

FILE:WC/WC/42-6.1-9 AGENCY APPLICATIONS  
FILE:WC/42-4.1-9 AGENCY PERMITS &  
LICENSES-CORRESPONDENCE

April 26, 2007

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

**RE: TEMPORARY URGENCY CHANGE PETITION**

Dear Ms. Whitney:

Enclosed is a Petition for Temporary Urgency Change in the minimum instream flow requirements in the Russian River under Decision 1610, together with a supporting memorandum. Unusually dry hydrologic conditions in the Russian River, coupled with reductions in water imported to the Russian River basin via the Potter Valley Project, warrant immediate action to avoid significant risks to the storage levels in Lake Mendocino. Sonoma County Water Agency (Agency) requests that the Division act immediately to approve the requested changes in instream flow requirements so that water can be conserved in Lake Mendocino and avert the possibility of the lake going dry by November.

In 2004, the Agency filed a similar petition to mitigate temperature impacts resulting from anticipated low lake levels. The approval of that petition by the State Board was critical to protecting the Chinook salmon in the Russian River during their fall migration and spawning. This year, the storage projections for Lake Mendocino are far more severe and there is valid concern that the lake could go dry. For this reason, the Agency requests that the Division act on this petition as soon as possible so that conservation of water in the lake can begin.

I look forward to cooperating with the Division of Water Rights on this important conservation effort.

Sincerely,

Randy D. Poole  
General Manager/Chief Engineer

Encs Urgency Change Petition, Environmental Form, Hydrological Report, DFG environmental review fee, and SWRCB petition fees

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 URGENCY CHANGE**  
(Water Code 1435)

X Change in Instream-Flow Requirements

Applications # 12919A, 15736, 15737, 19351 Permits # 12947A, 12949, 12950, 16596

I (we) Sonoma County Water Agency hereby petition for a temporary urgency  
(Water Right Holders Name)

change(s) noted above and shown on the accompanying map and described as follows:

Sonoma County Water Agency requests that the instream flow requirements for the Russian River mainstem from May 1 through October 28, 2007 be reduced from the levels specified in SWRCB Decision 1610. The Agency requests that the instream-flow requirements for the Upper Russian River (from its confluence with the East Fork of the Russian River to its confluence with Dry Creek) be reduced from 185 cfs to 75 cfs, and the requirements for the lower Russian River (downstream of its confluence with Dry Creek) be reduced from 125 cfs to 85 cfs. No changes to the instream flow requirements for Dry Creek are requested. This request is made to prevent storage levels in Lake Mendocino from dropping to very low levels by the end of summer. The rationale for this request is described in the attached report by Chris Murray, P.E. and Matthew Damos, P.E..

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

Present Not Applicable  
Proposed \_\_\_\_\_

**Place of Use** (If irrigation then state number of acres to be irrigated within each 40-acre tract.)

Present Not Applicable  
Proposed \_\_\_\_\_

**Purpose of Use**

Present Not Applicable  
Proposed \_\_\_\_\_

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)? Not Applicable  
(yes/no)

The temporary urgency change(s) is to be effective from May 1, 2007 to October 28, 2007  
(Cannot exceed 180 days)

Will this temporary urgency change be made without injury to any lawful user of water? Yes  
(yes/no)

Will this temporary urgency change be made without unreasonable effect upon fish, wildlife, and other in stream beneficial uses? Yes  
(yes/no)

State the "Urgent Need" (Water Code 1435(c)) which is the basis of this temporary urgency change petition:

Please see attached report

If the point of diversion or rediversion is being changed, is any person(s) taking water from the stream between the old point of diversion or rediversion and the proposed point? Not Applicable  
(yes/no)

Are there any persons taking water from the stream between the old point of return flow and the new point of return flow? Not Applicable (yes/no)

If yes, give name and address, as well as any other person(s) known to you who may be affected by the proposed change.

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\_\_\_\_\_

I (we) consulted the California Department of Fish and Game concerning this proposed temporary change. Yes  
(yes/no)

If yes, state the name and phone number of the person contacted and the opinion concerning the potential effects of your proposed temporary urgency change on fish and wildlife and state the measures required for mitigation.

Contacted Eric Larson, California Department of Fish and Game. This State agency will be providing comments under separate cover.

Contacted Bill Hearn and Dick Butler, NOAA Fisheries. This federal agency will be providing comments under separate cover.

**THIS TEMPORARY URGENCY CHANGE DOES NOT INVOLVE AN INCREASE IN THE AMOUNT OF THE APPROPRIATION OR SEASON OF USE. THIS TEMPORARY URGENCY CHANGE IS REQUESTED FOR A PERIOD OF ONE HUNDRED EIGHTY DAYS OR LESS.**

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 26, 2007 at Santa Rosa, California

\_\_\_\_\_  
(707) 547-1925  
Telephone No.

Sonoma County Water Agency  
P. O. Box 11628  
Santa Rosa, CA 95406  
(Address)

TEMPC **NOTE: A \$1000 filing fee, for each Application listed, made payable to the State Water Resources Control Board and an \$850 fee made payable to the Department of Fish and Game must accompany this petition for change.**



GOVERNMENTAL REQUIREMENTS

Before a final decision can be made on your change petition, we must consider the information contained in an environmental document prepared in compliance with the requirements of CEQA. If an environmental document has been prepared for your proposed changes by another agency, we must consider it. If one has not been prepared, a determination must be made as to who is responsible for the preparation of the environmental document for your change petition. The following questions are designed to aid us in that determination.

- 2. Contact your county planning or public works department for the following information:
  - a. Person contacted Not Applicable Date of contact \_\_\_\_\_  
Department \_\_\_\_\_ Telephone ( ) \_\_\_\_\_
  - b. Assessor's Parcel No. Not Applicable
  - c. County Zoning Designation Not Applicable
  - d. Are any county permits required for your proposed changes? No  
If yes, check appropriate space below:  
\_\_\_\_\_ Grading Permit, \_\_\_\_\_ Use Permit, \_\_\_\_\_ Watercourse  
Obstruction Permit, \_\_\_\_\_ Change of Zoning, \_\_\_\_\_ General Plan  
Change, Other (explain):  
\_\_\_\_\_
  - e. Have you obtained any of the required permits described above? Not Applicable  
If yes, provide a complete copy of each permit obtained.
  
- 3. Are any additional state or federal permits required for your proposed changes? No (i.e., from Federal Energy Regulatory Commission, U.S. Forest Service, Bureau of Land Management, Soil Conservation Service, Department of Water Resources (Division of Safety of Dams), Reclamation Board, Coastal Commission, State Lands Commission, etc.) For each agency from which a permit is required provide the following information:  
  
Permit type \_\_\_\_\_  
Person (s) contacted \_\_\_\_\_ Agency \_\_\_\_\_  
Date of contact \_\_\_\_\_ Telephone ( ) \_\_\_\_\_
  
- 4. Has any public agency prepared an environmental document for any aspect of your proposed changes? This proposed action is exempt from the California Environmental Quality Act under Classes 7 and 8 (Title 14, California Code of Regulations, sections 15307 and 15308), because it would be taken to assure the maintenance of natural resources and to maintain and protect the environment. Because the instream-flow requirements for Dry water supply conditions are part of the SWRCB's water-rights Decision 1610 and regularly occur, this proposed action would not cause unusual circumstances under Title 14, California Code of Regulations, sections 15300.2(c).

If so, please submit a copy of the latest environmental document (s) prepared, including a copy of the notice of determination adopted by the public agency. If not, explain below whether you expect

that a public agency other than the State Water Resources Control Board will be preparing an environmental document for your change petition or whether the applicant, if it is a California public agency, will be preparing the environmental document for your change petition:

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Note: When completed, please submit a copy of the final environmental document (including notice of determination) or notice of exemption to the State Water Resources Control Board. Processing of your change petition cannot proceed until such documents are submitted.

5. Will your proposed changes, during construction or operation, generate waste or wastewater containing such things as sewage, industrial chemicals, metals, or agricultural chemicals, or cause erosion, turbidity or sedimentation? No If so, explain: \_\_\_\_\_
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If yes or you are unsure of your answer, contact your local Regional Water Quality Control Board for the following information (See attachment for address and telephone number):

Will a waste discharge permit be required for your petition? \_\_\_\_\_

Person contacted \_\_\_\_\_ Date of contact \_\_\_\_\_

What method of treatment and disposal will be used? \_\_\_\_\_

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6. Have any archeological reports been prepared on this project, or will you be preparing an archeological report to satisfy another public agency? Not Applicable

Do you know of any archeological or historic sites located within the general project area?

No

If so, explain: \_\_\_\_\_

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## ENVIRONMENTAL SETTING

7. Attach THREE COMPLETE SETS of color photographs, clearly dated and labeled, showing the vegetation currently existing at the following locations: Not Applicable because no new points of diversion are proposed.
- a. Along the stream channel immediately downstream from the proposed point(s) of diversion.
  - b. Along the stream channel immediately upstream from the proposed point(s) of diversion.
  - c. At the place(s) where the water is to be used.

Note: It is very important that you submit no less than three complete sets of photographs as required above. If less than three sets are submitted, processing of your change petition will be delayed until you furnish the remaining sets.

8. From the list given below, mark or circle the general plant community types which best describe those which occur within you project area (Note: See footnote denoted by \* under Question 11 below):

Tree Dominated Communities

- Subalpine Conifer
- Red Fir
- Lodgepole Pine
- Mixed Conifer
  - Sierran Mixed Conifer
  - White Fir
  - Klamath Mixed Conifer
- Douglas-Fir
- Jeffrey Pine
- Ponderosa Pine
- Eastside Pine
- Redwood
- Pinyon-Juniper

- Willow
- Cottonwood

- Juniper
- Aspen
- Closed-Cone Pine-Cypress
- Montane Hardwood-Conifer
- Montane Hardwood
- Valley Foothill Hardwood
  - Blue Oak Woodland
  - Valley Oak Woodland
  - Coastal Oak Woodland
- Valley Foothill Hardwood-Conifer
  - Blue Oak-Digger Pine
- Eucalyptus
- Montane Riparian
- Valley Foothill Riparian
- Desert Riparian
- Palm Oasis
- Joshua Tree

Shrub Dominated Communities

- Alpine Dwarf-Shrub
- Low Sage
- Bitterbrush
- Sagebrush
- Montane Chaparral
- Mixed Chaparral
- Chamise-Redshank Chaparral
- Coastal Scrub
- Desert Succulent Shrub
- Desert Wash
- Desert Scrub
- Alkali Desert Scrub

Herbaceous Dominated Communities

- Annual Grassland
- Perennial Grassland
- Wet Meadow
- Fresh Emergent Wetland
- Saline Emergent Wetland
- Pasture

Aquatic Communities

- Riverine
- Lacustrine
- Estuarine
- Marine

Developed Communities

- Cropland
- Orchard-Vineyard
- Urban

Literature source: Mayer, K.E., and W.F. Laudenslayer, Jr., (eds). 1988. A Guide to Wildlife Habitats of California. California Department of Forestry and Fire Protection, Sacramento. 166 pp. (Note: You may view a copy of this document at our public counter at the address given at the top of this form or you may purchase a copy by calling the California Department of Fish and Game, Wildlife Habitat Relationships (WHR) Program at (916) 653-7203).

Not Applicable

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FISH AND WILDLIFE CONCERNS

9. Identify the typical species of fish which occur in the source(s) from which you propose to divert water and discuss whether or not any of these fish species or their habitat has been or would be affected by your proposed changes. (Note: See footnote denoted by \* under Question 11 below):

The following fish are likely to occur within the vicinity of the project area:

- Warmwater Fish - Large and Small Mouth Bass, various Sunfish, and Tule Perch
- Anadromous Fish - Chinook and Coho Salmon, Steelhead, Pacific Lamprey
- Miscellaneous Fish - Sacramento Sucker, Hardhead, Pikeminnow, Blackfish

None of these fish and none of their habitats are expected to be affected by the project.

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10. Identify the typical species of riparian and terrestrial wildlife in the area and discuss whether or not any of these species and/or their habitat has been or would be affected by your proposed changes through construction of additional water diversion and distribution works and/or changes in land use in the place of water use. (Note: See footnote denoted by \* below):

The following terrestrial wildlife are likely to occur in the vicinity of the project area:

- Deer, Opossum, Skunk, Raccoon, Ducks, Songbirds, Insects, Frogs, Snakes, and Lizards.

None of these terrestrial organisms and none of their habitats are expected to be affected by the project.

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\*Note: The purposes of Question 10 and 11 are to provide a preliminary assessment of the presence of typical plant and animal species in the area and whether these species might be affected by your proposed changes. Detailed site surveys to quantify populations of specific species or determine the presence of rare or endangered species may be required at a later date. It is very important that you answer these questions accurately. If you are unable to obtain appropriate answers from your local California Department of Fish and Game biologists (See attachment for address and telephone number) or you do not have adequate information or expertise to complete your answers, you should hire a fishery consultant and/or a wildlife consultant to review your project and prepare suitable answers for you. For information on available qualified fishery or wildlife consultants near you, consult your local telephone directory yellow pages under Environmental and Ecological Services, or call the California Environmental Protection Agency, Registered Environmental Assessor (REA) Program, at (916) 324-6881 or the University of California, Cooperative Extension Service (See your local telephone directory white pages).

12. Do your proposed changes involve any construction or grading-related activity which has significantly altered or would significantly alter the bed or bank of any stream or lake? No -

If so, explain: \_\_\_\_\_

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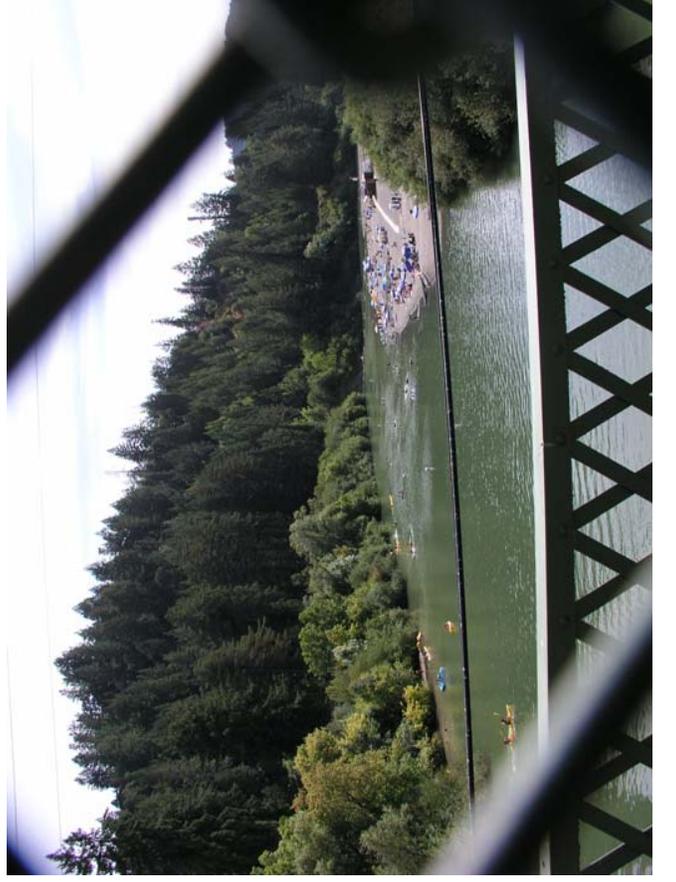
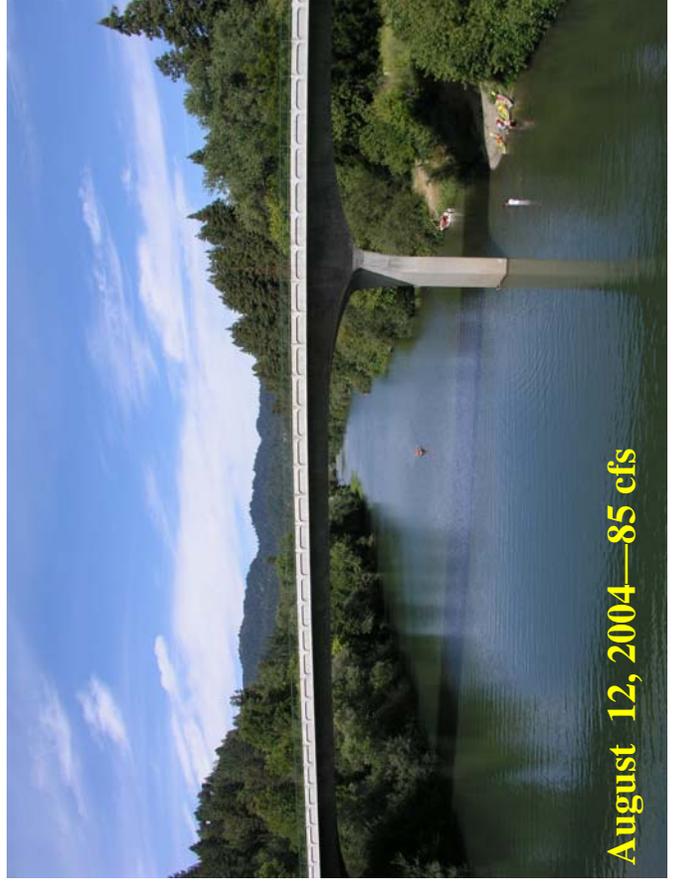
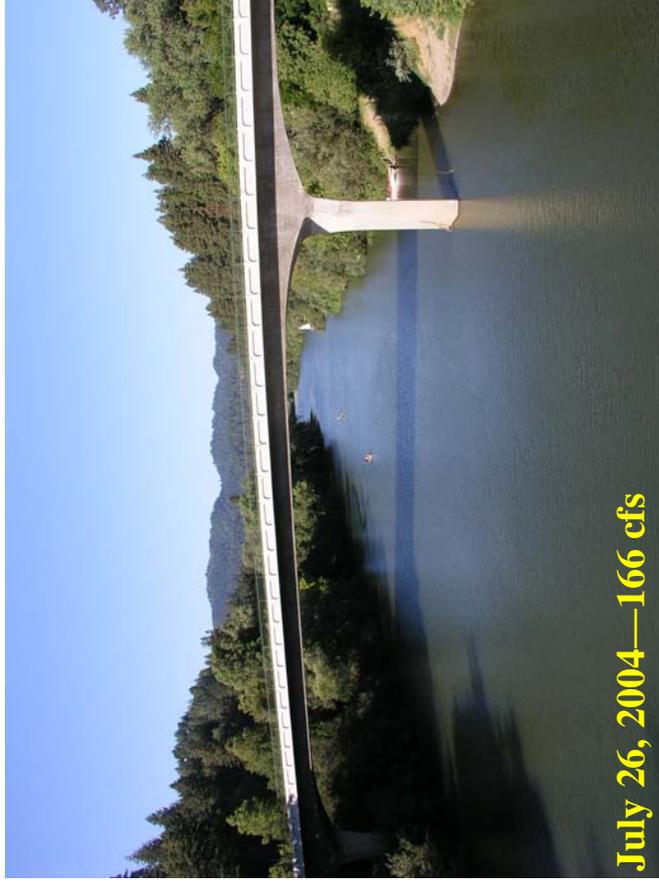
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CERTIFICATION

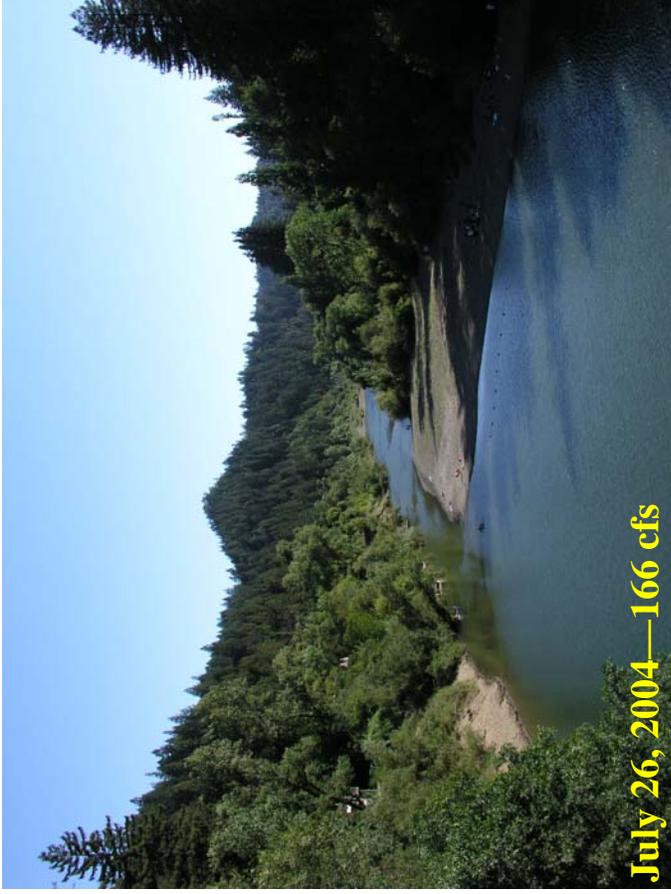
I hereby certify that the statements I have furnished above and in the attached exhibits are complete to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge.

Date \_\_\_\_\_ Signature \_\_\_\_\_

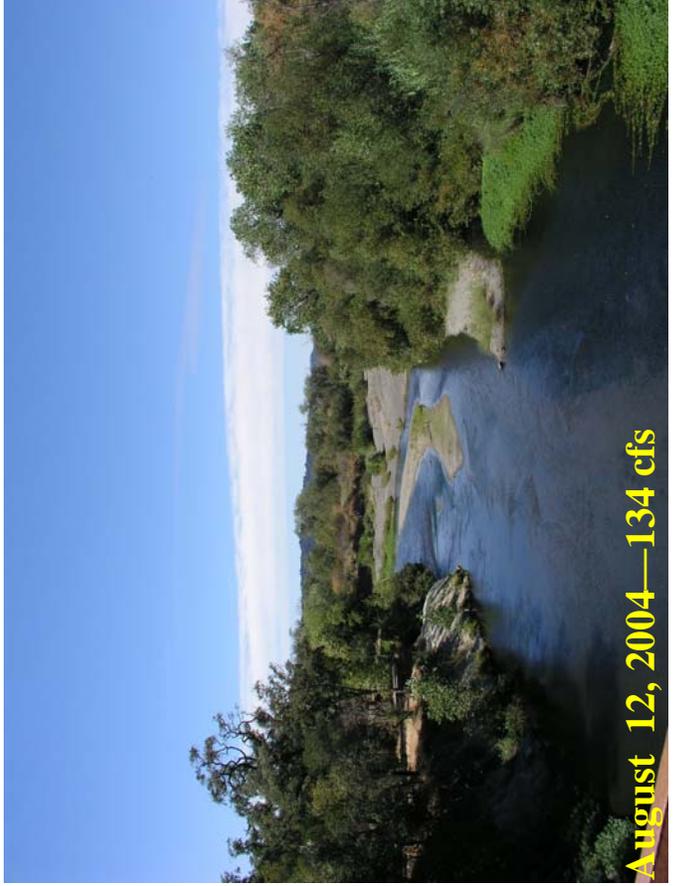
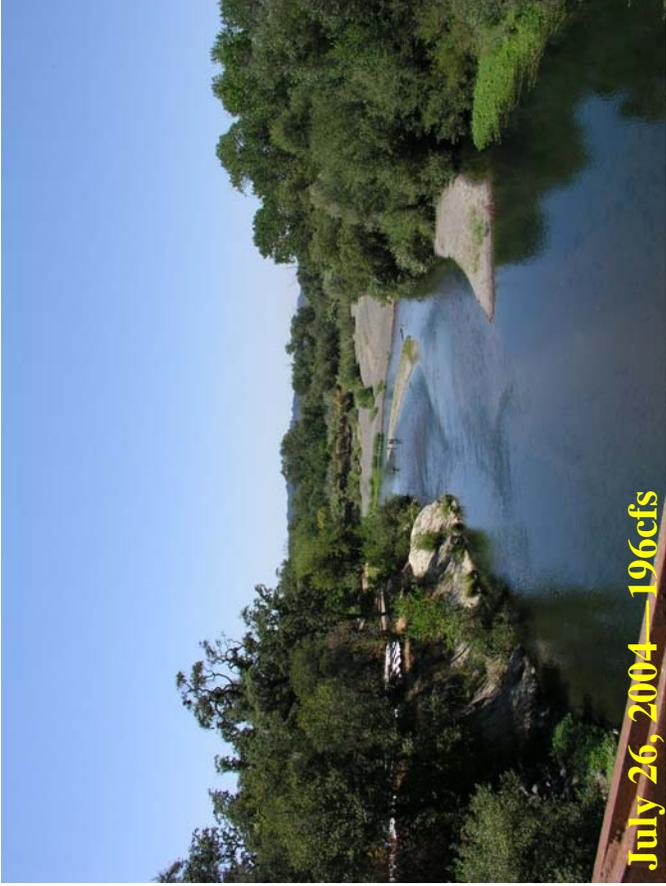
# Guerneville



# Hacienda



# Jimtown



# Hydrologic Analysis of Lake Mendocino Storage Under Dry Spring Conditions

Submitted to the State Water Resources Control Board, Division of Water  
Rights in Support of Temporary Urgency Change Petition

Chris Murray, P.E.  
Matthew Damos, P.E.  
Sonoma County Water Agency  
April 2007

## INTRODUCTION

The current storage level in Lake Mendocino is approximately 67,000 acre-feet, roughly 18,000 acre-feet lower than Lake Mendocino storage was in 2002 at this time. Although Lake Mendocino storage is unusually low, cumulative inflow into Lake Pillsbury during this water year still has been sufficiently high that, under the SWRCB's Decision 1610, 2007 is classified as a *Normal* year and will retain this classification for the rest of 2007. If the Agency must maintain instream flows in the Russian River to meet the D-1610 *Normal* year requirements during the rest of 2007, then based upon storage reduction rates that occurred during 2002, it is anticipated that the storage levels in Lake Mendocino will drop to approximately 8,000 acre-feet by November of this year.

As discussed below, such low Lake Mendocino storage levels could severely impact listed Russian River fish species, create serious water-supply impacts in Mendocino County and in the Alexander Valley in Sonoma County and harm Lake Mendocino and Russian River recreation. The Agency therefore is filing this temporary urgency change petition, asking the State Water Resources Control Board (State Board) to temporarily reduce the instream-flow requirements to 75 cfs in the Upper Russian River (from its confluence with the East Fork to its confluence with Dry Creek) and to 85 cfs in the Lower Russian River (downstream of its confluence with Dry Creek). The reduction is requested from May 1 through October 28, 2007.

During water year 2002, hydrologic conditions in the Eel River and Russian River watershed caused Lake Mendocino storage levels to decline to dangerously low levels by the end of the dry season. Recreation at Lake Mendocino was severely impaired. Serious risks existed for water supply and listed Russian River salmonid fishery resources, particularly adult Chinook salmon. The Mendocino County Board of Supervisors declared a state of emergency. The storage levels in Lake Mendocino dropped to a low of 24,400 acre-feet in December 2002.

Water year 2004 presented similar risks. These risks were mitigated through the Agency's filing a temporary urgency change petition with the State Board. The State Board approved the urgency change petition, reducing the minimum instream flow requirements to 75 cubic feet per second (cfs) in the Russian River from the confluence of the East and West Forks Russian River to the confluence of Dry Creek and the Russian River. From the Dry Creek confluence to the mouth of the Russian River, the minimum instream flow requirement was reduced to 85 cfs. The success of this change petition in protecting the storage in Lake Mendocino was clear, as the lake levels dropped to a low of 38,000 acre-feet by December. Even though the lake levels in 2002 and 2004 were similar at the start of the irrigation season, end-of-season storage levels were approximately 14,000 acre-feet higher in 2004, largely due to the State Board's approval of reductions in the applicable instream-flow requirements to conserve stored water.

During the summer of 2002, PG&E's Potter Valley Project (PVP) diverted less water from the Eel River to the Russian River watershed because, although runoff conditions were technically "*Normal*", PG&E changed its project operations after the Federal Energy Regulatory Commission (FERC) reclassified the year as "*Dry*". Although 2002

runoff conditions in the Russian River watershed were similar to those in the Eel River watershed, Lake Mendocino was operated under SWRCB Decision 1610's *Normal* year instream flow criteria. This *Normal* year operation, coupled with unusually high water demands, contributed to an unusual decline in storage levels in Lake Mendocino.

On June 2, 2004, FERC directed PG&E, effective June 9, 2004, to change its PVP diversions to comply with the terms of an amendment to PG&E's FERC license approved by FERC in January 2004. As a result of the FERC directive, diversions from the PVP during the summer of 2004 were very similar to those during the summer of 2002.

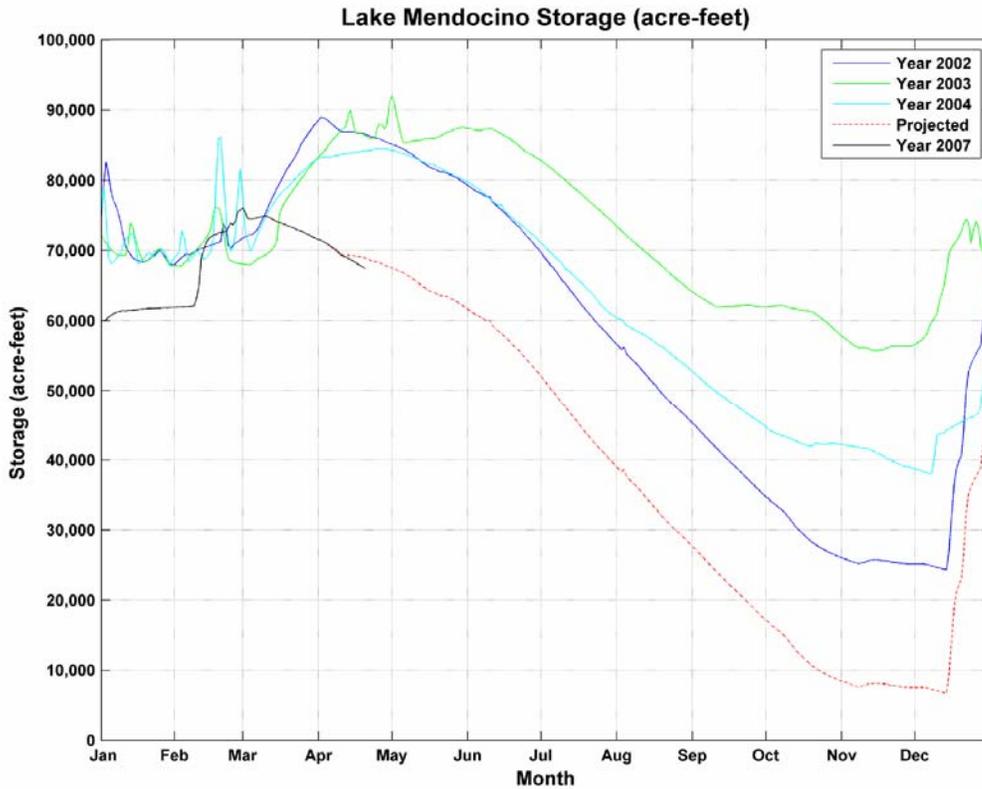
During the past year, it was discovered that PG&E had not properly implemented one of the terms in PG&E's FERC license for the PVP since 2004, resulting in spring and summer tunnel flows that were in excess of the licensed amounts. Since early March 2007, the new implementation of the FERC license has resulted in a reduction of PVP tunnel flows of approximately 200 cfs. These tunnel flow reductions are expected to have a significant effect on the inflows to Lake Mendocino through mid-July. Current projections indicate that, due to operational changes in the PVP, there will be approximately 3,000 acre-feet less inflow to Lake Mendocino from mid-April through September than during the same time period in 2002. In addition to the new interpretation of the FERC license for the PVP, there has been structural damage to the fish screens that has resulted in an inability to operate the PVP at its full 300 cfs capacity. The project has been limited to 50% capacity since December. It is unknown when full capacity will be restored. Since October 1, there has been approximately 50,000 acre-feet less flow through the PVP Tunnel than during the same period in 2002.

Figure 1 shows historical Lake Mendocino storage levels during 2002, 2003 and 2004. Figure 1 also shows the Lake Mendocino storage levels that have occurred so far during 2007 and the storage levels that are projected to occur during the rest of 2007, if the D-1610 instream-flow requirements are not changed.

In 1986, when Decision 1610 was adopted, the State Board recognized that conditions affecting the availability of water for Russian River instream flows could change, and the State Board reserved jurisdiction to modify the Russian River instream-flow requirements. Since 1986, PVP diversions have decreased, demands on the Russian River system have increased, and three fish species have been listed as threatened species under the federal Endangered Species Act. Additionally, the evidence from water year 2002 and 2004 shows that reductions in the minimum instream flow requirements can preserve water in storage to protect the Chinook salmon during migration and spawning, while maintaining high recreational values in the Russian River and good water quality.

This report provides the information upon which Sonoma County Water Agency bases its temporary urgency change.

**Figure 1**



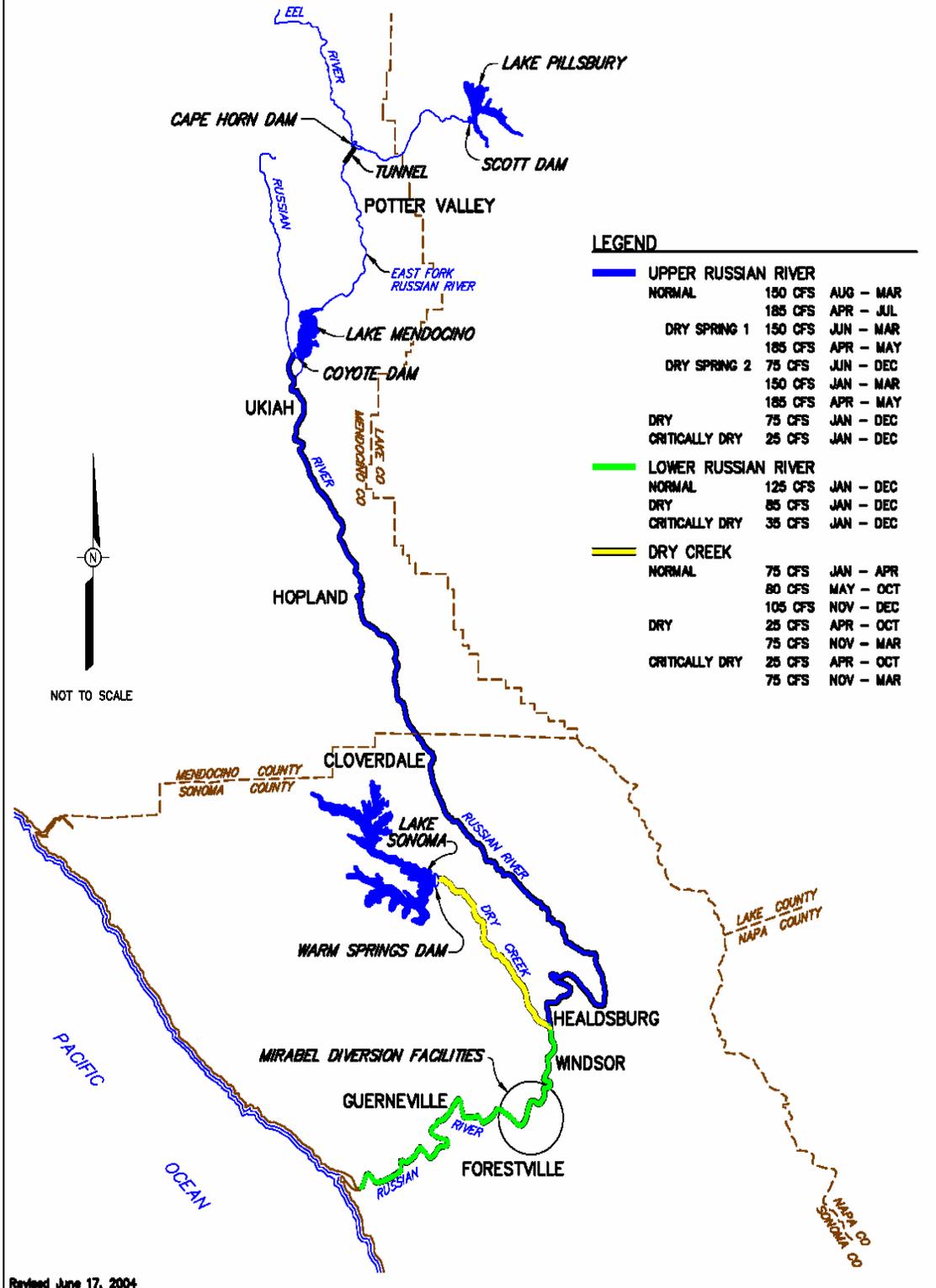
## **BACKGROUND**

### **Russian River System**

The Russian River originates in central Mendocino County, approximately 15 miles north of Ukiah (see Figure 2). It drains an area of 1,485 square miles including much of Sonoma and Mendocino Counties, and empties into the Pacific Ocean about 20 miles west of Santa Rosa. The main channel of the Russian River is about 110 miles long and flows generally southward from its headwaters near Redwood and Potter Valleys, to Mirabel Park, where the direction of flow changes to generally westward as it crosses the Coast Range.

Three major reservoirs provide the summer water supply for the Russian River watershed: Lake Pillsbury on the Eel River, Lake Mendocino on the East Fork Russian River, and Lake Sonoma on Dry Creek. These three reservoirs are described below. Most of the streamflow in the upper Russian River during the summer months is provided by water released from Lake Mendocino. Much of this supply originates in the Eel River watershed and is diverted at Cape Horn Dam to the East Fork Russian River via the Potter Valley Project.

## FIGURE 2 THE RUSSIAN RIVER SYSTEM



## **Lake Pillsbury and Potter Valley Project**

In 1908, W. W. Van Arsdale and the Eel River Power & Irrigation Company (later the Snow Mountain Power Company) completed construction of Cape Horn Dam and Van Arsdale Reservoir on the Eel River in Mendocino County, along with a diversion tunnel that led from the Eel River, through the mountains, to the East Fork of the Russian River (see Figure 2). The 450-foot drop in elevation between the Eel River and the East Fork Russian River was used to generate electrical energy at the Potter Valley Power Plant, located approximately 25 miles northeast of the City of Ukiah, to provide power to small electric companies in Sonoma, Napa, Lake, and Mendocino Counties.

In 1921, Scott Dam was constructed on the headwaters of the Eel River, forming Lake Pillsbury. Scott Dam is a concrete gravity dam that captures runoff from a drainage area of 298 square miles. Lake Pillsbury began storing water in December 1921 and had an original gross storage capacity of 94,400 acre-feet. However, sedimentation in the intervening period has reduced the lake's gross storage capacity to 74,993 acre-feet. Lake Pillsbury has a surface area of 2,280 acres at the normal maximum pool elevation of 1,828 feet above mean sea level (MSL). Water is released from Lake Pillsbury to the Eel River, and then re-diverted 12 miles downstream at Cape Horn Dam to the Potter Valley Power Plant through the diversion tunnel. The water then flows through the East Fork of the Russian River to Lake Mendocino.

All of the facilities described above, including Scott Dam and Lake Pillsbury, Cape Horn Dam and the diversion tunnel, and the Potter Valley Power Plant, comprise the Potter Valley Project (PVP). The PVP was purchased by the Pacific Gas and Electric Company (PG&E) in September, 1929.

Since 1908, diversions from the Eel River have been used to generate power, irrigate agricultural land in Potter Valley, and augment summer flows in the Russian River. The quantity of water that can be diverted to PG&E's Potter Valley Power Plant is affected by the PVP releases required to maintain the fishery in the Eel River. The release schedule is included in the FERC license for the PVP. PG&E also has an agreement with the United States Forest Service to maintain high reservoir levels in Lake Pillsbury until Labor Day of each year for recreational use. From 1922 to 1992, diversions to the Russian River watershed averaged 159,000 acre-feet per year (AFY). During water year 2007, SCWA is projecting PVP diversions of approximately 100,000 acre-feet.

## **Lake Mendocino**

Lake Mendocino, located 3 miles east of the City of Ukiah, is created by Coyote Valley Dam, located on the East Fork of the Russian River, 0.8 mile upstream of the East Fork's confluence with the Russian River (see Figure 2). Coyote Valley Dam is a rolled earth embankment dam with a crest elevation of 784 feet above MSL, which is 160 feet above the original streambed.

Lake Mendocino, which began storing water in 1959, has a design capacity of 122,500 acre-feet at the spillway crest elevation of 764.8 feet above MSL, and captures runoff

from a drainage area of about 105 square miles. The design water supply pool capacity of Lake Mendocino is 72,000 acre-feet. The Agency and the Mendocino County Russian River Flood Control and Water Conservation Improvement District (Mendocino District) have water right permits authorizing the storage of up to 122,500 AFY in the reservoir. Because the Agency is the local sponsor of the Coyote Valley Dam Project, it has the exclusive right to control releases from the water supply pool in Lake Mendocino. When the water level rises above the top of the water supply pool (elevation 737.5 feet above MSL) and into the flood control pool, the U.S. Army Corps of Engineers (USACE) assumes control of releases. Lake Mendocino has recreational facilities which are heavily used and provide significant economic benefits to the local area.

During the rainy season (November through May), natural streamflow (rather than reservoir releases) accounts for most of the flow of the Russian River. On the other hand, from June through October, most of the water in the Russian River downstream of Coyote Valley Dam and above Dry Creek is water that was released from storage at Lake Mendocino or that was imported by the Potter Valley Project.

### **Lake Sonoma**

Lake Sonoma, located about 5 miles southwest of the City of Cloverdale, is created by Warm Springs Dam, located on Dry Creek, about 11 miles upstream of Dry Creek's confluence with the Russian River (see Figure 2). Warm Springs Dam is a rolled earth embankment dam with a crest elevation of 495 feet above MSL.

Lake Sonoma, which began storing water in 1983, has a design capacity of 381,000 acre-feet at the spillway crest elevation of 495 feet above MSL, and captures runoff from a drainage area of about 130 square miles. The design water supply pool capacity of Lake Sonoma is 245,000 acre-feet. The Agency has a water right permit authorizing the storage of up to 245,000 AFY in the reservoir. Because the Agency is the local sponsor of the Warm Springs Dam Project, it has the exclusive right to control releases from the water supply pool in Lake Sonoma. When the water level rises above the top of the water supply pool (elevation 451.1 feet above MSL) and into the flood control pool, the USACE assumes control of releases.

The USACE operates Warm Springs Dam for flood control purposes in accordance with the criteria outlined in the *Warm Springs Dam and Lake Sonoma, Dry Creek, California Water Control Manual* (USACE 1984). Objectives described in this document include: (1) providing the maximum reduction in peak-flood discharges on Dry Creek and the Russian River below Healdsburg; (2) providing the maximum practical amount of conservation storage without impairment to other project functions; and (3) maintaining a minimum pool elevation of 292 feet above MSL to assure operation of the fish hatchery that is located immediately downstream of the dam. The 130,000 AF of flood control storage in Lake Sonoma was designed to provide control of a flood the size of the December 1955 flood event, which had a peak discharge of approximately 26,000 cfs at the dam site and represents about a 20-year flood event.

During the dry season (May through October), natural streamflow (rather than reservoir releases) accounts for very little of the flow in Dry Creek. Most of the water present in Dry Creek during this season results from the Agency's water supply releases from Warm Springs Dam. Water supply releases from Lake Sonoma are used to meet minimum instream flow requirements and municipal, domestic, and industrial demands in the lower Russian River area and portions of Sonoma and Marin counties (USACE 1998b). To meet these demands, water released from Lake Sonoma combines with releases from Coyote Valley Dam and runoff from other tributaries. Inflow to Lake Sonoma approaches zero from July through September, and the reservoir normally reaches its lowest level in November.

### **Water Rights**

The Agency holds water right Permit 12947A for storage of water in Lake Mendocino and for direct diversion and rediversion of water at the Agency's Wohler/Mirabel diversion facilities. Under this permit, the combined direct diversion and rediversion rates Wohler/Mirabel are limited to 92 cfs (average monthly rate) and 37,544 AFY. The Agency holds water right Permit 16596 for storage of water at Lake Sonoma and for direct diversion and rediversion of 180 cfs from the Russian River at Wohler/Mirabel. The Agency also holds water right Permits 12949 and 12950 for direct diversions of 20 cfs and 60 cfs, respectively, at Wohler/Mirabel. The combined direct diversion and rediversion rates at Wohler/Mirabel under all four of the Agency's water right permits presently are limited to no more than 180 cfs (116.3 million gallons per day [MGD]) and 75,000 AF during each October 1 to September 30 period.

The Mendocino District holds water right permit 12947B for storage of water at Lake Mendocino and for direct diversion and rediversion of water at many points along the Russian River. Under this permit, the combined direct diversion and rediversion quantities are limited to 8000 AFY.

### **State Water Resources Control Board Decision 1610 (Decision 1610)**

The Agency controls and coordinates water supply releases from the Coyote Valley Dam and Warm Springs Dam projects in accordance with the provisions of Decision 1610, adopted by the SWRCB on April 17, 1986. Decision 1610 specifies the minimum flow requirements for Dry Creek and the Russian River. These requirements vary based on defined hydrologic year conditions.

Decision 1610 requires a minimum flow of 25 cfs in the East Fork Russian River from Coyote Valley Dam to the confluence with the Russian River during all water year types. From that junction to Dry Creek, the required minimum Russian River flow requirements are 185 cfs from April through August and 150 cfs from September through March during *Normal* conditions, 75 cfs during *Dry* hydrologic conditions and 25 cfs during *Critically Dry* hydrologic conditions. Decision 1610 further specifies two variations of the *Normal* hydrologic condition, commonly known as *Dry Spring 1* and *Dry Spring 2*. The occurrence of these conditions results in lower minimum flow requirements in the

upper Russian River during times when the combined storage in Lake Pillsbury and Lake Mendocino is unusually low. Under *Dry Spring 1*, the minimum flow requirement for the upper Russian River between the confluence of the East and West Forks and Healdsburg is 150 cfs from June through December. Under *Dry Spring 2*, the upper River minimum flow requirement is 75 cfs from June through December.

From Dry Creek to the Pacific Ocean, the required minimum flow is 125 cfs during *Normal* conditions, 85 cfs during *Dry* hydrologic conditions and 35 cfs during *Critically Dry* conditions. There are no adjustments in these requirements for *Dry Spring 1 or 2*.

In Dry Creek, the required minimum flows are 75 cfs from January through April, 80 cfs from May through October, and 105 cfs in November and December during *Normal* conditions. During *Dry* and *Critically Dry* conditions, these requirements are 25 cfs from April through October, and 75 cfs from November through March. Figure 3 shows all of the required minimum instream flow requirements specified in Decision 1610 by river reach, along with definitions of the various hydrologic conditions.

On April 1, 2007, the cumulative inflow into Lake Pillsbury during the 2006-2007 water year was 167,000 AF. This means that 2007 will be classified as a *Normal* water year, regardless of the amounts of Lake Pillsbury inflows during the remainder of 2007. It is predicted that the total combined storage in Lake Pillsbury and Lake Mendocino on May 31, 2007 will be less than 130,000 AF, and that the *Dry Spring 2* conditions therefore will go into effect on June 1, 2007.

### **Storage Projections**

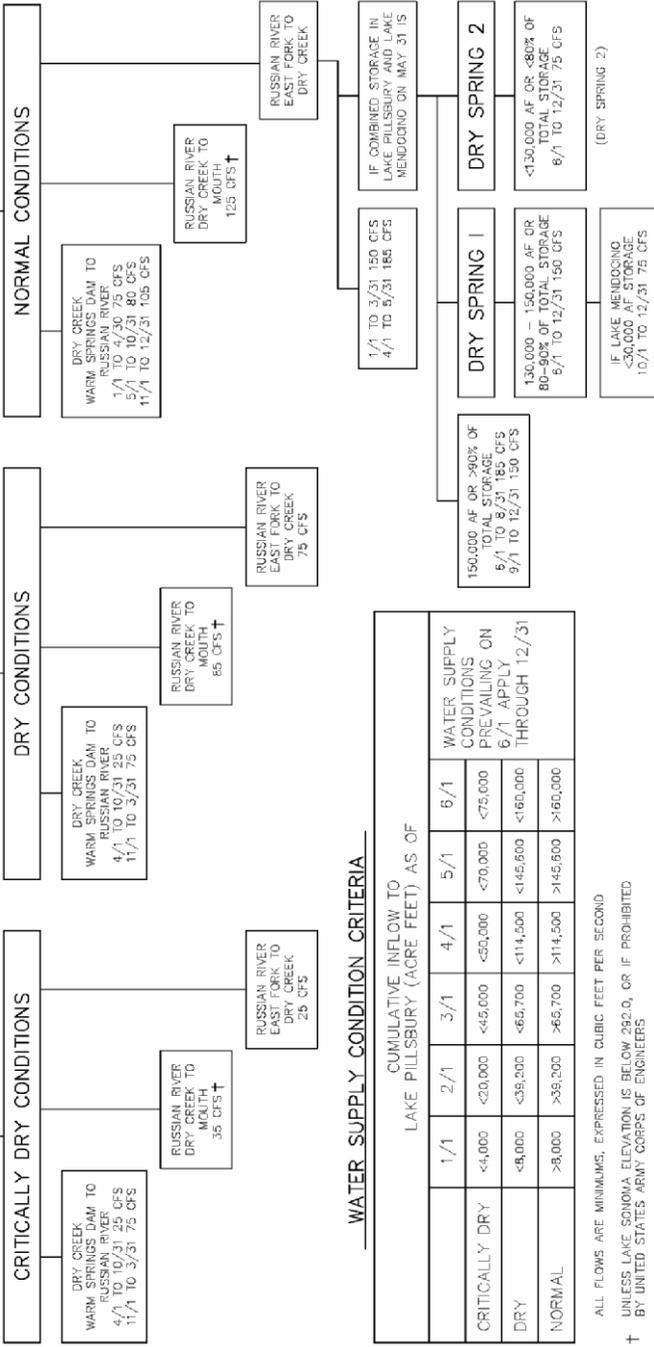
Figure 3 shows the Lake Mendocino storage levels that have occurred so far during 2007 and that are projected to occur during the remainder of 2007, both without any changes in the instream-flow requirements and if the SWRCB grants the Agency's temporary urgency change petition. As indicated in this figure, without any changes in the instream-flow requirements, Lake Mendocino storage is predicted to drop to 8,000 Af during October 2007. On the other hand, if the Agency's temporary urgency change petition is granted, and the requested changes in the instream-flow requirements may begin, on May 1, 2007, then Lake Mendocino storage is predicted to drop to a minimum of 22,000 AF during October 2007.

Since Lake Mendocino first was filled, its storage never has dropped below 12,000 AF, and it is uncertain whether water could continue to be released from Lake Mendocino into the East Fork Russian River if its storage were to drop to 8,000 AF. If water could not be released from Lake Mendocino during October and November 2007, then there would be severe impacts on the fishery and recreation resources that depend on the upper Russian River, and on water users that rely on the upper Russian River for their water supplies.

# RUSSIAN RIVER BASIN STREAMFLOW REQUIREMENTS

PER STATE WATER RESOURCES CONTROL BOARD DECISION 1610, APRIL 1986

ALWAYS - EAST FORK RUSSIAN RIVER  
 COYOTE DAM TO RUSSIAN RIVER  
 25 CFS



ALL FLOWS ARE MINIMUMS, EXPRESSED IN CUBIC FEET PER SECOND  
 † UNLESS LAKE ELEVATION IS BELOW 292.0, OR IF PROHIBITED BY UNITED STATES ARMY CORPS OF ENGINEERS  
 AF ACRE FEET

FIGURE 3

## **Dry Creek and Lower Russian River Flows**

During September and October 2001, the Agency, in coordination with the DFG, NOAA Fisheries, North Coast Regional Water Quality Control Board, and the USACE conducted a study of salmonid flow-habitat relationships (Study) in the Russian River and in Dry Creek. The results of the Study formed the basis for many of the evaluation criteria used in the Draft Russian River Biological Assessment and indicate that the Russian River and Dry Creek summer flows are at levels too high to provide optimal salmonid rearing habitat conditions. The habitat values for rearing salmonids peaks when flows in the Russian River and Dry Creek are in the 50-70 cfs range, and these habitat values begin to drop off at higher flows as a result of increased velocities and reduced habitat complexity. Dry Creek was identified as the stream reach most susceptible to salmonid rearing habitat degradation resulting from dam releases. In Dry Creek, the optimal range for summer salmonid rearing was determined to be approximately 50-70 cfs. 90 cfs was determined in the Draft Biological Assessment to be a threshold value for rearing habitat in Dry Creek. At flows above 90 cfs, salmonid rearing habitat degradation becomes significant.

Because of the potential of habitat degradation in Dry Creek under high flows, it would not be desirable to “make up” for reduced releases from Lake Mendocino by making higher releases from Lake Sonoma. For this reason, reductions in the lower Russian River instream-flow requirements from 125 cfs to 85 cfs are requested to prevent flow related impacts to rearing salmonids in Dry Creek. Without such a reduction in the lower Russian River instream-flow requirements, any reductions in Upper River flows would have to be “made up” with increased releases from Lake Sonoma, which would cause significant adverse impacts to salmonid rearing habitat in Dry Creek.

## **Conclusion**

For the reasons discussed in this memorandum, the Agency requests that the State Water Resources Control Board adopt the attached proposed order. This order will allow the Agency to operate Lakes Mendocino and Sonoma to maintain storage levels in Lake Mendocino at levels that will provide improved protections for fishery, recreation, and water supply interests in the Russian River Valley.