8
July	9.9
August	7.2
September	5.5
October	5.5
November	5.9
December	5.9

2. The petitioner shall recover its costs from the respondent. This judgment does not resolve any claim for attorney fees by petitioner. Such fees may be sought in accordance with the procedures provided therefor by law.

Dated: October 21, 1996

BY THE COURT

**N. EDWARD DENTON**

\_\_\_\_\_  
N. EDWARD DENTON  
JUDGE OF THE SUPERIOR COURT