State of California
State Water Resources Control Board
**DIVISION OF WATER RIGHTS**
**P.O. Box 2000, Sacramento, CA 95812-2000**
Info: (916) 341-5300, FAX: (916) 341-5400, Web: http://www.waterrights.ca.gov

# PETITION FOR TEMPORARY TRANSFER OF WATER/WATER RIGHTS

*(Water Code 1725)*

☐ Point of Diversion ☒ Point of Rediversion ☒ Place of Use ☒ Purpose of Use

Application No(s). 14804 Permit No. _____ License No. 11118

Statement or Other No. _____

***Present Holder and User of Water Right***

| South Sutter Water District | c/o Marc Van Camp, Agent | | 916/456-4400 |
|---|---|---|---|
| Person or Company name | Contact person | | Telephone No. |
| **2450 Alhambra Boulevard, 2nd Floor** | **Sacramento** | **CA** | **95817** |
| Address | City | State | Zip Code |
| **vancamp@mbkengineers.com** | | | |
| E-MAIL (For noticing purposes) | | | |

***Co-petitioner***

| | | | |
|---|---|---|---|
| Person or Company name | | Contact person | Telephone No. |
| Address | City | State | Zip Code |
| E-MAIL (For noticing purposes) | | | |

***Proposed New User***

See Attachment.

| | | | |
|---|---|---|---|
| Person or Company name | | Contact person | Telephone No. |
| Address | City | State | Zip Code |
| E-MAIL (For noticing purposes) | | | |

I (We) hereby petition the State Water Resources Control Board (State Water Board) under the provisions of Water Code (WC) section 1725 et seq. and in conformance with the specific requirements of California Code of Regulations (CCR) section 794 for temporary change(s) to the water right application(s) noted above for the purpose of transferring water. The changes are **shown on the accompanying map and described as follows:**

***Amount of Water to be Transferred*** up to 10,000 Acre-feet (AF). If the basis of right is direct diversion, the average rate of diversion for the maximum 30 day period of use is up to 100 cubic feet per second (cfs).

***Period of Transfer/Exchange*** (Not to exceed one year) See Attachment.

***Point of Diversion or Rediversion*** (Give coordinate distances from section corner or other ties as allowed by CCR section 715, and the 40-acre subdivision in which the present & proposed points lie.

Present See Attachment.

Proposed See Attachment.

***Place of Use***

Present See Attachment.

Proposed See Attachment.

***Purpose of Use***

Present See Attachment.

Proposed See Attachment.

| *Season of Use* | *Direct Use (cfs)* | *Storage (ac-ft)* |
|---|---|---|
| Present No change requested. | No change requested. | No change requested. |
| Proposed No change requested. | No change requested. | No change requested. |

The proposed transfer/exchange water is presently used or stored within the county/counties of:
Nevada, Placer, Yuba, and Sutter Counties

The proposed transfer/exchange water will be placed to beneficial use within the following county/counties:
See Attachment.

1a. Would the transfer/exchange water have been consumptively used or stored in the absence of the proposed temporary change (See WC 1725)? Yes
(yes/no)

1b. Provide an analysis which provides documentation that the amount of water to be transferred/exchanged would have been consumptively used or stored in the absence of the proposed temporary change. **See Attachment.**

2a. If the point of diversion/rediversion is being changed, are there any person(s) taking water from the stream between the present point of diversion/rediversion and the proposed point? Yes
(yes/no)

2b. Are there any persons taking water from the stream between the present point of diversion or return flow and the proposed point of diversion or return flow? Not Applicable. See Attachment.
(yes/no)

2c. If the answer to 2a. or 2b. is yes, provide the name and address. Also provide the name and address of other persons known to you who may be affected by the proposed change.
See files at Division of Water Rights, State Water Resources Control Board.

3a. Provide an analysis of any changes in streamflow, water quality, timing of diversion or use, return flows, or effects on legal users resulting from the proposed transfer/exchange. See Attachment.

3b. State reasons you believe the proposed temporary change will not injure any legal user of the water, see Water Code Section 1727 (b)(1). See Attachment.

4. Consult with staff of the applicable Regional Water Quality Control Board concerning the proposed temporary change. State the name and phone number of person(s) contacted. Summarize their opinion concerning compliance with CCR 794(b) and any Regional Board requirements. Jacqueline Matthews (916) 224-4845. Left message with Ms. Matthews on April 13, 2009. No comments have been provided at this time. A copy of the Petition has been sent to the RWQCB c/o Jacqueline Matthews.

5a. Consult with the California Department of Fish and Game pursuant to CCR 794(b) concerning the proposed temporary change. State the name and phone number of the person(s) contacted and their opinion concerning the potential effect(s) of the proposed temporary change on fish, wildlife, or other instream beneficial uses, and state any measures recommended for mitigation. Sharon Stohrer (916) 358-2384. Left message with Ms. Stohrer on April 13, 2009. No comments have been provided at this time. A copy of the Petition has been sent to DFG, c/o Sharon Stohrer.

5b. Does the proposed use serve to preserve or enhance wetlands habitat, fish and wildlife resources, or recreation in or on the water (See WC 1707) ? Yes
(yes/no)

5c. Provide an analysis of potential effect(s) on fish, wildlife, or other instream beneficial uses which may arise from the proposed change. See Attachment.

5d. State reasons you believe the proposed temporary change will not unreasonably affect fish, wildlife, or other instream beneficial uses, see Water Code Section 1727 (b)(2). See Attachment.

6a. Does any agency involved in the proposed transfer/exchange rely upon section 382 of the Water Code to allow the delivery of water outside of the agency's service area? No (yes/no)? See Attachment.

6b. If yes, provide an analysis of the effect of the proposed transfer/ exchange on the overall economy of the area from which the water is being transferred.

A TRANSFER/EXCHANGE UNDER WATER CODE SECTION 1725 INVOLVES ONLY THE AMOUNT OF WATER WHICH WOULD HAVE BEEN CONSUMPTIVELY USED OR STORED IN THE ABSENCE OF THE PROPOSED TEMPORARY CHANGE. A CHANGE WILL BE EFFECTIVE FOR A PERIOD OF ONE YEAR OR LESS, BEGINNING ON THE APPROVAL OF THIS PETITION OR ON SUCH DATE OTHERWISE SPECIFIED BY THE SWRCB ORDER. FOLLOWING EXPIRATION OF THIS TEMPORARY CHANGE, ALL RIGHTS AUTOMATICALLY REVERT TO THE PRESENT HOLDER BY OPERATION OF LAW.

*I (we) declare under penalty of perjury that the above is true and correct to the best of my (our) knowledge and belief.*

Dated: April 14, 2009 at Sacramento, California

Mark Van Signature(s)

(916) 456-4400 Telephone No.

**NOTE:** This petition shall be accompanied by all information and fees required by this form and W.C. Section 1725 et. seq, before the SWRCB will consider acceptance of the petition requesting a temporary change to facilitate a transfer/exchange.

**Proof of Service**: Compliance with W.C. section 1726(c) shall be met by the filing of copies of the proof of service to the Department of Fish and Game and to the board of supervisors of the counties where the water is currently used and the counties to which water is proposed to be transferred.

**Fees**: The following fees must accompany the petition before the petition will be accepted:

1. The fee of $2,000 + $0.30 per acre-foot (greater than 10 acre-feet) shall be submitted with the petition. (Title 23, California Code of Regulations section 1064). The fee is made payable to the State Water Resources Control Board.

2. An $850 environmental filing fee, made payable to the Department of Fish and Game, must accompany a petition for change (Public Resources Code 10005).

Additional copies of this form and water right information can be obtained at www.waterrights.ca.gov.

# Attachment to Petition for Change to License 11118 (Application 14804) held by South Sutter Water District

GENERAL

The purpose of this Petition for Change is to; (1) add the Central Valley Projects (CVP) CW "Bill" Jones Pumping Plant, the State Water Projects (SWP) Harvey O. Banks Pumping Plant, the Barker Slough Pumping Plant, and Contra Costa Canal as points of rediversion, (2) change the place of use to include the service areas served by the export facilities and (3) add Municipal and Industrial, as purposes of use under License 11118. This petition is necessary to allow for the one-year transfer of up to 10,000AF of surface water from South Sutter Water District (District) to the Drought Water Bank (DWB) in order to provide an additional municipal, industrial, and domestic water supply pursuant to the Department of Water Resources memorandum dated, March 5, 2009 and the Governor's State of Emergency drought declaration dated, February 27, 2009.

## RESPONSES TO PETITION FORM

PROPOSED NEW USER

The proposed new users pursuant to the surface water transfer are those agencies participating in the 2009 Department of Water Resources/U.S. Bureau of Reclamation's (Reclamation) Drought Water Bank (DWB).

PERIOD OF TRANSFER/EXCHANGE

The District proposes a reservoir release transfer of up to 10,000 acre feet from Camp Far West Reservoir (Reservoir) and the Camp Far West Diversion Dam (Diversion Dam) during the period from July through September. However, the order should approve the transfer for one year, July 1, 2009 through June 30, 2010, to facilitate the transfer upon favorable conditions.

POINT OF DIVERSION OR REDIVERSION

**Present Point of Diversion and Rediversion**

***Point of Diversion***

**Camp Far West Dam** - North 60° 30' West 4,450 feet from SE corner of Section 21, T14N, R6E, MDB&M, being within NE ¼ of SW ¼ of said Section 21 (California Coordinate System, Zone 2, N 504,600 and E 2,194,500);

***Point of Rediversion***

**Camp Far West Diversion Dam** – South 400 feet and West 2,850 feet from the corner NE corner of Section 29, T14N, R6E, MDB&M., being within the NE ¼ of NW ¼ of said Section 29 (California Coordinate System, Zone 2, N 501,550 and E 2,189,600).

**Proposed Points of Diversion and Rediversion:**

No change in the present point of diversion or point of rediversion is proposed. The CVP CW "Bill" Jones Pumping Plant, the SWP Banks Pumping Plant and Barker Slough Pumping Plant, and the Contra Costa Canal are to be added as points of rediversion to provide the ability to export the proposed transfer quantity from the Delta to the service areas served by the export facilities at points further described below. These proposed points of rediversion are identified on maps filed with the Division of Water Rights under Applications 5630 and 5626.

**CW "Bill" Jones Pumping Plant**: N481100, E1694000, California Coordinate System Zone 3, within the NE ¼ of the SW ¼ of Projected Section 29, T1S, R4E, MDB&M.

**Banks Pumping Plant via the Clifton Court Forebay**: N486035, E1695057, California Coordinate System Zone 3, within the NW ¼ of SE ¼ of Projected Section 20, T1S, R4E, MDB&M.

**Barker Slough Pumping Plant**: N 567,682, E 2,017,761, California Coordinate System Zone 2, within the NE ¼ of SW ¼ of Projected Section 18, T5N, R2E, MDB&M.

**Contra Costa Canal**: N 89°52'W, 8.9 feet from the E ¼ Corner of Section 33, T2N, R3E, MDB&M, within the SE ¼ of NE ¼ of Section 33, T2N, R3E, MDB&M.

PLACE OF USE

**Present Place of Use**

Domestic use and Irrigation of 59,000 acres within a gross area of 65,796 acres, within the boundaries of South Sutter Water District; and Irrigation of a net area of 4,180 acres (including 102 acres located outside of District boundaries and served by contract) within Camp Far West Irrigation District and a power plant located on the Conveyance Canal within the NW ¼ of SW ¼ of Section 1, T13N, R5E, MDB&M, as shown on the map filed with the State Water Resources Control Board.

**Proposed Place of Use:**

The proposed additional places of use include the service areas served by the export facilities. The service area of the CVP is shown on Map 214-208 – 12581 on file with the

Division under Application 5626. The service area of the SWP is shown on Map 1878 – 1, 2, 3, and 4 on file with the Division of Water Rights (Division) under Application 5630.

PURPOSE OF USE

**Present Purpose of Use**

The present purposes of use include Domestic, Irrigation, and Incidental Power.

**Proposed Purpose of Use**

Municipal and Industrial are proposed to be temporarily added as additional purposes of use.

## RESPONSE TO NUMBERED ITEMS ON PETITION FORM

### No. 1b

The District proposes to transfer up to 10,000 AF of surface water between July 1, 2008 and September 30, 2008 through reservoir release. The Reservoir fills and spills in most years of operation. Releases made at the Reservoir flow downstream to the Diversion Dam, where water is diverted to Camp Far West Irrigation District (CFWID), the fish flow bypass release structure and the main canal for deliveries within the District service area. Except at times the Reservoir is spilling Camp Far West Dam controls flows in the Bear River. Under normal operations the District releases from the Reservoir only the quantity of water required to meet the fish bypass flow requirement, their obligation to CFWID, deliveries within the District's service area, and any releases required under its Bay-Delta Settlement Agreement (Settlement Agreement) with the Department of Water Resources. Therefore; absent the proposed transfer, all water proposed to be transferred would be delivered for use within the District's service area. Under historical operational conditions and absent a water transfer, all water not utilized for meeting the in-stream fish flow requirement and obligations to CFWID, would have been diverted to the District's main canal for delivery to its service area. If circumstances occur such that it was not delivered through its main canal, the water would be retained in storage.

### No. 2a, 2b and 2c

Although there are water users taking water from the stream between SSWD's current points of return flow and the proposed points of diversion, we have answered question No. 2b as "not applicable". The diverters downstream of the existing point of diversion/rediversion are diverting under rights/contracts from the Feather River, Sacramento River, and the Delta. The releases made pursuant to the proposed temporary transfer will not reduce the supply available to these other users.

Each year landowners receive supplemental surface water supplies as a result of Reservoir releases. Irrigation requirements above the supplemental surface water supply provided by the District are met through groundwater pumping within the District. Landowners within the District will not alter their cropping patterns as a result of the proposed transfer. The District operates the system's outflow structures to maintain surface water levels within delivery and drainage channels to facilitate deliveries upstream. The outflow structures during the 2009 proposed temporary transfer will be operated to maintain water levels at their historical levels. Therefore, because there will be no change in landowner or District operations, there will be no change in District outflow as a result of the proposed transfer.

**No. 3a, and 3b**

The proposed temporary transfer will not result in a shift in timing of releases from the Reservoir. Absent the transfer, the District would release the transfer quantity of up to 10,000 AF from the Reservoir for diversion into the main canal during the months of July, August and September for consumptive uses within the District. Thus, the quantity of stored water released from the Reservoir would be the same as compared with the conditions absent the proposed temporary transfer. However, the proposed transfer will result in an increase in stream flow in the Bear River below the Diversion Dam during the proposed transfer period from about July 1 through September 30.

The water released for the proposed transfer will be in addition to the required fish bypass flow and any releases required under the District's Settlement Agreement. Therefore, the flow in the channel between the Diversion Dam and the proposed points of rediversion will be higher during the transfer period than would occur absent the proposed transfer. The release pattern for the proposed temporary transfer quantity will be coordinated with the Department of Fish and Game (DFG), and fisheries biologists to minimize fishery concerns within the Bear River as further described in section No. 5b, 5c, and 5d.

As stated above, the District supplies surface water to supplement the groundwater supplies of the landowner within the service area. The quantity of supplemental surface water supplied to landowners varies from year to year based on hydrologic and other factors. The quantity of supplemental surface water to be delivered to District landowners in 2008 assuming the proposed transfer will be within historical levels. There are no changes in cropping patterns or irrigation practices expected as a result of the proposed transfer. Also, as identified above, the structures that control outflow from the District are operated to minimize outflow and maintain water levels to facilitate deliveries to District landowners upstream. Therefore, there will be no change in the timing, quality, or quantity of tailwater as a result of the transfer.

The District does not release water from storage at the Reservoir and the Diversion Dam to other existing downstream users; and thus, there will be no downstream effect from the proposed temporary transfer relative to other legal users of water or to water quality. In addition, according to the Division's eWRIMS website database, no active authorized points of diversion

exist downstream of the Diversion Dam along the Bear River from the Diversion Dam to the confluence with the Feather River.

**No. 5b, 5c and 5d**

As further identified in the attached Environmental Information Form, accompanying this Petition, the Department and the Bureau published the following environmental documentation relative to the DWB.

On March 4, 2009, DWR published an Addendum to the Environmental Water Account (EWA) Environmental Impact Statement/Environmental Impact Report (EIS/EIR) and the EWA Supplemental EIS/EIR, to address issues relevant to the DWB (State Clearinghouse #1996032083). The Addendum is available at:
http://www.water.ca.gov/drought/docs/030409DWBaddendum.pdf

On March 5, 2009, the U.S. Bureau of Reclamation published a Draft Environmental Assessment (Draft EA), Draft Finding of No Significant Impact, and a Biological Assessment for the DWB pursuant to requirements under the National Environmental Policy Act (NEPA). These documents are available on Reclamation's web site at:
http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=3591

On March 9, 2009, the DWR issued a Notice of Exemption from the requirements under the California Environmental Quality Act (CEQA) for the DWB, which states that "This Project is subject to the Governor's Proclamation of a State of Emergency of February 27, 2009, among whose purposes is to protect the safety of persons and property from the natural disaster created by the critical drought conditions currently existing in the State. Therefore, CEQA exemptions under Section 17 and CCR title 14, section 1529(c) shall apply, therefore; the 2009 Drought Water Bank falls within this exemption." This document can be located at:
http://www.water.ca.gov/drought/docs/030909noe.pdf

In addition, the District is providing the information below, over and above the environmental documentation available through the DWB in order to identify the potential effects the proposed transfer would have on fish, wildlife, or other instream beneficial uses.

The principal concern of effects on instream beneficial uses resulting from the proposed water transfer relate to the potential for deleterious artificial attraction of fish species of concern into the lower Bear River. Possible effects on wildlife and other beneficial uses resulting from the proposed transfer are considered negligible or positive due to increased water available for wildlife and riparian habitats. Under present conditions, the lower Bear River does not provide suitable habitats for anadromous fish known to occur elsewhere in the Feather River system: fall-run Chinook salmon, spring-run Chinook salmon, steelhead trout, and green sturgeon. The latter three species are listed by the federal government as threatened species under the Endangered Species Act. Reproduction of the salmonid species in the lower Bear River is limited by silted spawning gravels, high winter flood flows, and high water temperatures

(SWRCB Order WR 2000-10). Additionally, habitats are unsuitable for green sturgeon due to the lack of deep pools and cool water necessary for reproduction.

Because the proposed transfer would increase instream flows in the lower Bear River, there is the potential for these fish species to be artificially attracted from the Feather River into the Bear River where habitats are hostile and fish production would be poor compared to those fish remaining in the Feather River. This potential circumstance is dependent on the timing of the increased flows relative to the seasonal presence of the fish species of concern. The analyses of potential effects on fish included an examination of the life cycle periodicity of anadromous fish in the Feather River system, the magnitude and timing of the instream flows in the lower Bear River resulting from the proposed transfer, the timing and magnitude of Feather River flows during the proposed transfer, and physical habitat conditions for anadromous fish in the lower Bear River.

The timing of the proposed transfer would be during July, August, and September. This period avoids the primary life cycle timing of the upstream migration and reproduction of anadromous fish in the Feather River. Upstream migration and spawning of steelhead and fall-run Chinook salmon occur during the fall and winter. Upstream migration of spring-run Chinook primarily occurs during the spring, and to a lesser extent, the early fall with reproduction occurring during the early fall. Green sturgeon upstream migration occurs during the winter and spring with reproduction occurring during the spring. The proposed water transfer period avoids adverse impacts to these species by timing the increased instream flows when the fish are not seasonally present.

Because the proposed transfer would occur during July, August, and September, water temperature data during this period within the Reservoir and the river downstream of the dam were examined to determine suitability for anadromous fish. Prior studies conducted for the District demonstrated that the water temperatures in front of the Dam at both the power outlet and the low-water outlet during the summer and early fall exceed the range for successful salmonid reproduction. Additionally, water temperatures recorded downstream of the Dam at the District's diversion facility showed that water temperatures do not cool to tolerable levels for salmon spawning until mid- to late-November. These circumstances are attributable to the fact that the Reservoir is a relatively low-elevation impoundment and subject to high summer water temperatures and intense solar radiation. Prior studies demonstrated that a shift in water layers in the reservoir does not occur until the late fall/early winter as early, cooler water runoff enters the reservoir. Therefore, increased reservoir releases during July, August, and September resulting from the proposed water transfer would not be expected to lower water temperatures in the lower Bear River to a tolerable range for anadromous fish and, therefore, would not attract fish into the river if the fish were present during that period. Additionally, juvenile anadromous fish would not be expected to be present during July, August, and September due to unsuitably high water temperatures and lack of or inferior physical rearing habitats, a condition attributable to a river channel formed by very high and frequent winter-time scouring flows.

Therefore, we concluded that the proposed water transfer during July, August, and September would not adversely impact fishery resources because the fish species of concern are not seasonally present, and the combination of low proportional contribution to the Feather River flows and unsuitably warm water temperatures would be unlikely to inadvertently attract fish into the Bear River if the fish were present. In addition, the transfer will take place within the constraints set forth in the 2006 Bay-Delta Water Quality Control Plan and the requirements of water rights Decision 1614 for the protection of fish and wildlife.

**No. 6b**

There will be no change in the overall economy of the area as a result of this proposed temporary transfer. The proposed transfer involves the release of stored water. There are no changes in cropping patterns within the District as a result of the proposed transfer. Additionally, the quantity of supplemental surface water to be supplied to District landowners will be within the historical range. Therefore, the proposed transfer will have no effect on the overall economy of the area from which the water is being transferred.

**California Environmental Protection Agency**
State Water Resources Control Board
**DIVISION OF WATER RIGHTS**
**P.O. Box 2000, Sacramento, CA 95812-2000**
Info: (916) 341-5300, FAX: (916) 341-5400, Web: http://www.waterrights.ca.gov

# ENVIRONMENTAL INFORMATION FOR PETITIONS

☒ **Petition for Change** ☐ **Petition for Extension of Time**
**Application No. 14804** **License 11118**

Before the State Water Resources Control Board (SWRCB) can approve a petition to change your water right permit or a petition for extension of time to complete use, the SWRCB must consider the information contained in an environmental document prepared in compliance with the California Environmental Quality Act (CEQA). This form is not a CEQA document. If a CEQA document has not yet been prepared, a determination must be made of who is responsible for its preparation. As the petitioner, you are responsible for all costs associated with the environmental evaluation and preparation of the required CEQA documents. Please answer the following questions to the best of your ability and submit any studies that have been conducted regarding the environmental evaluation of your project. If you need more space to completely answer the questions, please number and attach additional sheets.

## 1. DESCRIPTION OF PROPOSED CHANGES OR WORK REMAINING TO BE COMPLETED

For a petition to change, provide a description of the proposed changes to your project including, but not limited to, type of construction activity, structures existing or to be built, area to be graded or excavated, increase in water diversion and use (up to the amount authorized by the permit), changes in land use, and project operational changes, including changes in how the water will be used. For a petition for extension of time, provide a description of what work has been completed and what remains to be done. Include in your description any of the above elements that will occur during the requested extension period.

☒ *See Attachment No. 1*

**2. COUNTY PERMITS** Not Applicable.

a. Contact your county planning or public works department and provide the following information:

Person contacted: _____ Date of contact: _____

Department: _____ Telephone: (_____) _____

County Zoning Designation: _____

Are any county permits required for your project? ☐YES ☒ NO If YES, check appropriate box below:
☐Grading permit ☐Use permit ☐Watercourse ☐Obstruction permit ☐Change of zoning
☐ General plan change ☐Other (explain):

_____

_____

b. Have you obtained any of the required permits described above? ☐YES ☒ NO
If YES, provide a complete copy of each permit obtained.
☐ *See Attachment No.* ___

**3. STATE/FEDERAL PERMITS AND REQUIREMENTS** Not Applicable.

a. Check any additional state or federal permits required for your project:
☐Federal Energy Regulatory Commission ☐ U.S. Forest Service ☐ Bureau of Land Management
☐Soil Conservation Service ☐ Dept. of Water Resources (Div. of Safety of Dams) ☐Reclamation Board
☐Coastal Commission ☐State Lands Commission Other (specify) _____

b. For each agency from which a permit is required, provide the following information:

| AGENCY | PERMIT TYPE | PERSON(S) CONTACTED | CONTACT DATE | TELEPHONE NO. |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

☐ *See Attachment No.* ___

c. Does your proposed project involve any construction or grading-related activity that has significantly altered or would significantly alter the bed or bank of any stream or lake? ☐ YES ☒ NO
If YES, explain: _____

_____

_____

_____

_____

_____

_____

_____

☐ *See Attachment No.* ___

d. Have you contacted the California Department of Fish and Game concerning your project? ☒ YES ☐ NO
If YES, name and telephone number of contact: Sharon Stohrer (916) 358-2384

## 4. ENVIRONMENTAL DOCUMENTS

a. Has any California public agency prepared an environmental document for your project? ☐ YES ☒ NO
If YES, submit a copy of the latest environmental document(s) prepared, including a copy of the notice of determination adopted by the California public agency. Public agency: See Attachment No. 1.

b. If NO, check the appropriate box and explain below, if necessary: Not Applicable. Exempt Water Code Section 1725.
☐ The petitioner is a California public agency and will be preparing the environmental document.*
☐ I expect that the SWRCB will be preparing the environmental document.**
☐ I expect that a California public agency other than the State Water Resources Control Board will be preparing the environmental document.* Public agency: _____

☒ *See Attachment No.* 1

* Note: When completed, submit a copy of the final environmental document (including notice of determination) or notice of exemption to the SWRCB, Division of Water Rights. Processing of your petition cannot proceed until these documents are submitted.

** Note: CEQA requires that the SWRCB, as Lead Agency, prepare the environmental document. The information contained in the environmental document must be developed by the petitioner and at the petitioner's expense under the direction of the SWRCB, Division of Water Rights.

## 5. WASTE/WASTEWATER

a. Will your project, during construction or operation, (1) generate waste or wastewater containing such things as sewage, industrial chemicals, metals, or agricultural chemicals, or (2) cause erosion, turbidity or sedimentation?
☐ YES ☒ NO Not Applicable.
If YES, or you are unsure of your answer, explain below and contact your local Regional Water Quality Control Board for the following information (See instruction booklet for address and telephone no.):

_____

☐ *See Attachment No.* ___

b. Will a waste discharge permit be required for your project? ☐ YES ☐ NO
Person contacted: _____ Date of contact: _____

c. What method of treatment and disposal will be used? Not Applicable.

_____

_____

☐ *See Attachment No.* ___

## 6. ARCHEOLOGY

a. Have any archeological reports been prepared on this project? ☐ YES ☒ NO
b. Will you be preparing an archeological report to satisfy another public agency? ☐ YES ☒ NO
c. Do you know of any archeological or historic sites located within the general project area? ☐ YES ☒ NO

If YES, explain: _____

_____

_____

_____

_____

☐ *See Attachment No.* ___

7. **ENVIRONMENTAL SETTING** See Attachment No. 1

Attach **three complete sets of color photographs**, clearly dated and labeled, showing the vegetation that exists at the below-listed three locations. For time extension petitions, the photographs should document only those areas of the project that will be impacted during the requested extension period.

☐ Along the stream channel immediately downstream from the proposed point(s) of diversion.
☐ Along the stream channel immediately upstream from the proposed point(s) of diversion.
☐ At the place(s) where the water is to be used.

8. **CERTIFICATION**

I hereby certify that the statements I have furnished above and in the attachments are complete to the best of my ability and that the facts, statements, and information presented are true and correct to the best of my knowledge

Date: April 14, 2009 Signature: _____

# Attachment No. 1
## to Environmental Information for Petition for Temporary Urgency Change License 11118 (Application 14804) held by South Sutter Water District

## 1. PROJECT DESCRIPTION

### Introduction

South Sutter Water District (District) is proposing a transfer of up to 10,000 acre-feet (AF) of previously stored water to Department of Water Resources (Department) and U.S. Bureau of Reclamation's Drought Water Bank (DWB). The District historically has not been involved in water transfers, with the exception of the Bay-Delta Phase 8 Settlement Agreement (Settlement Agreement), and a similar transfer in 2008. The District is interested in providing water supply assistance pursuant to the Governor's declaration of February 27, 2009. In addition, increased costs associated with the FERC relicensing process, the required Probable Maximum Flood (PMF), and other regulatory processes have resulted in the District considering a water transfer to aid in offsetting these large expenses in order to maintain their ability to provide an affordable surface water supply.

Under the proposed transfer, up to 10,000 AF of previously stored water would be released from Camp Far West Reservoir (Reservoir) and the Camp Far West Diversion Dam (Diversion Dam). This water would flow downstream in the Bear River, thence the Feather River, thence the Sacramento River to the Delta where it would be rediverted at the State Water Project's Banks Pumping Plant, the Barker Slough Pumping Plant, the Central Valley Project Jones Pumping Plant, or the Contra Costa Canal for use within the service areas of the export facilities. In absence of the proposed transfer, this water would be delivered to District landowners.

### General Location

The District's service area is located within Sutter and Placer Counties, south of the Bear River and east of the Feather River, and includes a gross area of approximately 66,000 acres. Figure 1 identifies the location of the District within the Sacramento Valley, relative to other districts and stream systems. The District owns and operates the Reservoir, Camp Far West Dam (Dam), and the Diversion Dam located on the Bear River within Placer, Nevada and Yuba Counties.

### Background

Prior to the development of the Reservoir, individual landowners within the District's service area pumped groundwater to meet crop irrigation requirements. As a result, prior to the

construction and subsequent enlargement of the Reservoir, the groundwater levels were declining. The District was formed in May 1954 to develop, store, and distribute surface water in order to reverse the effects of declining groundwater elevations resulting from groundwater pumping. As a result of the development of the Reservoir and the District's delivery of surface water, the groundwater elevations have been successfully restored to pre-depletion historical levels. The development of the Reservoir has resulted in an efficient conjunctive use project, which has operated successfully for the last 40 years. District landowners receive supplemental surface water supplies that augment their groundwater pumping. The District does not own or operate any groundwater production wells. The proposed American Basin Conjunctive Use Project Report prepared by the Department of Water Resources (Department) identifies the minimal impact groundwater pumping has had on the groundwater basin post-Reservoir construction. In addition, monitoring wells located within the District indicate, in almost every year, that the groundwater basin is recharged during the subsequent winter period when the Delta is not in balance conditions. Absent the development of the surface water reservoir, groundwater pumping within the District's service area would have continued and groundwater levels would be significantly lower than they are with the development of the surface water supply.

The District has an existing Settlement Agreement relative to the State Water Resources Control Board's (SWRCB) Phase 8 of the Bay-Delta hearings with the Department. The Settlement Agreement requires the release of surface water during dry and critical years into the Bear River for in-stream beneficial uses within the Delta. In these years, the supplemental surface water supply available to District landowners is reduced to offset the 4,400 acre-feet release of surface water from the reservoir. The Settlement Agreement, and the subsequent SWRCB Order 2000-10 identify that there is a less than significant impact to export supplies available to State and Federal Contractors as a result of the Settlement Agreement, and increased groundwater pumping.

## Current Operations

In 2008, the District participated in a water transfer between the Department and various State Water Contractor Agencies (SWRCB Order 2008-0039-DWR). The 2008 Pilot Water Transfer (Pilot Transfer) was the first water transfer the District participated in with the exception of the Settlement Agreement with the Department. As part of this Pilot Transfer the District worked cooperatively with the Department and the SWRCB to provide the necessary data and materials. Many of the items and information contained in the enclosed attachments to this Environmental Information Form have been transmitted to the SWRCB pursuant to the Pilot Transfer. Following the Pilot Transfer, the District updated the materials provided during the Pilot Transfer to reflect 2008 District operations as further described below.

### *Camp Far West Reservoir and Camp Far West Diversion Dam Operations*

As identified above, the District owns and operates the Reservoir. In most years, the Reservoir fills, spills, and is essentially emptied in each and every year to meet the District's water delivery and in-stream flow requirements. The attached memorandum, dated April 9,

2009, describes 2008 Reservoir operations during the Pilot Transfer through the point of refill, which occurred on March 8, 2009. The Bear River watershed feeding the Reservoir is a rainfall basin; and therefore, the runoff into Reservoir diminishes rapidly during the spring months. The spring runoff is very unpredictable and unreliable as a surface water supply to the landowners within the District. Each year, District management estimates the water available from both Reservoir and the spring runoff to determine the surface water supply for allocation to all District landowners prior to the irrigation season. Increased spring runoff may allow for an increased surface water delivery to landowners within the District's service area.

Pursuant to an agreement between Camp Far West Irrigation District (CFWID) and the District during the construction and subsequent enlargement of the Reservoir, CFWID is entitled to the first 13,000 AF released from the Reservoir each year to satisfy their senior water rights on the Bear River. All of the inflow to the reservoir not delivered to either CFWID or District landowners flows downstream in the Bear River to the Feather River. Figure 2, attached, is a schematic of the system facilities at the Reservoir and the Diversion Dam. The District releases water from the Reservoir either through the power generating turbine or through the bypass outlet discharge structure. The water flows downstream approximately 1.5 miles to the Diversion Dam. The District operates the Diversion Dam to regulate the flow released from the Reservoir for diversion by CFWID, deliveries to District landowners, and releases through the fish flow bypass structure. Reservoir releases, deliveries to the District's main canal and to CFW ID, and releases through the fish flow bypass structure are closely monitored to minimize spill at the Diversion Dam during irrigation season. The District does not own or operate any other facilities along the Bear River below the Diversion Dam and the fish flow bypass structure.

***Bear River Stream Flow***

Flows released through the fish flow bypass structure enter the Bear River at the base of the Diversion Dam. Releases through the structure are measured and recorded at USGS Gage 11423800, Bear River Fish Release below Camp Far West Reservoir. Table 1 summarizes the average monthly fish flow releases to the Bear River for 2008, during the Pilot Transfer months of July through September. As identified above, the Diversion Dam does not typically spill during the irrigation season; however, some unmeasured seepage/leakage does occur. Based on information provided by Brad Arnold, the District's General Manager, and District staff; this quantity of water is assumed to be minimal and will not change as a result of the proposed transfer.

Pursuant to License 11118 (Application 14804), the District maintains a release of 10 cfs down the Bear River during the months of July through March of the subsequent year and 25 cfs during the months of April through June. The District does not release surface water down the Bear River to fulfill District surface water delivery obligations.

Pursuant to the Settlement Agreement, the District releases 4,400 AF during dry or critical years, as classified by the Sacramento Valley Year Type Index 40-30-30. Releases are made through the Diversion Dam, which is modified to allow for water to be released at the

specified diversion rate needed to fulfill the 4,400 AF release. Table 2 identifies the average monthly flow rate pursuant to the Settlement Agreement during 2008.

Under the proposed transfer, the Diversion Dam would be modified in a similar manner as under the Pilot Transfer to allow for the flow rate of release needed to satisfy up to 10,000 AF of transfer water. Water released pursuant to the proposed transfer would be in addition to the District's required fish flow bypass and any releases required pursuant to the Settlement Agreement.

Other inflows to the Bear River below the Diversion Dam are the result of natural runoff and inflow from non-District operations. These downstream inflows are not the result of operations within the District. Therefore, they will not be affected by the proposed transfer.

According to the Division of Water Rights eWRIMS website, no authorized points of diversion exist downstream of the Diversion Dam along the Bear River from the Diversion Dam to the confluence with the Feather River.

## Surface Water Use within the District

As previously indicated, the Reservoir was constructed to reduce the reliance on groundwater within the District's service area. The available surface water supplies are not sufficient to meet all of the demands within the District. The surface water supply is a supplemental source of water for District landowners.

Water originating from the Bear River for delivery to the District's service area is measured at the head of the main canal. The headworks of the main canal consist of a rated radial gate that is used to control, as well as measure, deliveries to the canal. Figure 3 shows the main canal deliveries to District landowners for the 2008 irrigation season.

The major crop within the District is rice, which typically requires approximately 5 to 6 acre-feet per acre of applied water to satisfy consumptive use and cultural practices. Since the construction and subsequent enlargement of the Reservoir, landowners have received between ½ and 2½ AF per acre of supplemental surface water to augment their groundwater pumping and fulfill irrigation needs within the District. The quantity of supplemental surface water delivered to landowners varies depending upon hydrologic conditions and other factors. Based on current projections, the quantity of supplemental surface water available for delivery to District landowners in 2009, assuming the proposed transfer, will be within the historical range.

## Tail Water Recovery Facilities and Operations within the District

### *District Delivery System and Facilities*

As identified above, water is diverted at the Diversion Dam and conveyed through the main canal for delivery within the District's service area. The District utilizes a system of

constructed canals, a pipeline, and reconstructed stream channels and sloughs as both its delivery and drainage system. Figure 4 is a map of facilities within the District's service area, including the main channels used to convey water to District landowners. Control structures located at key locations are operated to minimize spill and maintain water levels in order to facilitate deliveries.

Figure 4 identifies the District's eight outflow sites where spill could occur during the irrigation season. At seven of these eight outflow sites, control structures are in place, which maintain the water levels throughout the irrigation season to facilitate deliveries from the conveyance channels. Yankee Slough, Line 3, Line 3B, West Auburn Extension, East Auburn Extension, Coppin Dam, and King Slough have upstream control structures in place to maintain water levels and minimize outflow during the irrigation season.

According to Mr. Arnold, outflow from the District is minimal; and generally only occurs just prior to rice harvest, when farmers drain their rice fields. Mr. Arnold identified Coppin Dam and King Slough (sites 6 and 7 on Figure 4) as the two locations where outflow does occur. As identified on Figure 4, Coppin Dam is located at the confluence of the Auburn Ravine and the East Side Canal. Spill at the Coppin Dam can be partially attributed to operations within the District, and partially to unexpected inflow from Auburn Ravine which originates upstream of the District. According to District staff, outflow from the other conveyance channel control structures in place and at Pleasant Grove Creek, which does not have a control structure in place, is minimal. The tailwater from the majority of the District operations would flow into the East Side Canal, and thence, into the Natomas Cross Canal. Although the control structures at the outflow sites could be utilized for measurement of District outflow, due to budgetary constraints, and observations by District staff confirming that outflow is minimal during irrigation season, outflow measurement has not been conducted.

As identified above, the control structures at the outflow sites are operated to maintain water levels to facilitate deliveries to District landowners. The outflow structures will be operated to maintain the same water levels with or without the proposed transfer. Therefore, there will be little or no change in District outflow as a result of the proposed transfer.

**Third Party Impact Consideration**

The cropping pattern within the District, delivery operations, and outflow operations will not change as a result of the proposed transfer. Therefore, the release and transfer of up to 10,000 acre-feet of surface water proposed by the District will have little to no impact on other parties within or downstream of the District.

## 4. ENVIRONMENTAL DOCUMENTS

On March 4, 2009, the Department published an Addendum to the Environmental Water Account (EWA) Environmental Impact Statement/Environmental Impact Report (EIS/EIR) and the EWA Supplemental EIS/EIR, to address issues relevant to the DWB (State Clearinghouse

#1996032083). The Addendum is available at:
http://www.water.ca.gov/drought/docs/030409DWBaddendum.pdf

On March 5, 2009, the U.S. Bureau of Reclamation published a Draft Environmental Assessment (Draft EA), Draft Finding of No Significant Impact, and a Biological Assessment for the DWB pursuant to requirements under the National Environmental Policy Act (NEPA). These documents are available on Reclamation's web site at:
http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=3591

On March 9, 2009, the DWR issued a Notice of Exemption from the requirements under the California Environmental Quality Act (CEQA) for the DWB, which states that "This Project is subject to the Governor's Proclamation of a State of Emergency of February 27, 2009, among whose purposes is to protect the safety of persons and property from the natural disaster created by the critical drought conditions currently existing in the State. Therefore, CEQA exemptions under Section 17 and CCR title 14, section 1529(c) shall apply, therefore; the 2009 Drought Water Bank falls within this exemption." This document can be located at:
http://www.water.ca.gov/drought/docs/030909noe.pdf

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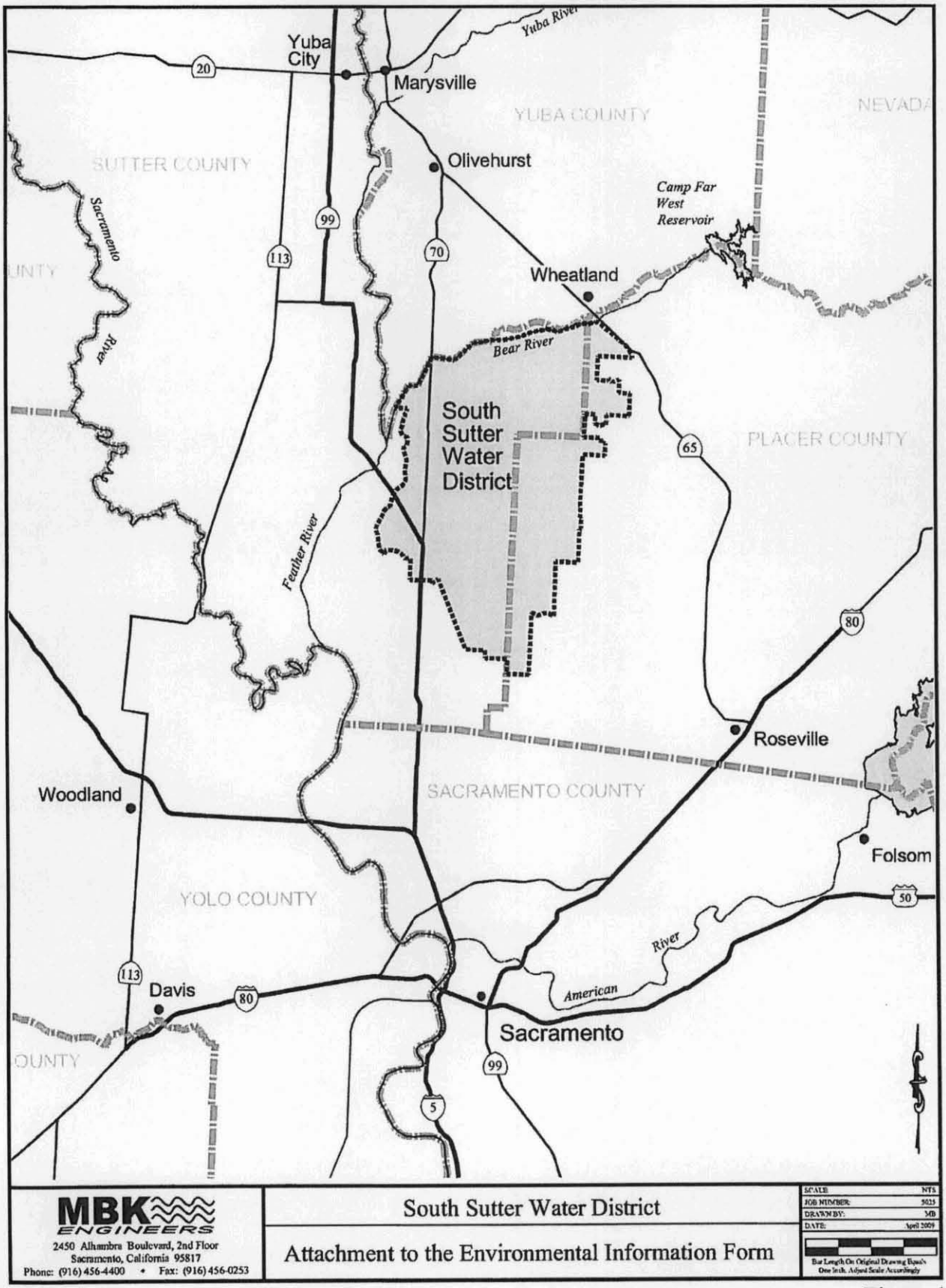


| | | |
|---|---|---|
| MBK ENGINEERS<br>2450 Alhambra Boulevard, 2nd Floor<br>Sacramento, California 95817<br>Phone: (916) 456-4400 • Fax: (916) 456-0253 | South Sutter Water District<br>Attachment to the Environmental Information Form | SCALE: NTS<br>JOB NUMBER: 5023<br>DRAWN BY: MB<br>DATE: April 2009<br>Bar Length On Original Drawing Equals One Inch. Adjust Scale Accordingly |

Figure 1

MBK ENGINEERS

*Water Resources • Flood Control • Water Rights*

# MEMORANDUM

**DATE:** April 9, 2009

**TO:** Robert Cooke

**FROM:** Sara Harper

**SUBJECT:** 2008 Reservoir Operations Summary for 2008 Pilot Water Transfer

In 2008, South Sutter Water District (District) participated in a Pilot Water Transfer (Pilot Transfer) with various State Water Contractor Agencies (SWCA). Pursuant to Article 6(a) of the Storage and Conveyance Agreement executed on August 15, 2008 between the Department of Water Resources (Department), the District, and the participating SWCAs; this memorandum summarizes the District's Camp Far West Reservoir (Reservoir) Operations during the 2008 Pilot Water Transfer through the point of maximum refill. This memorandum includes the following attachments;

- Figure 1 - 2008 reservoir hydrograph through point of maximum Reservoir refill;
- Figure 2 – Main canal deliveries;
- Table 1 – 2008 Pilot Water Transfer Deliveries;
- January 26, 2009 letter from GEI Consultants

As identified in Article 6(a) of the Storage and Conveyance Agreement, the Department did not impose refill criteria for the 2008 Pilot Water Transfer; however, the Department requested a summary of 2008 reservoir operations to verify that the Reservoir refilled when the Delta was in excess conditions; and therefore, during a period when the State Water Project and Central Valley Project would not be affected. Figure 1 identifies that the Reservoir filled and spilled on March 8, 2009 to a maximum Reservoir capacity of 93,740 acre-feet. The quantity of transferred water was 6,909 acre-feet which entered the reservoir between March 4 and March 8. The Delta was in excess conditions from February 18 through and beyond March 8.

Figure 2 shows the District deliveries to landowners within the District's service area. As identified in Figure 2, deliveries were within historic quantities and on the same pattern as would otherwise be delivered, absent the 2008 Pilot Water Transfer. Table 1 identifies the total volume and rate released pursuant to the 2008 Pilot Water Transfer, as previously identified by invoice, dated October 23, 2008, copied to the Department.

The District has been working with the Federal Energy and Regulatory Commission (FERC) to meet the inflow design flood (IDF) for Camp Far West Dam, FERC Project No. 2997. As a direct result of this effort, the District commissioned GEI Consultants to perform aerial and bathymetric surveys in order to analyze and determine the current Reservoir area and capacity.

Attached is a letter dated January 26, 2009 from GEI Consultant, Mark Fortner, identifying the current Reservoir Capacity as 93,740 acre-feet. As you may recall the proposed Reservoir operations plan, dated July 23, 2008, identified a Reservoir storage capacity of 104,400 acre-feet. At this time, the exact reason for this decrease in storage is unknown; however, this decrease may be due to a variety, or combination of factors including; sedimentation or improved data and calculation procedures. The reduction in storage capacity had no effect on the total water supply available to the District for the 2008 irrigation season; and therefore, the Pilot Water Transfer. The reduced storage within the Reservoir results in a modification to the calculation determining whether the water supply available to the District is from natural inflow (direct diversion) or withdrawal from storage. For example, as with most reservoirs, the inflow is calculated using the measured outflow quantities and changes in storage quantities using the area-capacity curve. The equation for this calculation is;

$$\Delta S = I - O$$

Where:

$\Delta S$ = Change in storage
I = Inflow
O = Outflow

Rearranging this equation to solve for the inflow shows that inflow is equal to the change in storage volume plus outflow ($I = \Delta S + O$). Outflow quantities from the Reservoir are accurately measured through Camp Far West Dam (Dam) at the powerhouse, or when the powerhouse is bypassed, water is released though the outlet discharge located near the base of the Dam. In addition, releases from the Dam are further verified at the District owned and operated Camp Far West Diversion Dam (Diversion Dam), located approximately 1 ½ miles downstream of the Reservoir. Releases made pursuant to the 2008 Pilot Water Transfer, deliveries to the District service Area, the District's Bay Delta Settlement Agreement (Settlement Agreement) with the Department, and the District's fish bypass flow are measured at the Diversion Dam; and are accurate measurements of releases pursuant to the District's aforementioned delivery obligations. If the change in Reservoir storage was increasing, and was previously overestimated, the resulting inflow would be overestimated. If the change in storage was decreasing and was previously overestimated, the resulting inflow would be underestimated. This mathematical relationship is identified in the above equation. Therefore, the total water supply used by the District does not change as a result of the new representation of the area-capacity curve; the releases from the Reservoir have been simply reclassified from withdrawal from storage to direct diversion, or vice versa. The modified area-capacity curve does not have an effect on the quantity made available for this water transfer, or future water transfers the District may elect to participate, as these are directly measured at the District's most downstream point of control.

Sara Harper

SH/pp
5025.5/ROBERT COOKE MEMO 2009-04-09.DOC

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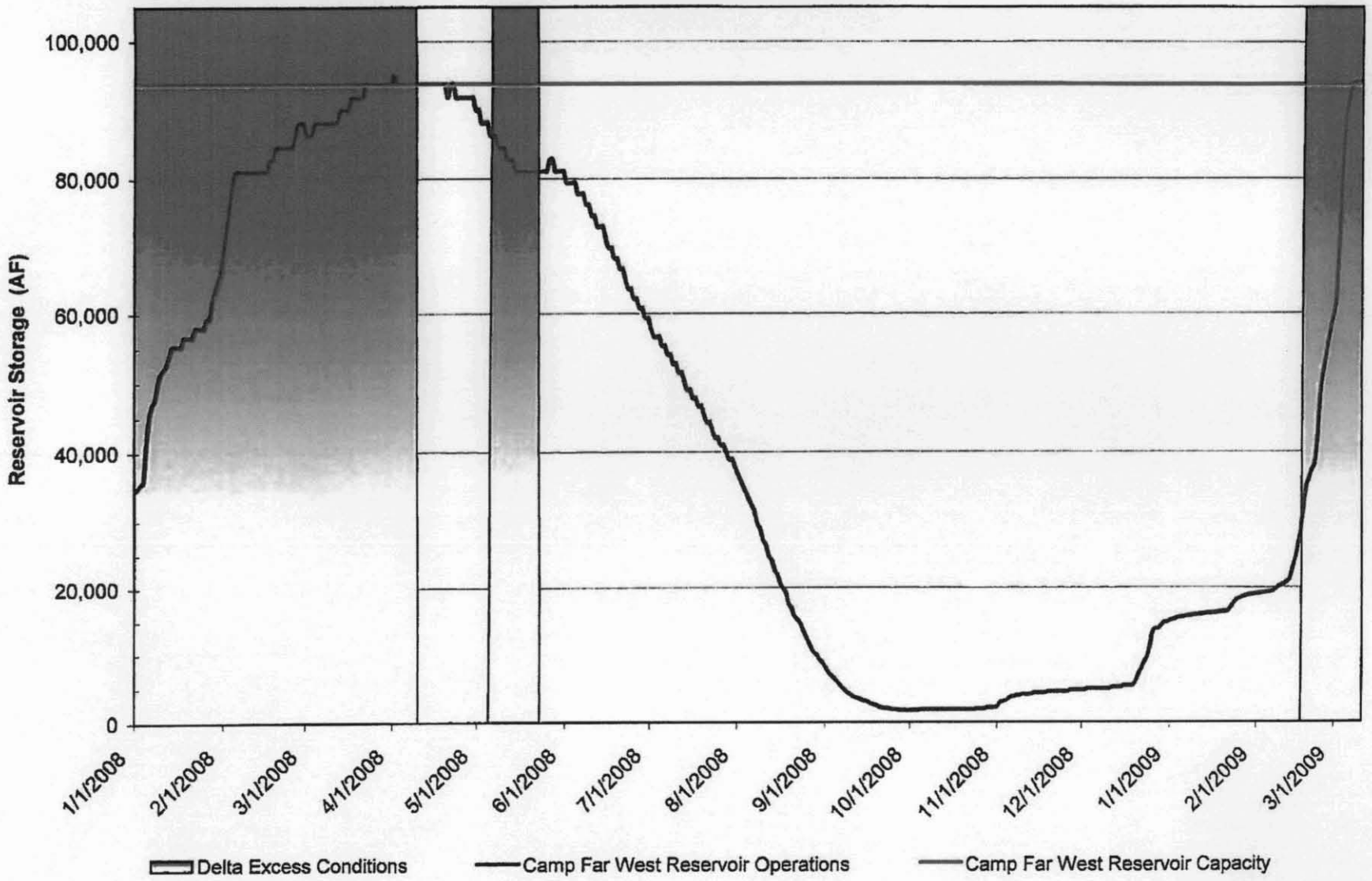
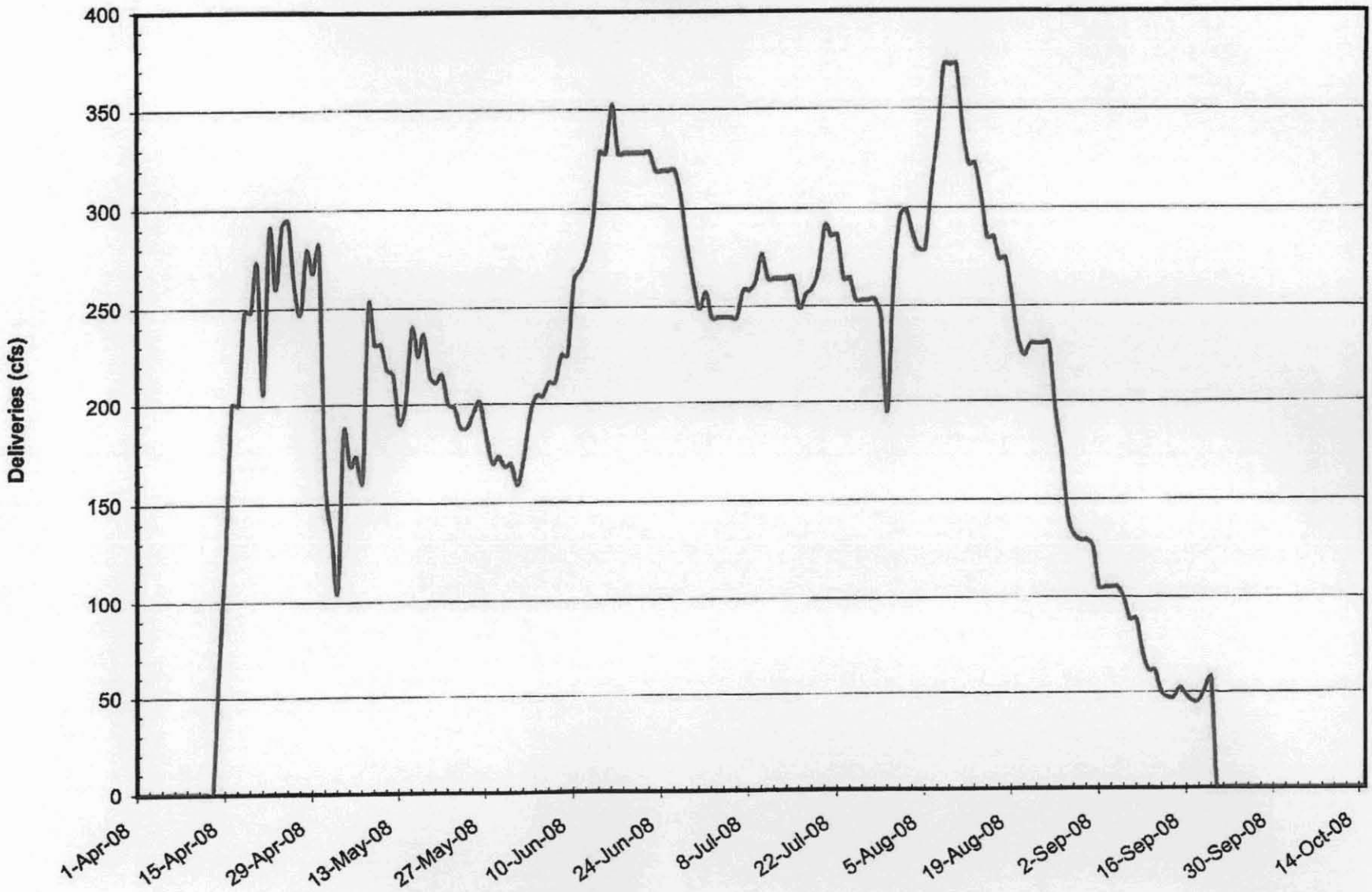
## South Sutter Water District
## 2008 Reservoir Operations Summary
## Figure 1




U:\harper\5025 South Sutter Water District\Transfers\2008 Transfer\2008 analysis\CFW Res Ops. Delta Cond 1968-2008
Tab 2008 Res Ops Volume

*MBK* Engineers
4/9/2009

## South Sutter Water District
## Main Canal Deliveries
## Figure 2




*MBK* Engineers
4/9/2009

U:\harper\5025 South Sutter Water District\Transfers\2008 Transfer\2008 analysis\CFW Res Ops Delta Cond 1968-2008
Tab: MC Deliveries

South Sutter Water District
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**Table 1**

**Summary of Releases Pursuant to the 2008 Pilot Water Transfer [1]**

| | Mean Daily Water Stage Level [2] | Total Release at Diversion Dam | | Release Pursuant to Bay-Delta Settlement Agreement | | Release Pursuant to Water Transfer | |
|---|---|---|---|---|---|---|---|
| | Feet | cfs [3] | AF | cfs [3] | AF | cfs [3] | Cumulative (AF) |
| 7/29/08 | 4.42 | - | | - | | - | - |
| 7/30/08 | 4.42 | 31.5 | 62 | 31.5 | 62 | - | - |
| 7/31/08 | 4.42 | 63.0 | 125 | 37.0 | 73 | 26.0 | 52 |
| 8/1/08 | 4.42 | 94.5 | 187 | 37.0 | 73 | 57.5 | 166 |
| 8/2/08 | 4.42 | 126.4 | 251 | 37.0 | 73 | 89.4 | 344 |
| 8/3/08 | 4.42 | 126.4 | 251 | 37.0 | 73 | 89.4 | 522 |
| 8/4/08 | 4.42 | 126.0 | 250 | 37.0 | 73 | 89.0 | 699 |
| 8/5/08 | 4.42 | 126.0 | 250 | 37.0 | 73 | 89.0 | 876 |
| 8/6/08 | 4.42 | 126.0 | 250 | 37.0 | 73 | 89.0 | 1,053 |
| 8/7/08 | 4.42 | 126.0 | 250 | 37.0 | 73 | 89.0 | 1,230 |
| 8/8/08 | 4.41 | 124.0 | 246 | 37.0 | 73 | 87.0 | 1,403 |
| 8/9/08 | 4.42 | 126.0 | 250 | 37.0 | 73 | 89.0 | 1,580 |
| 8/10/08 | 4.42 | 126.4 | 251 | 37.0 | 73 | 89.4 | 1,758 |
| 8/11/08 | 4.43 | 126.8 | 252 | 37.0 | 73 | 89.8 | 1,937 |
| 8/12/08 | 4.43 | 126.8 | 252 | 37.0 | 73 | 89.8 | 2,116 |
| 8/13/08 | 4.42 | 126.4 | 251 | 37.0 | 73 | 89.4 | 2,294 |
| 8/14/08 | 4.43 | 126.8 | 252 | 37.0 | 73 | 89.8 | 2,473 |
| 8/15/08 | 4.43 | 127.2 | 252 | 37.0 | 73 | 90.2 | 2,652 |
| 8/16/08 | 4.43 | 127.2 | 252 | 37.0 | 73 | 90.2 | 2,831 |
| 8/17/08 | 4.43 | 127.6 | 253 | 37.0 | 73 | 90.6 | 3,011 |
| 8/18/08 | 4.43 | 127.6 | 253 | 37.0 | 73 | 90.6 | 3,191 |
| 8/19/08 | 4.34 | 114.8 | 228 | 37.0 | 73 | 77.8 | 3,346 |
| 8/20/08 | 4.39 | 121.6 | 241 | 37.0 | 73 | 84.6 | 3,514 |
| 8/21/08 | 4.38 | 120.4 | 239 | 37.0 | 73 | 83.4 | 3,680 |
| 8/22/08 | 4.43 | 127.6 | 253 | 37.0 | 73 | 90.6 | 3,860 |
| 8/23/08 | 4.43 | 127.6 | 253 | 37.0 | 73 | 90.6 | 4,040 |
| 8/24/08 | 4.42 | 126.4 | 251 | 37.0 | 73 | 89.4 | 4,218 |
| 8/25/08 | 4.43 | 127.6 | 253 | 37.0 | 73 | 90.6 | 4,398 |
| 8/26/08 | 4.40 | 122.8 | 244 | 37.0 | 73 | 85.8 | 4,569 |
| 8/27/08 | 4.43 | 127.6 | 253 | 37.0 | 73 | 90.6 | 4,749 |
| 8/28/08 | 4.42 | 126.4 | 251 | 37.0 | 73 | 89.4 | 4,927 |
| 8/29/08 | 4.43 | 127.2 | 252 | 37.0 | 73 | 90.2 | 5,106 |
| 8/30/08 | 4.44 | 128.4 | 255 | 37.0 | 73 | 91.4 | 5,288 |
| 8/31/08 | 4.44 | 128.4 | 255 | 37.0 | 73 | 91.4 | 5,470 |
| 9/1/08 | 4.43 | 126.8 | 252 | 37.0 | 73 | 89.8 | 5,649 |
| 9/2/08 | 4.46 | 131.2 | 260 | 37.0 | 73 | 94.2 | 5,836 |
| 9/3/08 | 4.50 | 137.2 | 272 | 37.0 | 73 | 100.2 | 6,035 |
| 9/4/08 | 4.48 | 134.8 | 267 | 37.0 | 73 | 97.8 | 6,229 |
| 9/5/08 | 4.44 | 129.2 | 256 | 37.0 | 73 | 92.2 | 6,412 |
| 9/6/08 | 4.43 | 128.0 | 254 | 37.0 | 73 | 91.0 | 6,593 |
| 9/7/08 | 4.43 | 127.2 | 252 | 37.0 | 73 | 90.2 | 6,772 |
| 9/8/08 | 4.43 | 126.8 | 252 | 37.0 | 73 | 89.8 | 6,951 |
| 9/9/08 | 4.44 | 96.3 | 191 | 37.0 | 73 | 59.3 | 7,069 |
| 9/10/08 | 4.43 | 64.0 | 127 | 37.0 | 73 | 27.0 | 7,123 |
| 9/11/08 | 4.43 | 31.8 | 63 | 31.8 | 63 | 0.0 | - |
| 9/12/08 | 4.43 | 31.9 | 63 | 31.9 | 63 | 0.0 | - |
| Total Release | | | 10,377 | Releases to Date | 3,254 | Total Releases | 7,123 |
| | | | | District's Portion of the Assumed Depletions Loss (3%) | | | -214 |
| | | | | **Quantity of Water Delivered to SWPCA** | | | **6,909** |

1) Table includes only releases through the Transfer Weirs in the Diversion Dam. Releases through the fish flow bypass structure for fish flows are not included.

2) Mean Daily stage water level readings are based on 15-minute water level data recorded at the SMUD water level sensor located upstream of the Diversion Dam within the Diversion Dam pool.

3) Mean Daily Release are based on 15-minute water level data recorded at the SMUD water level sensor and calculated based on the weir flow equation and constants identified in the Storage and Conveyance Agreement.

GEI Consultants

Geotechnical
Environmental and
Water Resource
Engineering

January 26, 2009

Mr. Bradley Arnold
South Sutter Water District
2464 Pacific Avenue
Trowbridge, CA 95959

SUBJECT: **Camp Far West Reservoir Storage**

Dear Mr. Arnold:

Presented below is a summary of Camp Far West Reservoir storage analysis for 1968 and estimated storage based on aerial and bathymetric surveys performed from October through November 2007.

Camp Far West was planned in the early 1950s to supplement irrigation water within South Sutter Water District (SSWD). The 185-foot-high, earth-filled dam was completed in 1964. Numerous maps were used to plan the Camp Far West Project. These include Camp Far West Irrigation District Map, August 1922; a plane survey by the Division of Water Resources dated 1930; USGS quadrangle maps–Camp Far West, CA, 1949 and 1951, and surveys by T. H. McGuire & Son in 1957, 1960, and 1961. Area capacity curves were developed for the reservoir using hand methods and are shown on the General Plan of Reservoir, sheet 103, dated March 26, 1962. An elevation-storage tabulation dated 1968 has been in use by SSWD and corresponds to the 1962 curves. At the spillway crest (Elevation 300 feet), the corresponding storage is 104,400 acre-feet.

A new aerial survey and topographic mapping was authorized by SSWD in October 2007. The reservoir was flown on October 23, 2007, near a low pool elevation of 225 feet (NGRD'29). The topographic mapping scale used is 1"=200' at a five (5) contour interval. A bathymetric survey was performed from November 28 to December 4, 2007, at the same scale and contour interval of the aerial mapping. In 2009, the final digital mapping was converted to a GIS environment to build a surface for volume calculations. This surface was used to calculate volumes at five-foot elevation intervals. These elevation volumes were plotted and used to develop a new elevation-storage table for Camp Far West (attached). At the spillway crest the latest 2009 calculations had a corresponding storage of 93,740 acre-feet.

www.geiconsultants.com

GEI Consultants, Inc.
10860 Gold Center Drive, Suite 350, Rancho Cordova, CA 95670
916.631.4500 fax: 916.631.4501

The new 2009 elevation-storage data is plotted and shown on the attached figure. At Elevation 300 feet there is an approximately 10 percent difference in storage for the 2009 curve. The 2009 curve is based on better topographic data and computing capabilities compared to the 1960s data and should be used in the future. A difference of 10 percent is considered reasonable.

Sincerely,

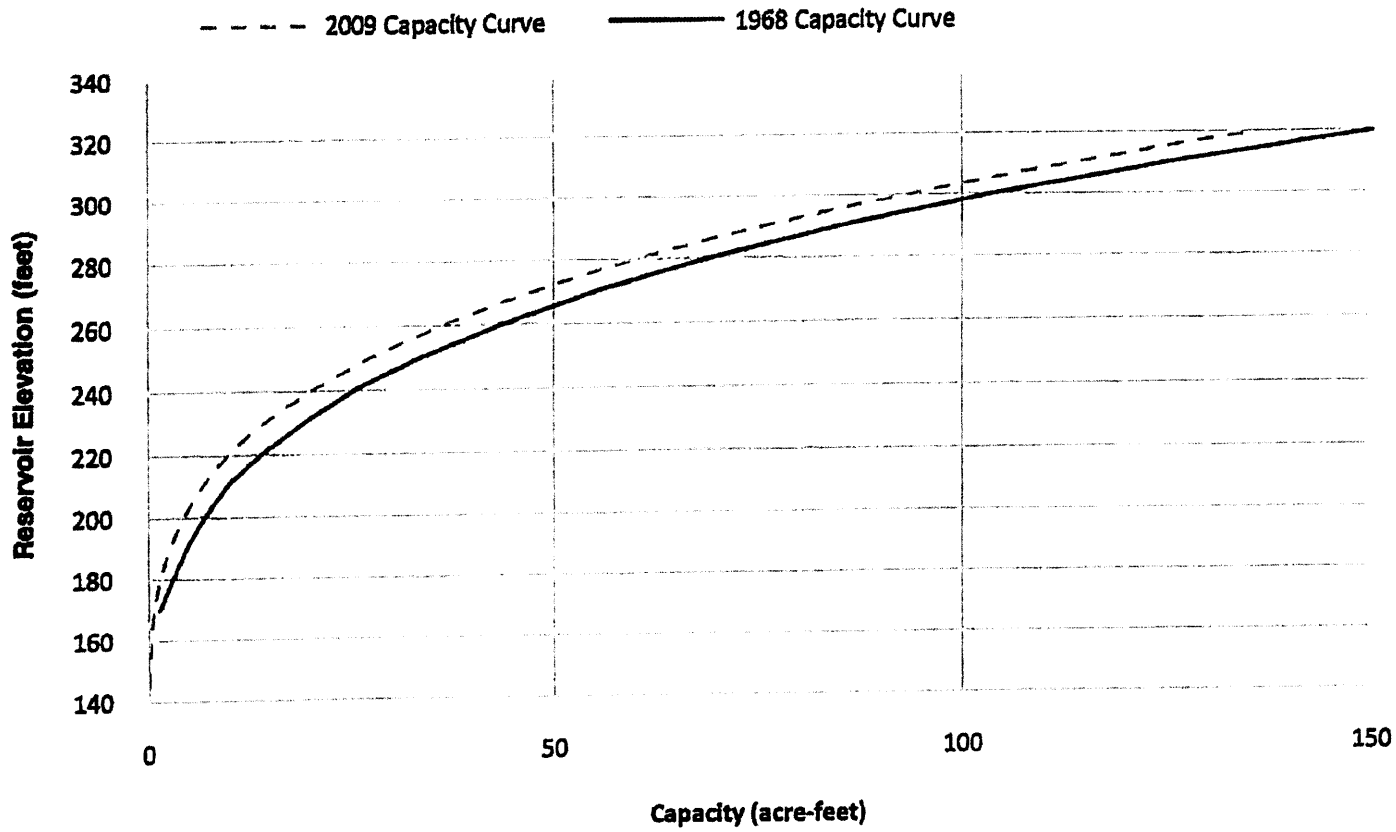
GEI Consultants, Inc.

Mark Fortner, P.E., PLS

Cc: Mr. Kevin O'Brien, Downey Brand
Mr. Marc Van Camp, MBK
Enclosure

J:\SOUTH SUTTER WATER DISTRICT\PROJECTS\CAMP FAR WEST\L-CAMP FAR WEST RES STORAGE 012609.DOC

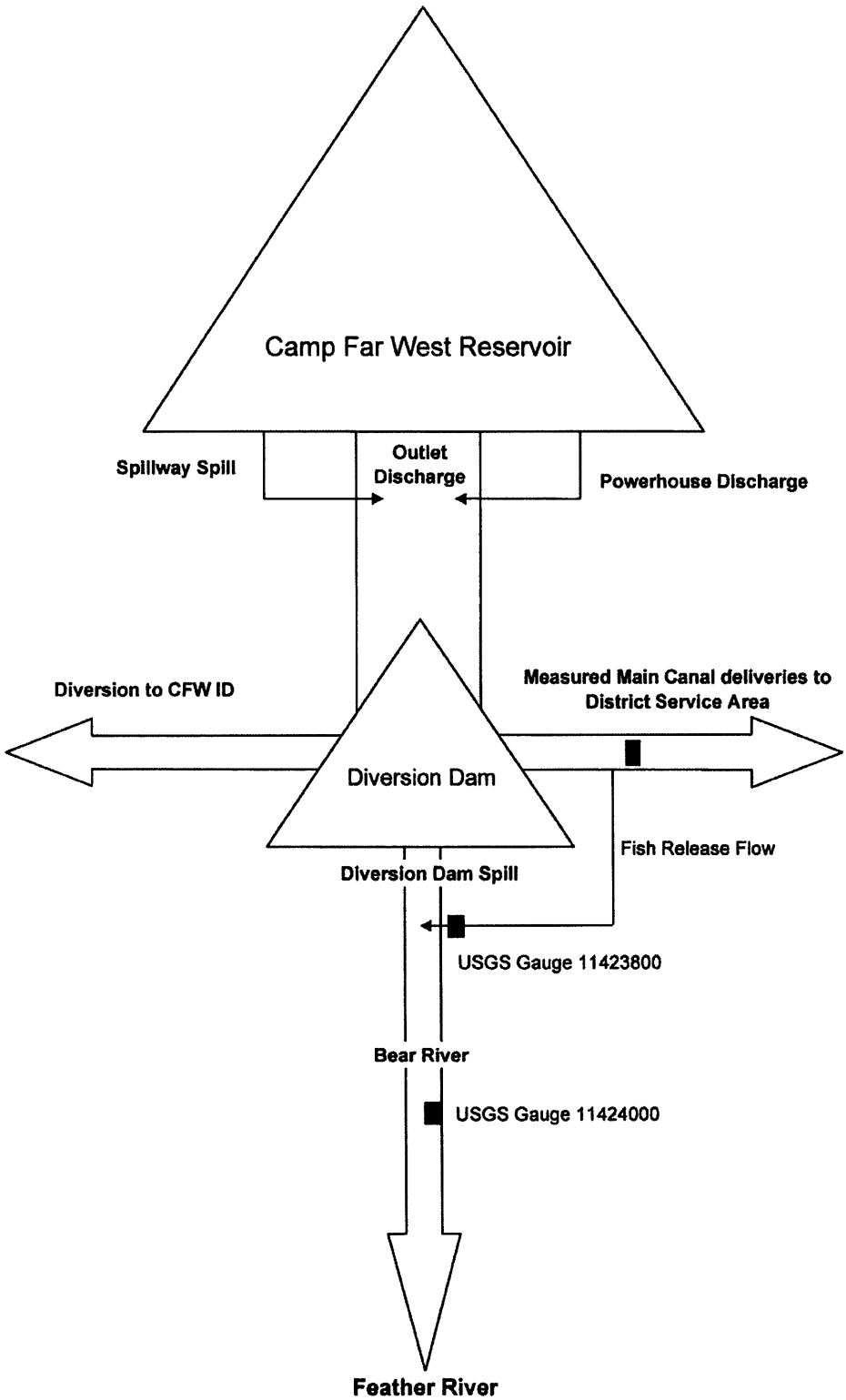
## South Sutter Water District
## Camp Far West Reservoir
## 1968 and 2009 Capacity Curves




Note : Spillway Crest Elevation is 300 feet.
Elevation is based on National Geodetic Vertical Datum (NGVD'29).

GEI Consultants

## Figure 2


Camp Far West Reservoir
Spillway Spill
Outlet Discharge
Powerhouse Discharge
Diversion to CFW ID
Measured Main Canal deliveries to District Service Area
Diversion Dam
Fish Release Flow
Diversion Dam Spill
USGS Gauge 11423800
Bear River
USGS Gauge 11424000
Feather River

## Table 1

Average Monthly Flow Rate at the Fish Flow Release Structure

| Month | USGS Gage 11423800 Fish Flow Release (cfs) |
|---|---|
| Jul-08 | 11.7 |
| Aug-08 | 10.8 |
| Sep-08 | 15.1 |

## Table 2

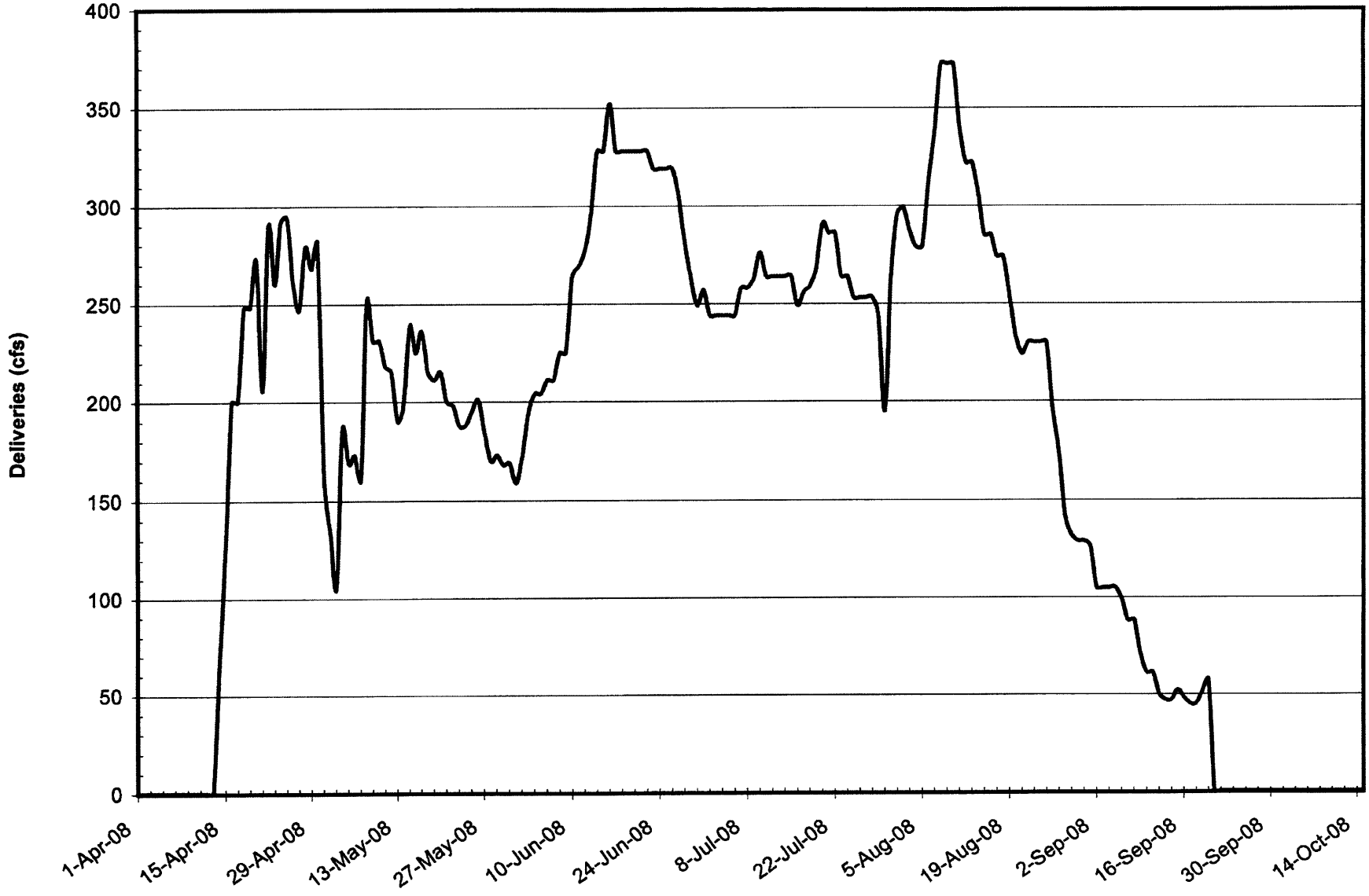
Average Monthly Flow Rate at the Bay-Delta Settlement Agreement Release Structure

| Month | Bay-Delta Settlement Agreement Releases (cfs) |
|---|---|
| Jul-08 | 2.2 |
| Aug-08 | 37.0 |
| Sep-08 | 35.1 |

# Figure 3

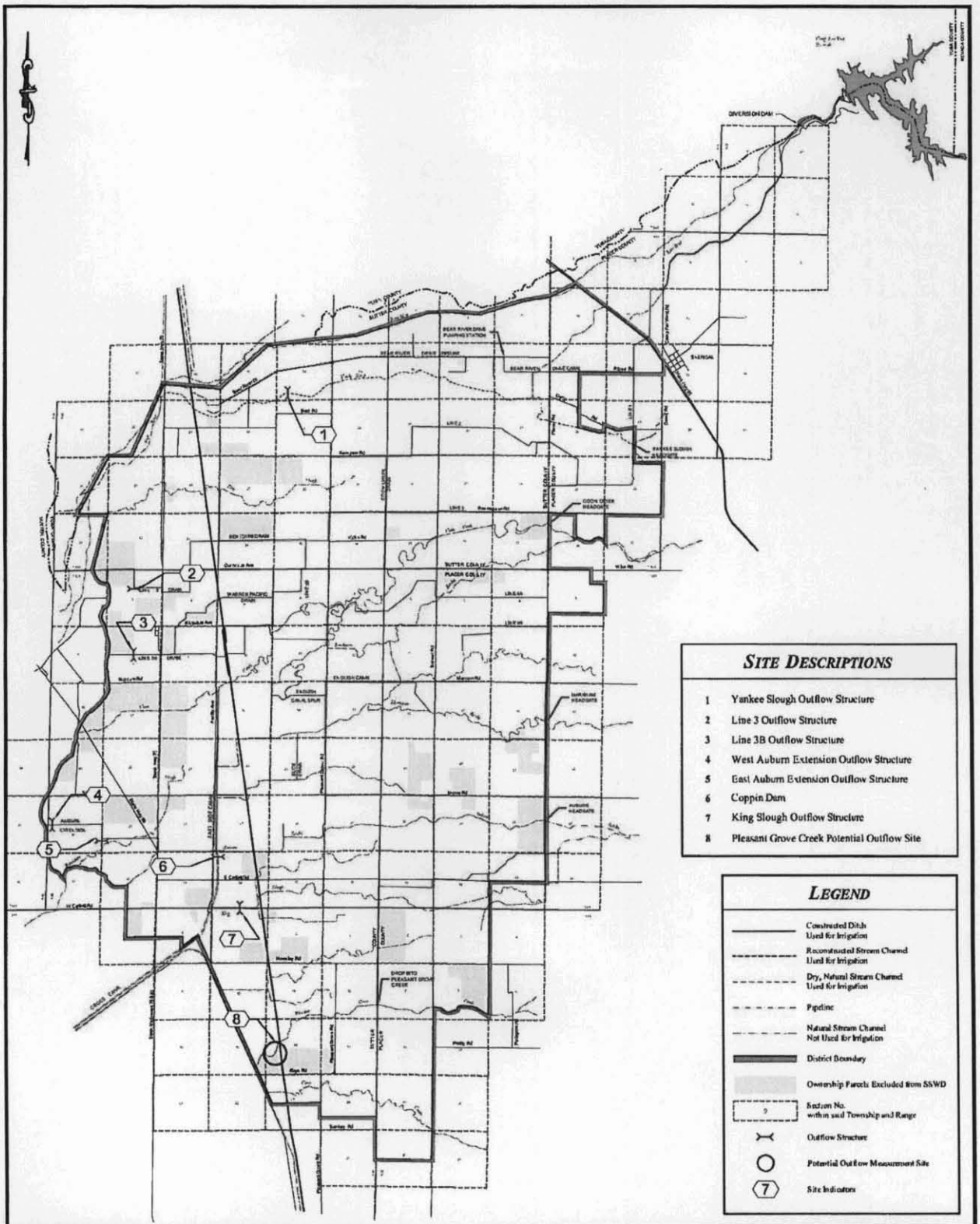


## South Sutter Water District
## 2008 Main Canal Deliveries




U:\harper\5025 South Sutter Water District\Transfers\2008 Transfer\2008 analysis\CFW Res Ops. Delta Cond 1968-2008
Tab: MC Deliveries

***MBK*** Engineers
April 14, 2009

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South Sutter Water District

Attachment to the Environmental Information Form

| | |
|---|---|
| SCALE: | 1"=4000' |
| JOB NUMBER: | SH |
| DRAWN BY: | MB |
| DATE: | April 2009 |

Bar Length On Original Drawing Equals One Inch. Adjust Scale Accordingly

Figure 4