

**STATE WATER RESOURCES CONTROL BOARD  
DIVISION OF WATER RIGHTS**

DIVISION DECISION 2008-01

Klein Foods, Inc.  
APPLICATIONS 31304, 31362, and 31363

August 2008

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<sup>1</sup> Information sources identified in this decision are provided for ease of reference. There may be other supporting evidence in the record that is not specifically cited in the Decision. All listed information is contained in the Division's files for Applications 31304, 31362, and 31363.

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# 1 INTRODUCTION AND OVERVIEW

This matter comes before the State Water Resources Control Board (State Water Board), Division of Water Rights (Division), pursuant to Water Code sections 1345-1348 for water right Applications 31304, 31362, 31363 (A031304, A031362 and A031363 respectively), filed by Klein Foods, Inc. (Applicant).

This Division Decision is based on a review of all available information. This information includes an evaluation of the hydrologic characteristics of the water sources and the availability of water to supply the proposed project, the beneficial uses of the proposed water diversion, the protestants' claims, and the potential impacts on prior water rights and public trust resources. The Division concludes that unappropriated water is available to supply the applications and water right permits should be issued, subject to the terms and conditions contained in the Order portion of this decision.

Prior to adopting this decision, the Division adopted a Mitigated Negative Declaration. The mitigation terms identified in the Mitigated Negative Declaration will be incorporated into the water right permits issued for this project and are also contained in the Order portion of this Division Decision.

## 1.1 Project Description

Applicant requests the right to divert a total of 226 acre-feet per annum (afa) of water to storage for irrigation of 280 acres of vineyard and for recreation purposes. The Applicant intends to divert water from five Unnamed Streams tributary to Lake Sonoma (on Dry Creek) thence the Russian River. The project is located on the 19,000-acre Cooley Ranch site, which is approximately five miles west of the City of Cloverdale in Sonoma County. Approximately 13,000 acres of the Cooley Ranch are designated as forever wild, and an additional 4,650 acres are designated as an agricultural preserve pursuant to an open space agreement administered by the Sonoma County Agricultural Preservation and Open Space District. All of the proposed vineyards and water storage facilities are located within the area designated as agricultural preserve. The project has not been constructed.

The three water right applications are located in adjoining geographical areas of the Cooley Ranch. These geographical areas are referred to as the Western Project Area (associated with Application 31304), Northern Project Area (associated with Application 31362), and Eastern Project Area (associated with Application 31363). Each of the applications is considered a minor project as defined by Water Code section 1348.

### 1.1.1 Application 31304 (Western Project Area)

Water right Application 31304 was filed on March 14, 2002. The application is for collection of 48 afa of water to storage in Reservoir 2W for irrigation of a 65-acre place of use (POU). The application requests the following Points of Diversion (PODs):

POD 2W	Point of Diversion by collection to storage at Reservoir 2W and point of re-diversion from points 4W and 5W. Water is to be diverted from November 1 to March 31.
POD 4W	Point of Diversion to offstream storage at Reservoir 2W. Water is to be diverted from November 1 to March 31.
POD 5W	Point of Diversion to offstream storage at Reservoir 2W. Water is to be diverted from November 1 to May 1.

1.1.2 Application 31362 (Northern Project Area)

Water right Application 31362 was filed on September 26, 2002. The application is for collection of 98 afa of water to storage in Reservoir 2N for irrigation of a 114-acre POU. The application requests the following PODs:

POD 2N	Point of Diversion by collection to storage at Reservoir 2N and point of re-diversion from points 3N and 4N. Water is to be diverted from November 1 to March 31.
POD 3N	Point of Diversion to offstream storage at Reservoir 2N. Water is to be diverted from November 1 to May 1.
POD 4N	Point of Diversion to offstream storage at Reservoir 2N. Water is to be diverted from November 1 to March 31.

1.1.3 Application 31363 (Eastern Project Area)

Water right Application 31363 was filed on September 26, 2002. The application is for collection of a total of 80 afa of water to storage in three reservoirs: Reservoir 1E (35 acre-feet), Reservoir 3E (15 acre-feet), and Reservoir A (30 acre-feet), for irrigation of a 101-acre POU. The application requests the following PODs:

POD 1E	Point of Diversion by collection to storage at Reservoir 1E, Point of diversion to offstream storage at Reservoir 3E, and point of re-diversion from points 3E and 6E. Water is to be diverted from November 1 to May 1.
POD 3E	Point of Diversion by collection to storage at Reservoir 3E, Point of diversion to offstream storage at Reservoir 1E, and point of re-diversion from points 1E and 6E. Water is to be diverted from November 1 to May 1.
POD 6E	Point of Diversion to offstream storage at Reservoir 1E and Reservoir 3E. Water is to be diverted from November 1 to May 1.
POD 7E	Point of Diversion to offstream storage at Reservoir A. Water is to be diverted from November 1 to March 31.

## 2 NOTICE AND SUMMARY OF PROTESTS

On October 3, 2003, the Division issued a Public Notice of Applications 31304, 31362, and 31363 in accordance with Water Code sections 1300 through 1304. The Division received the following protests:

Protestant	Basis of Protest
Louis D. Preston	Injury to Prior Rights
Sonoma County Water Agency	Injury to Prior Rights
California Department of Fish and Game	Environmental Issues

### 2.1 Louis D. Preston

On October 29, 2003, Louis D. Preston protested on the grounds that approval of Applications 31304, 31362, and 31363 would jeopardize water availability to supply prior rights under Licenses 004498 (A014043) and 010583 (A023067). On January 9, 2004, the Division accepted the protests based on possible injury to prior rights. The Division's acceptance letter noted that the seasons of diversion requested in Applications 31304, 31362, and 31363 do not overlap with the season of diversion authorized by License 010583 (A023067). Accordingly the Division requested that the protestant clarify how approval of Applications 31304, 31362, and 31363 could adversely affect the protestant's rights under this license. On January 22, 2004 the protestant agreed to withdraw the protest with inclusion of the following permit term recognizing his prior rights:

*This permit is specifically subject to the prior rights of Louis D. Preston under License 4498 (Application 14043).*

The Applicant agreed to inclusion of this permit term, and on March 8, 2004 the Division dismissed the protest of Louis D. Preston.

### 2.2 Sonoma County Water Agency

On October 23, 2003, the Sonoma County Water Agency (SCWA) protested on the basis of injury to prior rights authorized under water right Permits 12947A, 12949, 12950, and 16596 (Applications 12919A, 15736, 15737, and 19351, respectively). The SCWA protest indicated that it would withdraw the protest upon inclusion of standard permit terms 47, 51, 80(a), and 90(a). The Division accepted SCWA's protest on January 9, 2004. By letter dated January 30, 2004, the Applicant agreed to SCWA's protest dismissal terms proposed. Inclusion of the following terms in any permit authorized pursuant to Applications 31304, 31362, and 31363 therefore addresses SCWA's protest concerns:

- *Whenever the prior storage rights of Sonoma County Water Agency (under Permit 16596, issued pursuant to Application 19351) are not satisfied by April 1 of any year, Permittee shall release water collected to storage under this permit between November 1 of the preceding year and March 31 of the current year. Permittee shall immediately release water at the maximum practicable rate to the extent necessary*



*to satisfy said prior downstream storage rights. Permittee shall not be obligated to release more water than is required to draw down the water levels in the reservoirs to the level of the November 1 staff gage reading for the prior calendar year unless Permittee has withdrawn water from the reservoirs for consumptive purposes since November 1 of the previous calendar year. In that event, Permittee shall be required to release an amount of water sufficient to draw down the reservoir water levels to the levels existing on November 1 of the prior calendar year, as measured by the staff gage, and also release any additional amount of water collected and withdrawn from the reservoirs for consumptive use purposes since November 1 of the previous calendar year.*

- The State Water Resources Control Board reserves jurisdiction over this permit to change the season of diversion to conform to later findings of the Board concerning availability of water and the protection of beneficial uses of water in the Russian River. Any action to change the authorized season of diversion will be taken only after notice to the Permittee and opportunity for hearing.*
- This permit is subject to prior rights. Permittee is put on notice that, during some years, water will not be available for diversion during portions or all of the season authorized herein. The annual variations in demands and hydrologic conditions in the Russian River Watershed are such that, in any year of water scarcity, the season of diversion authorized herein may be reduced or completely eliminated by order of the State Water Resources Control Board, made after notice to interested parties and opportunity for hearing.*
- Before storing water in any reservoir identified in this permit, Permittee shall install a staff gage in the reservoir, satisfactory to the Chief of the Division of Water Rights, for the purpose of determining water levels in the reservoir. The Permittee must maintain the staff gage in operating condition as long as water is being diverted or used under this permit. Permittee shall record the staff gage readings on the last day of each month. Permittee shall record the maximum and minimum water surface elevations and the dates that these water levels occur each water-year between October 1 and September 30. Permittee shall maintain a record of all staff gage readings and shall submit these records with all required Reports of Permittee, Reports of Licensee or whenever requested by the staff of the Division of Water Rights. The State Water Resources Control Board may require the release of water that cannot be verified as having been collected under a valid basis of right. Permittee shall allow the Sonoma County Water Agency and all successors in interest, or a designated representative, reasonable access to the reservoirs for the purpose of verifying staff gage readings and determining water levels in the reservoirs.*

On March 8, 2004, the Division dismissed SCWA's protest based on the Applicant's acceptance of SCWA's dismissal terms and the understanding that these terms will be incorporated into any permits/licenses issued pursuant to water right Applications 31304, 31362, and 31363.

## 2.3 California Department of Fish and Game

On November 10, 2003 the California Department of Fish and Game (DFG) protested on the basis that approval of the applications would result in reduced stream flow, potentially resulting in impact to riparian and aquatic species. The protest indicated that Dry Creek and Cherry Creek support landlocked steelhead trout and foothill yellow legged frogs downstream from the PODs identified in Applications 31304, 31362, and 31363. The protest also stated that:

1. The proposed onstream reservoirs would cause changes in the hydrology and habitat within their footprints;
2. Clearing of land will result in the loss of native vegetation and probably the loss of wildlife including deer, songbirds, and raptors;
3. An undisclosed amount of oak woodland would be converted to vineyard;
4. Sites proposed for vineyard development include seasonal wetlands; and,
5. Erosion from developed vineyard sites could lead to sedimentation in Dry Creek, Cherry Creek, and Lake Sonoma, which would result in a loss of aquatic habitat.

DFG indicated that specific protest dismissal terms had not yet been developed. Instead, DFG stated that surveys for sensitive plant and animal species must be conducted for the entire project area by qualified biologists. DFG also indicated that a detailed hydrologic analysis was needed to determine if water was available to supply the project without adversely affecting the flows needed to support sensitive aquatic resources, riparian resources, or channel maintenance. Although DFG did not provide definitive protest dismissal terms, their protest did indicate that dismissal terms for projects on "these creeks"<sup>2</sup> and their unnamed tributaries would likely include the following:

1. Under the exercise of all bases of right, the season of diversion shall be limited to December 15 to March 31 of each year.
2. Under the exercise of all bases of right, from April 1 to December 14, all natural flow shall be bypassed.
3. No water shall be diverted unless a minimum bypass flow of not less than the estimated long-term unimpaired February median flow at the point of diversion (POD) is maintained at the POD.
4. The bypass shall be a passive system that is designed to only divert flow when the terms of the State Water Board permit are met. Outside the diversion season, and at low flows, water will automatically bypass the diversion point.
5. The cumulative maximum rate of instantaneous withdrawal at the point of diversion shall not exceed a flow rate equivalent to 15 percent of the estimated

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Presumably Dry Creek and Cherry Creek<sup>2</sup>

"winter 20 percent exceedance flow," which is the 20 percent exceedance value of the stream's daily average flow duration curve for the period December 15 to March 31. Cumulative withdrawal rate refers to the effects of this and all other permitted or licensed projects as well as diversions under riparian rights.

6. To avoid impacts to resources, any onstream storage facilities must meet the exemption criteria for the location of onstream reservoirs. Those that do not must be capable of bypassing all flows as described in terms above.
7. Under the exercise of all bases of rights, there shall be no direct diversion for irrigation or for frost or heat control.
8. To avoid impacts to native species, no fish shall be stocked into any onstream reservoir.
9. If warranted, the Applicant shall develop a mitigation plan aimed at replacing lost plant, fish, and/or wildlife resources including, but not limited to, species or habitats listed in the California Natural Diversity Database. This plan will include a survey which quantifies loss of resources that have occurred or will occur as a result of these projects. Plans will specify measures taken to offset impacts to resources and outline specific mitigation and monitoring programs.
10. If warranted, an erosion control plan shall be developed. This plan shall outline measures aimed at alleviating sediment delivery into the tributaries. This plan shall include:
  - a. Time restriction for grading operations or other project-related activities to reduce the potential for erosion and sediment delivery to affected streams;
  - b. Buffer zones shall be established along any riparian corridor of the affected project site. Discing or removal of existing riparian vegetation or other disruptive work shall not occur within said buffer zone; and,
  - c. Erosion control for all exposed areas susceptible to erosion, including seeding, mulching, tree planting, slope contouring, and other erosion protection measures shall be included in this plan.
11. If unforeseen problems arise which are causing significant adverse impacts to fish and/or wildlife resources or as further data are accumulated for analysis, the Applicant may be required to remediate the situation to the satisfaction of DFG.
12. Permittee must agree to allow access for DFG personnel to monitor compliance.

On January 30, 2004, the Applicant's authorized agent<sup>3</sup> responded to the DFG protest. The Applicant's response indicated that they had entered into a Memorandum of Understanding (MOU) with the Division for the conduct of environmental assessment needed to comply with the California Environmental Quality Act (CEQA). The Applicant further stated that they were withholding comment on DFG's twelve protest dismissal terms until conclusion of the environmental review process. On May 6, 2004 DFG

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<sup>3</sup> Paula Whealen of Wagner and Bonsignore, Consulting Civil Engineers. Applicant and Applicant's authorized agent are hereafter used interchangeably.

provided the Division with a description of the Points of Interest (POIs) for this project. The POIs represent the locations where DFG believes cumulative flow related impact analyses should be conducted. As discussed in the following sections, substantial environmental analysis and hydrologic investigation were undertaken between 2004 and the present.

By letter dated March 15, 2006, the Applicant formally responded to DFG's protest and explained the mitigation proposed to address the concerns raised by DFG (WB 1, pp. 1-6). The Applicant's letter also addressed each of DFG's twelve protest dismissal terms. DFG did not respond to the letter. DFG and the Applicant did not resolve the protest.

### **3 FIELD INVESTIGATION AND STAFF ANALYSIS**

On November 9, 2007, the Division requested that DFG provide a statement of facts to support their protest allegations that approval of the project would:

- Result in reduced stream flows, potentially impacting aquatic and riparian resources;
- Create onstream dams that cause changes in hydrology and a loss of habitat within their footprints;
- Include land clearing that results in impacts to terrestrial wildlife, native vegetation, songbirds, raptors, oak woodlands, and seasonal wetlands; and,
- Result in a loss of aquatic habitat value due to sedimentation in Dry Creek, Cherry Creek, and Lake Sonoma.

DFG responded by memorandum dated December 11, 2007. DFG's response indicated that that it remained concerned that "components of the current project: 1) have not decreased impacts to less than significant levels; 2) have not provided adequate mitigation for significant impacts; 3) have not provided sufficient evidence to support statements that the project will not have a significant impact on resources; and 4) fails to include recommendations for resources protection from DFG staff." (DFG 4, p.1.) Despite the project revisions and other mitigation incorporated into the project, the parties were unable to resolve this protest. Therefore, the Division scheduled a field investigation, pursuant to Water Code section 1345, to address the issues raised by DFG.

On March 7, 2008, the Division issued to the interested parties, a notice of field investigation for Applications 31304, 31362 and 31363. The notice informed DFG, the sole remaining protestant, that it would be asked to provide information demonstrating that approval of the project would cause specific injury to the environment or public trust resources. The notice also informed DFG that it should submit written data to support its position and propose terms to resolve protest issues. Division staff conducted the field investigation in accordance with Water Code sections 1345 through 1348. Representatives of the State Water Board, Applicant, DFG, and SCWA were present. A transcript of the field investigation is included in the application file (FI 1).

### 3.1 Water Availability

Before issuing a water right permit, the Division must find that unappropriated water is available to supply the Applicant. (Wat. Code § 1375, subd. (d).) Unappropriated water is available if the water is neither appropriated by senior appropriators nor diverted for riparian use (Wat. Code § 1202) nor needed for public trust resources, including fish, wildlife, and other instream beneficial uses. (*National Audubon Society v. Superior Court* (1983) 33 Cal. 3d 419, 426 [189 Cal. Rptr. 346, 349].)

Wagner & Bonsignore Consulting Civil Engineers prepared a Water Availability Analysis (WAA) dated September 29, 2004 for the proposed project. POIs for the analysis were selected by DFG. Seasonal unimpaired flow was estimated at each POI using data from the Dry Creek USGS Gaging Station #11464500 located near Cloverdale. Seasonal unimpaired flow was estimated for each POI by adjusting historical data from the Dry Creek gage based on differences in watershed area and precipitation between watersheds.

A Cumulative Flow Impairment Index (CFII) calculation was used to evaluate the cumulative flow impairment of all existing and pending projects in the watersheds draining the project area. The CFII was calculated by dividing the demand in acre-feet (from October 1 through March 31) by the supply in acre-feet (from December 15 through March 31) at a specific POI. The February median flow was also calculated at all PODs. Division staff reviewed and accepted the methodology used in the September 29, 2004 WAA, including the calculations of Cumulative Flow Impairment, February median flow, and net water available for diversion.

The WAA included an operations analysis and schematic for each application. The operations summary for Application 31304 indicated that there would be insufficient flow available to fill two of the three reservoirs if the February median flow is bypassed at each POD. The estimated deficit at POD 2W was 0.3 af, and the estimated deficit at POD 3W was 12.3 af. It is important to note, however, that the WAA was based on the project as originally proposed and therefore significantly overestimated project demand, since the net water sought by the applications was reduced from 417 afa to 226 afa. In fact, Reservoir 3W in Application 31304 was removed from the project design.

The September 29, 2004 WAA report prepared by Wagner & Bonsignore included CFII calculations for 29 POIs. The CFII calculation procedure is defined in a document entitled *Guidelines for Maintaining Instream Flows to Protect Fisheries Resources Downstream of Water Diversions in Mid-California Coastal Streams* (DFG-NMFS Draft Guidelines), which was jointly developed by DFG and National Marine Fisheries Service (NMFS). According to the DFG-NMFS Draft Guidelines, the CFII can be used to evaluate the potential level of stream flow impairment from cumulative water demand. From a hydrologic standpoint, however, the CFII method is poorly suited for application to this project, in part because the project involves transfer of water between different sub-watersheds. The CFII calculations at certain POIs do not account for water contributions from other sub-watersheds.

In the case of this project, most of the proposed reservoirs would be filled by a combination of local inflow and diversion to storage from other PODs. The seasonal

CFII calculation does not account for these non-local flow inputs and as a result, it overestimates impairment at some locations. In effect the CFII method is too coarse to comprehensively and accurately describe flow impairment at the project site. Moreover, 10 of the 29 POIs selected by DFG are now irrelevant due to project amendments which significantly reduced the scope of the project subsequent to preparation of the WAA.

On February 28, 2006, Wagner & Bonsignore submitted a set of supplemental hydrologic analyses based on a detailed daily operations spreadsheet model of the modified project (i.e., currently proposed project). The supplemental hydrologic analyses were prepared to address concerns raised by Division and DFG staff regarding potential impacts to aquatic resources resulting from water diversion and to further demonstrate water availability. Division staff reviewed and concurs with the supplemental hydrologic analyses calculations and the finding that in the majority of years, sufficient unappropriated water exists to satisfy the requested demand and support the proposed agricultural use. The determination of whether unappropriated water is available to the Applicant must be made by taking into account the amounts of water needed to remain in the source for protection of instream beneficial uses (Wat. Code § 1243.5.). Potential flow related impacts to instream resources are evaluated in Section 3.3 below.

### 3.2 Protest Issues

DFG contends that the project, as proposed, will cause adverse impacts to foothill yellow-legged frogs, rainbow trout, riparian areas, stream channels, wetlands, and oak woodlands. DFG further states that these impacts would be caused by a combination of reduced instream flow and footprint impacts from the construction of diversion facilities and development of the POUs. Following is a discussion of the issues raised by DFG in their original protest and supplemental information provided to support their protest.

### 3.3 Flow Related Impacts to Instream Beneficial Uses

Eleven watercourses flow through the project site (See attached map; Jennings 1, p.-3, fig. 2), five of which would be affected by diversion (Table 1).

**Table 1: Project area Watercourses and Associated PODs**

Stream #	PODs
1	none
2	none
2a	none
2b	none
2c	none
3	2W, 4W
4	5W
5	none
6	1E, 6E, 3E
7	2N, 4N, 7E
8	3N

DFG has repeatedly expressed concerns that diversions requested under Applications 31304, 31362, and 31363 would cause impacts to aquatic resources due to reduced instream flow. (DFG 1; DFG 2; DFG 3; DFG 4). In their original protest, DFG indicated that the amount of water proposed for diversion would result in reduced stream flow, potentially causing impacts to riparian and aquatic resources downstream from proposed PODs (DFG 1, p.1). In 2006, DFG elaborated on their original protest as part of the CEQA consultation process and expressed concern that there were five diversions proposed within the same stream reach (Stream 7). (DFG 2, pp 1-2.) DFG recommended dispersing the PODs rather than grouping them so as to reduce the amount of diversion from a single stream. Their 2006 comments also recommended limiting the size of reservoirs so that water diversion is not excessive and truncating the season of diversion to March 1 (DFG 2, p.2; DFG 3, p. 6). However, DFG did not recommend a specific level of diversion that would be considered acceptable nor did it define "excessive" diversion. Instead DFG has deferred to the cumulative impact criteria contained in the DFG-NMFS Draft Guidelines. (DFG 3, pp 2-7; DFG 4 pp, 2-4.)

In 2006 the Applicant modified the project design to reduce the overall volume of diversion by approximately 46 percent. (Initial Study (IS), p. 41). The project modification reduced the number of PODs affecting Stream 7 from five to three. Despite the project reductions, DFG remains concerned about the affects of diversion on instream resources. A number of the flow related concerns raised by DFG are related to CFII values that were calculated for the original project. DFG has repeatedly cited high CFII values as a potentially significant impact. (DFG 3, pp 2-7; DFG 4 pp, 2-4.) The CFII method was established as part of the DFG-NMFS Draft Guidelines. The DFG-NMFS Draft Guidelines were, in effect, established to provide a set of diversion thresholds designed to provide conservative protection of state and federally listed threatened and endangered salmonids. However, as stated above, application of the CFII methodology to this project is not hydrologically appropriate. (Section 3.1, *supra*.) While the DFG-NMFS Draft Guidelines may provide information and justification that is relevant to the Cooley Ranch project, blanket application of the metrics established in the DFG-NMFS Draft Guidelines<sup>4</sup> is ecologically inappropriate because: (1) fish are not present at or immediately downstream of any of the PODs; (2) anadromous fish do not exist between the project site and Lake Sonoma; and (3) most of the project PODs are located on steep Class II or Class III streams with relatively small contributing drainage areas that flow directly to Lake Sonoma. Nonetheless, DFG has raised concerns regarding flow related impacts that warrant further evaluation.

### 3.3.1 Channel Forming Flows

DFG has indicated that the hydrographs included as part of the February 28, 2006, Wagner & Bonsignore supplemental hydrologic analyses show the project will cause flat-lining to occur until February during average (and even wet) water years, unless the first storms of the season are significant. DFG further found that while peak flows are preserved later in the season, the moderate flows that occur during December and January are being eliminated (DFG 4, p. 3). This finding is not entirely accurate,

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<sup>4</sup> These Guidelines are recommended for use by permitting agencies, planning agencies, and water development interests when taking proposed actions that would divert or act to remove instream flows in California's mid-coastal watersheds containing anadromous salmonids. (DFG-NMFS 2002, p. 2.)

however, because a February median flow<sup>5</sup> bypass is being proposed for all locations where hydrographs were prepared. Therefore, moderate flows would not be eliminated at these locations. DFG correctly points out that there will be periods when flows will be flat-lined to the February median flow. “*DFG considers flat-lining to the February median bypass during this period, especially to a stream supporting rainbow trout,<sup>6</sup> a significant adverse impact that has not been mitigated*”. (DFG 4, p.3.) After reviewing the hydrographs, DFG contends that removal of the quantity of water currently proposed will result in significant adverse impacts to resources. DFG concerns primarily regarding the cumulative amount of water to be diverted appear to be primarily related to potential impacts on channel forming flows and channel maintenance. However, DFG has not provided substantial qualitative or quantitative analysis demonstrating that the proposed quantity of water to be diverted is excessive or would cause impacts to channel maintenance in the specific watercourses that would be affected by the project.

The 2006 supplemental hydrologic analyses prepared by Wagner & Bonsignore included a set of five hydrographs each for PODs 4W, 4N, and 7E, which were intended to address the potential impact of the project on channel forming flows. (WB 3; WB 4.) The supplemental hydrologic analyses also included a qualitative discussion of the hydrographs with respect to changes in peak flows. While peak flows were affected during periods when reservoirs were filling, the analysis generally concluded that during normal water year conditions “...*channel forming flows would still occur, but could be less frequent and may occur later in the season than for unimpaired conditions.*” (WB 3, p.5; WB 4, p. 5.) Wagner and Bonsignore did not evaluate every POD, instead their analysis focused on Streams 3 and 7 - the more significant watersheds and the streams where sensitive aquatic resources<sup>7</sup> were located at, or downstream of a POD.

During the April 4, 2008 field investigation, DFG maintained their concern that the project, as designed, would be detrimental to channel formation. DFG pointed out that hydrographs were only completed for POD 4N and POD 7E on Stream 7 and that hydrographs were not prepared for POD 2N where peak flow reduction would be more pronounced. (FI, pp. 39-40.) It is important to point out, however, that the watershed area above POD 2N is only 68.5 acres (IS, p. 40) and the watercourse was characterized as an ephemeral drainage with surrounding grassland habitat, soil substrate, and no riparian vegetation upstream and downstream of the POD. (*Id.*, p. 20; Kjeldson, p. 34.) Therefore, the analytical value of preparing hydrographs at this location would likely be limited with respect to assessing flow related affects on channel maintenance or form.

DFG presented the hydrographs prepared by Wagner and Bonsignore for POD 4N to illustrate their point. DFG asserted that the hydrographs for POD 4N show that only two out of the six years modeled “actually maintain any natural peak or any peak flows.” (FI, p. 41.) DFG further stated that it was “under the impression that by suppressing these peak flows that you’re going to have a significant impact on channel-forming flows downstream.” (*Ibid.*) Inspection of the hydrographs prepared for POD 4N shows that

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<sup>5</sup> “[t]he February median flow is a conservatively high bypass flow because it conserves ‘typical’ winter flows to which native fish are adapted. February is generally the wettest month in the 4-county area, and therefore the long-term February median flow is a hydrologic metric that permits diversion during the higher flows of winter.” (DFG-NMFS, pp. 6-7.)

<sup>6</sup> This is a reference to Stream 7, where rainbow trout were identified 2,900 feet downstream of POD 7E. (IS, p. 72.)

<sup>7</sup> Foothill yellow legged-frog and rainbow trout.



while early season moderate flows (above February median) would be reduced, intermediate peak flows would not be completely eliminated on an annual basis, except in extremely dry conditions (e.g., WY 1976), when significant peak flows would not occur in any case. DFG's presentation indicated that by removing peak flow events, the frequency and magnitude of channel-forming events would be reduced and as a result gravel bars would no longer be scoured on a regular basis, margins would be colonized by riparian vegetation, and important breeding and tadpole nursery habitats would be eliminated. While this may be true of the effects of flow reduction on channels in general, DFG did not provide any specific evidence to suggest that these impacts would occur (or to what degree they would occur) at the Cooley Ranch site as a result of project approval. DFG's concern that the project will cause significant adverse effects is not supported by information contained in the record.

### 3.3.2 Foothill Yellow-Legged Frogs

Many of DFG's concerns with the proposed project are related to potential impacts to foothill yellow-legged frogs, which are listed by DFG as a California Species of Special Concern. With respect to foothill yellow-legged frogs, DFG has stated the following concerns:

1. Changes to channel forming flow could result in changes to channel form and adversely affect habitat conditions for foothill yellow-legged frogs;
2. Construction of onstream dams and reservoirs will eliminate important frog habitat;
3. Construction of onstream dams will impede sediment transport, which in turn could impair habitat for foothill yellow-legged frogs;
4. Construction of instream PODs (offset wells/infiltration galleries) will disturb frog habitat;
5. Reservoir releases could scour egg masses or adversely change water temperature;
6. Water diversion could dewater stream margins, thereby stranding or impinging frogs, egg masses, or tadpoles; and,
7. Onstream dams could create habitat for non-native predators.

Kjeldson Consulting Biologists originally conducted biological surveys of the project site, including every POD, in 2002 (Kjeldson). The 2002 Kjeldson biological surveys took place on March 29, April 24, May 17, June 20, and October 22. Kjeldson identified foothill yellow-legged frogs at POD 7E, which is located on Stream 7. At least two of the Kjeldson survey days were conducted during the foothill yellow-legged frogs breeding season. Kjeldson did not find foothill yellow-legged frogs or other sensitive aquatic life on any other watercourse within the project location. The Kjeldson survey report attributed the absence of foothill yellow-legged frogs at PODs 2N and 3N to the lack of vegetative cover, lack of pools, and general habitat conditions that have been altered by cattle grazing. (Kjeldson, p. v.)

Amphibian surveys were conducted by Mark Jennings of Rana Resources on May 27, August 10, and August 17-21 of 2004 as a follow-up to the Kjeldson biological surveys. The purpose of the amphibian surveys was to determine the extent of foothill yellow-legged frog distributions and the potential impact of vineyard development, reservoir development, and water diversion on these organisms. (Jennings 1, p. 2, Table 1.) Jennings conducted visual surveys of all the watercourses that would be affected by diversion and also at Snow Creek, which is located in the general vicinity of the project but would not be affected by diversion. The surveys were conducted on foot by walking down each watercourse. Jennings identified foothill yellow-legged frogs in two of the five streams, Streams 3 and 7, that would be affected by diversion. (Ibid.) Foothill yellow-legged frogs were not found in Streams 6 and 8, and habitat for foothill yellow-legged frogs was determined to be unsuitable in Stream 4. (*Id.*, p. 3.) Jennings' overall conclusions were that proposed water diversions would not: (1) change the duration of water flow during the late spring or early summer on streams containing foothill yellow-legged frogs; (2) impede frog movements up or downstream; or (3) alter the current life history pattern as exhibited by foothill yellow-legged frogs in the region (*Id.*, p. 5.) Jennings also determined that the proposed onstream dams would not adversely affect frog habitat because they would be located "in the upper part of the drainages where frogs are not currently present due to lack of flowing water after the winter rains." (*Id.*, pp.4-5.)

DFG has indicated a belief that the biological surveys that were conducted for the project are inadequate because they were done during the wrong time of the year and were based on presence or absence of the species rather than based on habitat characteristics. (FI, pp. 39, 62.) As stated above, however, some of the biological surveys were in fact conducted during the foothill yellow-legged frog breeding season. Dr. Jennings has also indicated that his work did consider the habitat conditions and the likelihood of whether a given stream could support foothill yellow-legged frogs based on visual observations of habitat at the site and his professional experience. (FI, pp. 80-84.) Moreover, DFG staff did not identify foothill yellow-legged frog habitat during the September 27, 2005 site visit, in any locations other than those specified in the Kjeldson and Jennings surveys.

During the April 4, 2008 field investigation, DFG presented findings from an experiment that was conducted on the West Fork of the Russian River, where it documented Pacific toad tadpole mortality caused from a 16 percent drawdown of stream flow. (FI, pp.45-46.) DFG argued that drawdown levels would be even greater at Cooley Ranch streams and that similar impacts would occur. DFG demonstrated that daily drawdown could be as great as 80 percent at POD 4W on Stream 3. Comparison of the DFG experiment on the West Fork of the Russian River to potential impacts on Cooley Ranch streams, however, is not valid because of the marked difference in the characteristics of the streams being compared and the fact that the foothill yellow-legged frogs and Pacific toads are different species with different escape behaviors. (Ashton, p. 3.) On the other hand, DFG points out that diversion during the foothill yellow-legged frog breeding period could result in stream drawdown that adversely affects egg masses fixed to stream substrate, and that fill and spill operations could result in the scouring of egg masses. DFG also points out that based on Wagner and Bonsignore's 2006 supplemental hydrologic analysis there could be periods where stream drawdown is significant. DFG argues it is therefore conceivable that foothill yellow-legged frog tadpoles could be adversely affected by diversion.

During the field investigation DFG disseminated a letter from Sarah Kupferberg of Questra Engineering. (DFG 5.) The Kupferberg letter includes a critical review of the documents that were prepared to assess potential impacts of the project on foothill yellow-legged frogs, identifies a number of data gaps, and generally supports the DFG concerns stated above. Dr. Kupferberg identifies data that could be collected and studies that could be undertaken to broaden the level of knowledge regarding foothill yellow-legged frogs at the Cooley Ranch site, but she does not specifically dispute Dr. Jennings' determinations of where frogs or frog habitat exist at the site. DFG acknowledges that Dr. Kupferberg has never visited the Cooley Ranch site and that their concerns are primarily based on applying science from other locations to Cooley Ranch. (FI 2008, pp. 61-62.) DFG is not in possession of any specific information pertaining to impacts to foothill yellow-legged frogs that was generated at or for Cooley Ranch itself. Additionally, DFG has not provided any scientific evidence regarding impacts to foothill yellow-legged frogs in watercourses comparable to those that would be affected by diversion at the Cooley Ranch site.

The Division acknowledged in its 2007 Initial Study that the Cooley Ranch water right project could have potentially significant impacts on foothill yellow-legged frogs. As a result the Division proposed mitigation measures in the form of permit terms to reduce potential impacts to less than significant levels. The Applicant agreed to the proposed permit terms. Additionally, Dr. Jennings made a number of recommendations aimed at reducing or avoiding potential impacts to foothill yellow-legged frogs. (Jennings 1, pg 6.) All of his recommendations have been incorporated into the project. Mitigation measures to offset potential impacts to foothill yellow-legged frogs include:

- February median flow bypass on PODs located on streams containing foothill yellow-legged frogs;<sup>8</sup>
- Limiting disturbance of streambeds to seasonally dry periods;
- Requiring restoration of streambeds disturbed for the construction of offset wells;
- Limiting the season of diversion for PODS on streams containing foothill yellow-legged frogs;
- Precluding the diversion of water by riparian claim;
- Prohibiting construction work within live streams or during the wet season;
- Piping springs that currently drain onto dirt roads directly to streams to augment year-round instream flow;
- Prohibiting stocking of non-native species in any reservoir, requiring monitoring for the presence of non-natives, and requiring reservoir draining or gigging to eliminate any non-native frogs that are found;

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<sup>8</sup> The DFG-NMFS Guidelines indicate that the February median flow is a hydrologic metric that permits diversion only during the higher flows of winter and is appropriate given the uncertainties of flow needs for numerous aquatic biological processes (including vertebrate and invertebrate production). (DFG-NMFS 2002, p. 7.)

- Establishing setbacks (i.e., buffers) on all watercourses flowing through the places of use;
- Establishing approximately 30 acres of enhanced and protected riparian area along 13,050 linear feet of Streams 7 and 8;
- Rendering Snow Creek off limits to any future diversion within the Cooley Ranch property;
- Limiting water diversion from offset wells to 1 cubic foot per second (cfs);
- Monitoring to ensure water diversion does not exceed authorized amounts; and,
- Requiring Permittee to obtain a DFG streambed alteration permit prior to construction.

Notwithstanding the proposed mitigation, DFG remains concerned that the project could potentially cause adverse impacts to foothill-yellow legged frogs. The following refinements to the permit terms will address DFG comments and concerns:

For Application 31304: (Western Project Area)

- For the protection of fish and wildlife, diversion from Points of Diversion (PODs) 2 and 4 shall be limited to November 1 of each year to March 1 of the succeeding year.
- Release of water through the outlet pipes at Reservoir 2 is prohibited between March 1 and September 1, unless warranted by emergency conditions or prior approval is granted by the Division of Water Rights.

For Application 31362: (Northern Project Area)

- For the protection of fish and wildlife, diversion from Points of Diversion (PODs) 2 and 4 shall be limited to November 1 of each year to March 1 of the succeeding year.
- Release of water through the outlet pipes at Reservoir 2 is prohibited between March 1 and September 1, unless warranted by emergency conditions or prior approval is granted by the Chief of the Division of Water Rights.

For Application 31363: (Eastern Project Area)

- For the protection of fish and wildlife, diversion from Points of Diversion (POD) 7 shall be limited to November 1 of each year to March 1 of the succeeding year.

DFG indicates that the foothill yellow-legged frog breeding season begins mid-March to mid-April. (FI, p. 30.) Kupferberg states that pumping should be stopped at least 2-3 weeks prior to the earliest observed oviposition date. (DFG 5, p. 3.) Therefore, shortening the diversion season to March 1 will further ensure that project operations do not affect natural flow conditions during the foothill yellow-legged frog breeding season

or during times when egg masses or tadpoles could be present. Furthermore, limitations on the timing of reservoir releases will prevent project operations from possibly scouring/flushing egg masses, larval stage or tadpole stage foothill-yellow legged frogs.

After considering the potential impacts to foothill yellow-legged frogs in combination with all of the above-described mitigation, the Division concludes that DFG's protest concerns regarding potential impacts to foothill yellow-legged frogs are adequately addressed.

### 3.3.3 Rainbow Trout

Juvenile rainbow trout were identified in Stream 7 approximately 2,900 feet downstream of POD 7E (below waterfalls that prevent upstream fish passage) and in Snow Creek. (Jennings 1, p. 3; Jennings 2, p. 3.) POD 7E is the most downstream POD on Stream 7, and no water diversion from Snow Creek is proposed. Rainbow trout were not identified in any other stream that would be affected by diversion during any of the biological surveys conducted for the project. Potential impacts to rainbow trout were evaluated in the Division's Initial Study and found to be less than significant with mitigation incorporated. (IS, p. 72.)

Rainbow trout are a game species, and they are not designated as a special status species. DFG has stated general concerns that the project could adversely affect rainbow trout. These concerns appear to be related to the affects of flow reduction on rainbow trout and their habitat. The watershed area of Stream 7 at POD 7E is 264.4 acres, and the watershed area at the Stream 7 confluence of Lake Sonoma is 584.3 acres. (IS, p. 40.) Division staff has estimated the watershed area at the location where rainbow trout are present (2,900 feet downstream of POD 7E) to be approximately 458 acres. Therefore, 42 percent to 55 percent of the contributing drainage area would be unaffected by diversion in the reach where fish are present.

After reviewing the hydrologic spreadsheet model prepared by Wagner & Bonsignore (WB3; WB4), Division staff have determined that seasonal impairment at POD 7E is approximately 17 percent.<sup>9</sup> Assuming uniform runoff, seasonal impairment would drop to about 10 percent at the location where fish are present and 8 percent at the confluence with Lake Sonoma. Actual impairment at these locations may be lower since Stream 7 is fed by a number of springs downstream of POD 7E that would not be affected by project operations. (Jennings 2, p. 3.) NMFS staff has indicated that when CFI values are less than 10 percent, it is unlikely that cumulative flow related impacts to steelhead trout would occur. (NMFS.) Given the physiological similarities of rainbow trout and steelhead trout, it is unlikely that significant flow-related impacts to rainbow trout would occur as a result of diversion at the Cooley Ranch site. Additionally, the mitigation measures proposed for protection of foothill yellow-legged frogs, including implementation of February median bypass flows, will also provide protection for rainbow trout. DFG's claim that the project, as mitigated, would have significant impacts on rainbow trout is not supported by information in the record.

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<sup>9</sup> Calculated as one minus the sum of daily impaired flow divided by daily unimpaired flow multiplied by 100 percent for entire 39-year period of record.

### 3.3.4 General Aquatic and Riparian Resources

DFG protested the subject applications because appropriation of water would reduce stream flow and potentially result in impacts to aquatic and riparian resources. (DFG 1, p. 1.) These concerns were reiterated and expanded upon in DFG's subsequent comments. (DFG 3, pp 2-5.) DFG also implied that the project will result in removal of all flows necessary to support maintenance of aquatic species (including species not listed as sensitive) and riparian habitat. (DFG 3, p. 3.) During the field investigation DFG recommended that a February median flow bypass be applied to all PODs, not just the PODs located upstream of known foothill yellow-legged frog locations, to keep sufficient water in the system to keep resources in good condition, per Fish and Game Code. (F1, pp. 48, 75-76.)

All of the watercourses in the project area containing sensitive aquatic life (i.e., foothill yellow-legged frogs or rainbow trout) would be afforded February median bypass flows and limited diversion seasons, which are intended to reduce potential impacts. There are three other watercourses within the project area that are affected by diversion but were not found to contain sensitive aquatic life. These are Streams 4, 6, and 8, which are affected by five separate PODs (see Table 1, *supra*). Bypass flows were not proposed for these watercourses because sensitive species were not identified in them. The diversion season for these watercourses is proposed as November 1 of each year through May 1 of the succeeding year.

Stream 4 would be affected by POD 5W, which is an offset well with a maximum rate of diversion of 1 cfs. The watershed area contributing to POD 5W is 18.3 acres, and the biological survey indicated that a riparian corridor was present and that the watercourse downstream of POD 5W could be affected by a seasonal reduction in flow. (Kjeldson, p. 37.) Additionally, the Division's Initial Study indicated POD 5W is located on a seasonal drainage, Stream 4, that supports California newts and tree frogs. (IS, p. 20.)

Stream 6 would be affected by PODs 1E, 3E, and 6E. The drainage areas at PODs 1E, 3E, and 6E are 13.1, 11.3, and 124.8 acres respectively. PODs 1E and 3E are onstream reservoirs, and POD 6E, is an offset well with a maximum rate of diversion of 1 cfs. Biological surveys indicate that there is no riparian habitat at or immediately downstream of PODs 1E or 3E. (Kjeldson, pp. 38, 40.) These PODs are characterized as grassland habitat and did not have amphibians present. Riparian habitat was identified downstream of POD 6E, and Stream 6 is characterized as a perennial watercourse at this location. (IS, p. 20.)

Stream 8 would be affected by POD 3N, which is an offset well with a maximum rate of diversion of 1 cfs. The watershed area contributing to POD 3N is 63.1 acres. Stream 8 is characterized as a perennial watercourse in the vicinity of POD 3N and a riparian corridor is present (IS, p. 20).

Potential impacts from diversion at PODs 1E and 3E on Stream 6 will be insignificant given the small size of their contributing watersheds and the fact that no riparian habitat or amphibians are present at these locations. Reduced flows, however, have the potential to cause impacts to riparian resources downstream of other PODs. Accordingly, mitigation for the project includes establishing approximately 30 acres of enhanced and protected riparian area along 13,050 linear feet of Streams 7 and 8.

Mitigation for flow-related impacts to riparian habitat also includes implementation of bypass flow requirements for POD 2N, PODs 4N and 7E (Stream 7), and PODs 2W and 4W (Stream 3), which are the watercourses with the most well-developed riparian corridors.

Notwithstanding the proposed mitigation measures, DFG remains concerned that diversion of water will adversely affect riparian and aquatic resources. As stated above, PODs 5W, 3N and 6E, which are located on Streams 4, 8, and 6, respectively, are offset wells and as such are amenable to implementation of bypass flow requirements. Implementation of February median bypass flows at these PODs would be consistent with DFG recommendations. The following refinements to the permit terms will address DFG comments and concerns:

For Application 31304: (Western Project Area)

For the protection of riparian and aquatic habitat, under all bases of right, Permittee shall during the period from November 1 of each year through May 1 of each succeeding year bypass a minimum of 0.06 cubic foot per second (cfs) at POD 5. Under all bases of right, Permittee shall bypass the total stream flow at POD 5 from May 2 through October 31 of each year. The total stream flow at POD 5 shall be bypassed whenever it is less than 0.06 cfs.

For Application 31362: (Northern Project Area)

- For the protection of riparian and aquatic habitat, under all bases of right, Permittee shall during the period from November 1 of each year through May 1 of each succeeding year bypass a minimum of 0.2 cubic foot per second (cfs) at POD 3. Under all bases of right, Permittee shall bypass the total stream flow at POD 3 from May 2 through October 31 of each year. The total stream flow at POD 3 shall be bypassed whenever it is less than 0.2 cfs.

For Application 31363 (Eastern Project Area)

- For the protection of riparian and aquatic habitat, under all bases of right, Permittee shall during the period from November 1 of each year through May 1 of each succeeding year bypass a minimum of 0.4 cubic foot per second (cfs) at POD 6. Under all bases of right, Permittee shall bypass the total stream flow at POD 6 from May 2 through October 31 of each year. The total stream flow at POD 6 shall be bypassed whenever it is less than 0.4 cfs.

After considering the potential flow-related impacts to riparian and aquatic habitat in combination with the above-described mitigation, the Division concludes that the DFG's protest concerns have been adequately addressed.

### **3.4 Footprint Impacts to Oak Woodlands and Riparian Areas**

DFG has indicated that construction of reservoirs and conversion of the place of use (POU) will cause potentially significant impacts to oak woodlands and riparian areas. This issue was raised in DFG's initial protest (DFG 1, pp. 2-3), in follow-up comment

letters (DFG 2, p. 1; DFG 3, p. 2), and during the field investigation (FI, p. 20). The proposed dam, reservoir, and diversion facility sites were surveyed for trees, and project impacts to oak woodlands were evaluated in the Division's Initial Study. (IS, pp. 51-52, 64-66, and 75.) Moreover, the areas of Waters of the State, including their associated riparian zones that would be disturbed by project construction were comprehensively inventoried. (AES 1, pp. 16-32.) It was estimated that project construction would result in the loss of approximately 1.2 acres of riparian area and 183 native trees with a diameter breast height (dbh) of six inches or greater. (IS, pp. 64-65, 75.) As disclosed in the Initial Study, construction of diversion facilities will impact oak woodlands and riparian areas. However, the mitigation measures described above (see Section 3.3.2) in combination with mitigation requiring replacement of all trees that are removed at a ratio of 3 trees replaced for every tree lost, will offset these impacts. The Division concluded that implementation of mitigation measures will reduce impacts to riparian resources to less than significant levels.

As discussed in the Division's November 9, 2007 letter to DFG, significant impacts to oak woodlands in the POU are not expected because much of the proposed POU was historically cleared for prune orchards as far back as 1900. The orchards were followed by cultivation of vineyards and hay fields, before being used as grazing lands for cattle and sheep. (IS, p. 17.) The proposed POU now consists primarily of ruderal grassland habitat, which supports a flora resulting from decades of grazing and the introduction of non-native plants. (IS, p. 51.) Oak woodland habitat does occur around the perimeter of the proposed POU. Based on a review of aerial photography, approximately 210 trees occur within the proposed POU. Approximately 80 percent of these trees occur along the perimeter of the proposed POU or in riparian zones that would be avoided, as buffers protect them. All other trees within proposed vineyard areas would be avoided. The only trees planned for removal are those trees within proposed dam, reservoir and POD footprints. (DWR 1, pp. 2-3.) While the project does not call for removal of oak trees within the POUs, DFG correctly points out that there are no specific permit terms requiring trees to be avoided within the POUs. (DFG 4, p. 2.) The following revision to the project (i.e., addition of a permit term to ensure the project is conducted in accordance with the project description) will be included, substantially as written, in any permits issued pursuant to Applications 31304, 31362, and 31363 in response to DFG comments and concerns:

- All trees with a diameter greater than 6 inches breast height (dbh) within the place of use identified in this permit shall be avoided with a no disturbance buffer that extends to the dripline of the tree.

After considering the potential impacts to oak woodland habitat in combination with the proposed protective permit terms, the Division concludes that the DFG's protest concerns have been adequately addressed.

### **3.5 Wetlands**

In their protest, DFG indicated that portions of the POU proposed for vineyard development include seasonal wetlands. DFG recommended that reservoir and land conversion be designed to avoid impacting wetlands. (DFG 3, p. 2.) DFG also expressed concern regarding potential wetland impacts during the April 4, 2008, field investigation, but did not elaborate on those concerns. (FI, pp. 20-21, 29.) Initially,



Division staff also had concerns that the project could cause potentially significant impacts to wetlands (DWR 2, p.2), but the project was re-designed in 2006 to reduce potential impacts to wetlands. The Applicant subsequently prepared a wetland delineation that was verified by the U.S. Army Corps of Engineers for all areas that would be impacted by construction of the project. (AES 2.) As indicated in the Division's Initial Study, the project as amended will still result in a loss of 2.1 acres of wetlands. (IS, p. 85.) Other wetlands that were identified and delineated within the project area will be avoided. The following mitigation measures were incorporated into the project (as enforceable permit terms) to minimize impacts to wetlands and offset the loss of 2.1 acres of wetlands.

- Establishing 50-foot setbacks on all wetlands within the POUs;
- Creating 2.1 acres of compensatory wetlands on the project site;
- Preserving 7.3 acres of existing wetlands; and,
- Requiring the Applicant to obtain a U.S. Army Corps of Engineers Section 401 Permit and State Water Board Water Quality Certification.

The Division concludes that implementation of the proposed permit terms will reduce potential impacts to wetlands to less than significant levels and will sufficiently address DFG's concerns.

### **3.6 Erosion and Sedimentation**

DFG's 2003 protest stated that "erosion from the developed vineyard site could lead to sedimentation in Dry Creek, Cherry Creek, and Lake Sonoma, resulting in a loss of aquatic habitat value." (DFG 1, p.2.) The Division's Initial Study disclosed that soil-disturbing activities associated with development of the vineyards could result in significant erosion. (IS, p. 26.) Mitigation proposed to address sedimentation impacts include permit terms requiring the Applicant to comply with the Sonoma County Vineyard Erosion and Sediment Control Ordinance (VESCO) and obtain approvals from the Sonoma County agricultural commissioner's office prior to construction, diversion, or use of water. The purpose of the VESCO is, in part, to minimize erosion and sedimentation in connection with vineyard planting and replanting in the county, and to protect the lands, streams and riparian habitat in the county. Compliance with the VESCO requires implementation of a county-approved erosion control plan. In accordance with the VESCO, growers planting new vineyards or replanting existing vineyards are required to utilize recognized conservation practices, best management practices, and provide for riparian setbacks to protect the environment and watersheds of the County. (IS, p 26.) The Applicant has also agreed to a permit term requiring prevention of soil and silt from entering into or being placed where it may be washed by rainfall runoff into the waters of the State. The Division concluded that implementation of the proposed mitigation would reduce potential impacts from erosion and sedimentation to less than significant levels. DFG did not dispute this conclusion. Implementation of proposed permit terms sufficiently addresses DFG concerns regarding potential erosion and sedimentation impacts.

#### 4 CALIFORNIA ENVIRONMENTAL QUALITY ACT

In general, CEQA applies to discretionary projects that public agencies approve or propose to be carried out. (Pub. Resources Code § 21080(a).) The Applicant's project is a discretionary project as defined in CEQA. (Pub. Resources Code § 21065; Cal. Code Regs., tit. 14, § 15357.) Therefore, CEQA applies to the Division's action on Applications 31304, 31362, and 31363. The State Water Board is the lead agency. (Pub. Resources Code §§ 21067, 21090.1, 21165; Cal. Code Regs., tit. 14, §15050.)

On September 12, 2002, the Division executed a Memorandum of Understanding (MOU) with the Applicant and the consulting firm Analytical Environmental Sciences (AES) for the preparation of environmental analyses needed to support the Division's environmental review pursuant to CEQA. On February 6, 2003, AES submitted an Administrative Draft Initial Study (ADIS) for the proposed project. A copy of the ADIS and supporting biological study were transmitted to DFG on April 30, 2004. (AES 3.)

The Division provided written comments to AES and the Applicant on August 6, 2004. The Division's comment letter included a summary of oral comments that were provided to Division staff by DFG. (DWR 3, pp. 8-9.) On March 31, 2005, AES submitted a revised ADIS for Division review. The revised ADIS included a supplemental amphibian survey report prepared by Mark Jennings of Rana Resources. (Jennings 1.) On August 17, 2005, Division staff met with Wagner & Bonsignore and consultants to discuss staff concerns with the revised ADIS. (DWR 4.) On September 27, 2005, Division staff conducted a site visit to better assess the project and confirm the analysis contained in the ADIS. Those attending the site visit included Division staff, Mark Jennings of Rana Resources, Tom Origer and Jeanine Loyd of Origer and Associates, and staff from Wagner & Bonsignore and the North Coast Regional Water Quality Control Board North Coast Region (North Coast Regional Board). The site visit involved extensive visual observation of the watercourses that flow through the project site and inspection of the location of proposed PODs, with the exception of POD 3N on Stream 8. (DWR 5.)

On December 2, 2005 Division staff held an informal CEQA consultation meeting with DFG staff and North Coast Regional Board staff pursuant to California Code of Regulations, title 14, section 15063(g). The purpose of the meeting was to follow up on the September 27, 2005 site visit, ensure that Division staff understood the agencies' concerns, and to obtain their input on the project's potential environmental effects. DFG and North Coast Regional Board staff expressed concerns with the proposed project, and they recommended re-design and downsizing of the original 417-acre-foot water project. DFG and North Coast Regional Board staff requested that additional information, analyses, and mitigation be incorporated into the environmental review. This information included, but was not limited to, a wetland delineation, resource maps and matrices, mitigation of impacts to sensitive vegetation, management plans to address stream temperature and gravel, limiting water withdrawal to ensure cumulative water withdrawal was not excessive, and limiting the diversion season to December 15 through March 1. (DWR 6.)

In a December 12, 2005, letter to the Applicant and AES, the Division identified several deficiencies in the ADIS and recommended that the Applicant consider modifying the project design to avoid environmental impacts. (DWR 2, pp. 4-5.) The Division's letter

was intended to make the Applicant and consultants aware of the concerns raised by Division staff, DFG staff, and North Coast Regional Board staff and to identify the revisions to the ADIS that were needed to address those concerns. On February 3, 2006, DFG provided the Division and the Applicant with a memorandum summarizing their concerns with the proposed project and provided recommendations for reducing impacts. (DFG 2, pp. 1-2.) The DFG memorandum indicated that it was concerned that the proposed project would cause potentially significant impacts by appropriating high percentages of the water from a few specific watersheds. DFG also expressed concerns regarding the removal of substantial amounts of riparian vegetation, impacts to wetlands caused from land and reservoir development, and loss of oak woodlands. Following is summary of DFG's February 3, 2006 recommendations:

1. Dispersing PODs rather than grouping multiple diversion points in the same watershed to reduce cumulative impacts;
2. Locate PODs in watersheds without aquatic resources;
3. Locate reservoirs offstream to reduce impacts to riparian and stream habitat;
4. Size reservoirs such that the cumulative quantity of water removed is not excessive;
5. Shorten the diversion season to allow for adequate flows after March 1 to protect amphibians and fish at all diversion points with aquatic resources at, or downstream from, the diversion; and,
6. Design reservoir and land conversion so as to avoid impacting wetlands.

DFG also requested that a biological assessment be conducted to disclose the loss of oak woodland habitat.

On March 6, 2006, the Applicant's agent submitted a supplemental hydrologic analysis intended to address Division and DFG concerns regarding the project's potential flow related impacts. (WB 3; WB 4.) On March 9, 2006, AES submitted a letter from Rana Resources responding to Division and DFG concerns regarding potential impacts to foothill yellow-legged frogs. (Jennings 2.) The Division conducted a meeting with the Applicant's agents and consultants, DFG staff, and North Coast Regional Board staff on March 20, 2006. At the meeting the Applicant's agents announced their intention to significantly revise and scale back the scope of the project in order to reduce the potential for environmental impacts and address agency concerns. (DWR 7, p. 2.) On April 4, 2006, the Division received a formal request from the Applicant to amend Applications 31304, 31362, and 31363. These amendments reduced the project from 417 af of storage and 476 acres of vineyard to 226 af of storage and 280 acres of vineyard, respectively. This represented a 46 percent reduction in storage volume and a 41 percent reduction in vineyard acreage. A total of six reservoirs was also eliminated from the project as a result of the April 4, 2006 amendments.

On February 2, 2007, the Division received a third draft revised ADIS from AES. The revised ADIS reflected the project amendments and incorporated additional information, including results of supplemental hydrologic and biologic assessments and wetland/waters of the State delineations. The revised ADIS also included expanded mitigation. Over the seven-month period that followed, the Division revised and refined the ADIS. As lead agency, Division staff reviewed and edited the Initial Study prepared by AES for Applications 31304, 31362, and 31363, and approved a proposed Mitigated Negative Declaration. The ADIS identified that approval of Applications 31304, 31362, and 31363 could potentially affect Geology and Soils, Air Quality, Hydrology and Water

Quality, Biological Resources, Hazards and Hazardous Materials, and Cultural Resources. (IS, p. 21.) However, mitigation measures were agreed to by the Applicant and incorporated into the project to reduce these potential impacts to less than significant levels.

On September 7, 2007, the Division circulated an Initial Study and proposed Mitigated Negative Declaration in accordance with the requirements of CEQA. (Pub. Resources Code § 21092.) Comments were received from the Department of Water Resources and the Native American Heritage Commission within the designated comment period. These comments were informational in nature and did not expressly object to approval of the Proposed Mitigated Negative Declaration or identify any potentially significant impacts of the project. The public comment period for the proposed Mitigated Negative Declaration ended on October 7, 2007. On October 12, 2007, late comments were received from DFG. (DFG 3.) The Division responded to the DFG comments by memorandum dated November 9, 2007. (DWR 1.) In response to comments and information received from DFG after the close of the comment period, additional project revisions described in Sections 3.3.2, 3.3.4, and 3.4 will be required as conditions of approval and have been incorporated into the final Mitigated Negative Declaration.

The Division has considered the comments received, and based on the complete record finds that the mitigation measures contained in the final Mitigated Negative Declaration will adequately reduce potential environmental effects to less than significant levels. Prior to adopting this Decision, the Division approved the Mitigated Negative Declaration. The conditions contained in the Mitigated Negative Declaration will be incorporated, substantially as written, into the permits issued pursuant to this decision. The State Water Board will subsequently submit the Mitigated Negative Declaration and Notice of Determination to the State Office of Planning and Research.

## **5 SUMMARY AND CONCLUSIONS**

The Division has evaluated and considered all of the available information concerning water right Applications 31304, 31362, and 31363, including: 1) Water availability; 2) the Applicant's proposed diversion and use of water; 3) senior water rights; and, 4) potential impacts on Public Trust Resources.

Based on a review of all of the information, the Division concludes that there is unappropriated water available to supply water right Applications 31304, 31362, and 31363. The proposed diversion and use of water is beneficial and in the public interest, and the applications should be approved subject to the terms and conditions specified in the Order below. Determination that the approval of these applications is in the public interest and will not adversely impact public trust resources is based, in part, on the preservation of flow in Snow Creek as mitigation for the proposed project. The Division finds that there is no unappropriated water remaining in Snow Creek and its tributaries. Snow Creek is a tributary to Cherry Creek thence Lake Sonoma located in Sonoma County.

## ORDER

**IT IS HEREBY ORDERED** that Applications 31304, 31362, and 31363 are approved, and permits shall be issued subject to prior rights and subject to Standard Permit Terms 6 and 9 through 15.<sup>10</sup> In addition, the permits shall be subject to the following terms and conditions:

**For Applications 31304, 31362, and 31363:**

- *Prior to diversion or use of water under this permit, Permittee shall submit evidence to the Chief of the Division of Water Rights that demonstrates that the project has been constructed in accordance with the recommendations provided in the January 3, 2003 Geotechnical Investigation prepared for this project. Evidence shall include certification by a registered Geotechnical Engineer or registered Geologist that the project was constructed in accordance with the recommendations in the January 3, 2003 Geotechnical Investigation or that equally protective measures were implemented.*
- *Prior to the start of construction or diversion or use of water under this permit, Permittee shall file a notice of vineyard planting or replanting with the Sonoma County Agricultural Commissioner. The notice shall conform to applicable provisions of the Sonoma County Vineyard Erosion and Sediment Control Ordinance (Ord. No. 5216 § 2, 2000). The notice shall include: 1) maps, plans, drawings, calculations, photographs, and other information as may be necessary or required by the agricultural commissioner to verify that the vineyard planting qualifies as a Level II or III authorized vineyard planting, or that the vineyard replanting qualifies as a Level II authorized vineyard replanting; and (2) an erosion and sediment control plan, certified pursuant to Section 30-74 of the Sonoma County Vineyard Erosion and Sediment Control Ordinance, for the vineyard planting or replanting. Prior to the start of construction or diversion or use of water under this permit, Permittee shall submit evidence to the Chief of the Division of Water Rights verifying that the Sonoma County agricultural commissioner has authorized the vineyard planting or replanting to proceed.*
- *Prior to licensing of this permit, Permittee shall submit evidence to the Chief of the Division of Water Rights verifying that the project was constructed in compliance with the requirements of the certified erosion and sediment control plan and the Sonoma County Vineyard Erosion and Sediment Control Ordinance.*
- *Permittee shall submit a detailed Dust Control and Mitigation Plan for review and approval by the Northern Sonoma Air Quality Management District. The Dust Control and Mitigation Plan shall identify how project construction and operation will comply with the California Air Resources Board's Asbestos Airborne Toxic Control Measure (ATCM). (Cal. Code Regs., title 17, § 93105.) Prior to the start of construction or diversion or use of water under this permit,*

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<sup>10</sup> The State Water Board maintains a list of Standard Permit Terms that may be obtained upon request.

*Permittee shall submit evidence to the Chief of the Division of Water Rights showing that the Northern Sonoma Air Quality Management District has approved the Permittee's Dust Control and Mitigation Plan.*

- *No construction shall be commenced and no water shall be diverted or used under these permits until all necessary federal, state, and local approvals have been obtained for the construction of the project facilities, planting of the place of use, and the diversion and use of water.*
- *In order to prevent degradation of the quality of water during and after construction of the project, Permittee shall file a report pursuant to Water Code section 13260 prior to commencement of construction and shall comply with all waste discharge requirements imposed by the North Coast Regional Water Quality Control Board or by the State Water Resources Control Board.*
- *Permittee shall prevent any debris, soil, silt, cement that has not set, oil, or other such foreign substance from entering into or being placed where it may be washed by rainfall runoff into the waters of the State.*
- *If the storage dams will be of such size to be within the jurisdiction of the Department of Water Resources, Division of Safety of Dams (Department), construction of the water supply project authorized by this permit and diversion and use of water under this permit shall not be commenced until the Department has approved the plans and specifications of the dam.*
- *In accordance with the requirements of Water Code section 1393, Permittee shall clear the proposed sites for reservoirs with capacity of 50 acre-feet or greater, of all structures, trees, and other vegetation which would interfere with the use of the reservoir for water storage and recreational purposes.*
- *Before storing water in any reservoir identified in this permit, Permittee shall install a staff gage in the reservoir, satisfactory to the Chief of the Division of Water Rights, for the purpose of determining water levels in the reservoir. The Permittee must maintain the staff gage in operating condition as long as water is being diverted or used under this permit.*

*Permittee shall record the staff gage readings on the last day of each month. Permittee shall record the maximum and minimum water surface elevations and the dates that these water levels occur each water-year between October 1 and September 30. Permittee shall maintain a record of all staff gage readings and shall submit these records with all required Reports of Permittee, Reports of Licensee, or whenever requested by the staff of the Division of Water Rights.*

*The State Water Resources Control Board may require the release of water that cannot be verified as having been collected under a valid basis of right.*

- *Permittee shall allow the Sonoma County Water Agency and all successors in interest, or a designated representative, reasonable access to the reservoirs for*

*the purpose of verifying staff gage readings and determining water levels in the reservoirs.*

- *Whenever the prior storage rights of Sonoma County Water Agency (under Permit 16596, issued pursuant to Application 19351) are not satisfied by April 1 of any year, Permittee shall release water collected to storage under this permit between November 1 of the preceeding year and March 31 of the current year. Permittee shall immediately release water at the maximum practicable rate to the extent necessary to satisfy said prior downstream storage rights. Permittee shall not be obligated to release more water than is required to draw down the water levels in the reservoirs to the level of the November 1 staff gage readings for the prior calendar year unless Permittee has withdrawn water from the reservoirs for consumptive purposes since November 1 of the previous calendar year. In that event, Permittee shall be required to release sufficient amount of water to draw down the reservoir water levels to the levels existing on November 1 of the prior calendar year, as measured by the staff gage, and also release any additional amount of water collected and withdrawn from the reservoirs for consumptive use purposes since November 1 of the previous calendar year.*
- *The State Water Resources Control Board reserves jurisdiction over this permit to change the season of diversion to conform to later findings of the Board concerning availability of water and the protection of beneficial uses of water in the Russian River. Any action to change the authorized season of diversion will be taken only after notice to the Permittee and opportunity for hearing.*
- *This permit is subject to prior rights. Permittee is put on notice that, during some years, water will not be available for diversion during portions or all of the season authorized herein. The annual variations in demands and hydrologic conditions in the Russian River Watershed are such that, in any year of water scarcity, the season of diversion authorized herein may be reduced or completely eliminated by order of the State Water Resources Control Board, made after notice to interested parties and opportunity for hearing.*
- *This permit is specifically subject to the prior rights of Louis D. Preston under License 4498 (Application 14043).*
- *Permittee shall install and maintain an outlet pipe of adequate capacity in each dam as near as practicable to the bottom of the natural stream channel in order that water entering the reservoirs, which is not authorized for appropriation under this permit, can be released. Before starting construction, Permittee shall submit plans and specifications of the outlet pipes, or alternative facility, to the Chief of the Division of Water Rights for approval. Before storing water in the reservoirs, Permittee shall furnish evidence to substantiate that the outlet pipes have been installed in each dam. Evidence shall include photographs showing completed works or certification by a registered Civil or Agricultural Engineer.*
- *Based on the information contained in the Division of Water Right's files, riparian water has not been used on the place of use. Diversion of water is not authorized under this permit if the Permittee diverts water under riparian right.*

*With the approval of the Chief of the Division of Water Rights, Permittee may use water under basis of riparian right on the authorized place of use, provided that Permittee submits reliable evidence to the Chief of the Division of Water Rights quantifying the amount of water that Permittee likely would have used under the basis of riparian right absent the appropriation authorized by this permit. The Chief of the Division of Water Rights is hereby authorized to approve or reject any proposal by Permittee to use water under the basis of riparian right on the place of use authorized by this permit.*

- *Prior to the start of construction, or diversion or use of water under this permit, the Permittee shall submit a Compliance Plan for approval by the Chief of the Division of Water Rights that will demonstrate compliance with the flow bypass terms specified in this permit. The Compliance Plan shall include the following:*
  - a) *A description of the physical facilities (i.e., outlet pipes, siphons, pipelines, bypass ditches, splitter boxes, etc.) that will be constructed or have been constructed at the project site and will be used to bypass flow.*
  - b) *A description of the gages and monitoring devices that will be installed or have been installed to measure stream flow and/or reservoir storage capacity, including any necessary calibration.*
  - c) *A time schedule for the installation and rating of these facilities.*
  - d) *A description of the frequency of data collection and the methods for recording bypass flows and storage levels.*
  - e) *An operation and maintenance plan that will be used to maintain all facilities in good condition.*
  - f) *A description of the events that will trigger recalibration of the monitoring devices, and the process that will be used to recalibrate.*

*The Permittee shall be responsible for all costs associated with developing the Compliance Plan, and installing and maintaining all flow bypass and monitoring facilities described in the Compliance Plan.*

*Permittee shall maintain all measurements and other monitoring required by this condition. Permittee shall provide measuring and monitoring records to the Chief of the Division of Water Rights within 15 days upon request by the State Water Resources Control Board, the Chief of the Division of Water Rights, or other authorized designees of the State Water Resources Control Board.*

*Diversion or use of water prior to approval of the Compliance Plan and the installation of facilities specified in the Compliance Plan is not authorized.*

- *Permittee shall report any non-compliance with the terms of the permit to the Chief of the Division of Water Rights within three days of identification of the violation.*
- *Permittee shall not conduct, or cause to be conducted, construction work within the bed or bank of a live stream channel while flowing water or foothill yellow-legged frogs are present.*



- *If foothill yellow-legged frogs are encountered during construction, Permittee shall cease construction and ground-disturbing activities in areas within 250 feet of the location where foothill yellow-legged frogs are present and shall contact the California Department of Fish and Game. Prior to restarting construction activities, Permittee shall submit to the Chief of the Division of Water Rights evidence of Department of Fish and Game approval to continue construction.*
- *Permittee shall not stock and shall not allow others to stock fish in any reservoir. Permittee shall monitor on a yearly basis the reservoirs authorized under this permit, to make sure that no fish, non-native, or other exotic aquatic predators are accidentally introduced into them. Permittee shall eliminate any fish or non-native found by draining the reservoir where they were found and gigging non-native frogs by hand. Permittee shall prepare annually a report describing the methodology used to survey the reservoirs for the presence of exotic species, the dates when the surveys occurred, and what actions were taken if exotic species were found. These exotic species monitoring reports shall be submitted to the Division of Water Rights with all required Reports of Permittee, Reports of Licensee or whenever requested by the staff of the Division of Water Rights. Permittee shall post signs in English and Spanish at each reservoir stating that the introduction of fish and frogs into the reservoir is prohibited.*
- *Permittee shall not conduct construction activities within 50 feet of a drainage from October 16 of each year to April 30 of the succeeding year to reduce the likelihood of the presence of northwestern pond turtles in construction areas. If a northwestern pond turtle is encountered during construction, Permittee shall cease construction and ground-disturbing activities in areas within 250 feet of the location where northwestern pond turtles are present and shall contact the California Department of Fish and Game. Prior to restarting construction activities, Permittee shall submit to the Chief of the Division of Water Rights evidence of Department of Fish and Game approval to continue construction.*
- *This permit does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & G. Code, §§ 2050 - 2097) or the federal Endangered Species Act (16 U.S.C.A. §§ 1531 - 1544). If a "take" will result from any act authorized under this water right, the Permittee shall obtain authorization for an incidental take prior to construction or operation of the project. Permittee shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this permit.*
- *If tree removal activities are to occur between February 1 and September 30, a biologist, whose qualifications are acceptable to Division of Water Rights staff, shall conduct a pre-construction survey for the purpose of identifying nesting bird species prior to tree removal. The pre-construction survey shall include all potential nesting habitat within 500 feet of proposed tree removal activities. The survey shall be conducted no more than 14 days prior to the beginning of tree removal activities. If an active raptor or migratory bird nest is found during*

*the pre-construction survey, the Permittee shall notify the California Department of Fish and Game. If an active raptor nest is found during the pre-construction survey, a 500-foot no-disturbance buffer shall be established and maintained around the nest until all young have fledged. If an active nest of any other migratory or non-migratory bird is found, a 250-foot buffer shall be established around the nest until all young have fledged.*

- For the protection of riparian habitat, Permittee shall establish setbacks on watercourses within the places of use, as shown on Setback Maps SB-01, SB-02, and SB-03, dated July 10, 2007 on file with the Division of Water Rights. The setbacks shall be at least 100 feet wide along Class I watercourses, 50 feet wide along Class II watercourses, and 25 feet wide along Class III watercourses. Setbacks shall be measured from the top of the bank on both sides of the stream. No ground disturbing activities shall occur within the setback area, including, but not limited to, grading, herbicide spraying, roads, fencing, and use or construction of storage areas. Planting, maintenance, and irrigation of native riparian vegetation within the setback area are allowed.*
- For the mitigation of disturbed riparian habitat, Permittee shall establish Stream Mitigation Areas as shown on Stream Mitigation Area Map SM-01, dated July 10, 2007 on file with the Division of Water Rights. Stream Mitigation Areas shall be at least 100 feet wide as measured from the top of the bank on both sides of the stream. Stream Mitigation Areas shall encompass at least 13,050 linear feet of Class I Watercourses. With exception of installation of a pipeline between POD 4 and POD 2 (as identified in Application 31362) and the installation of three standpipes, no ground disturbing activities shall occur within the Stream Mitigation Areas, including, but not limited to, grading, herbicide spraying, roads, and use or construction of storage areas. Planting, maintenance, and irrigation of native riparian vegetation within the Stream Mitigation Areas area are allowed. Prior to diversion or use of water under this permit, the Permittee shall fence the perimeter of the Snow Creek mitigation area and shall fence vegetation planted within the Unnamed Stream mitigation area in order to restrict cattle or domestic stock access.*
- Permittee shall remove exotic vegetation and trash from the Stream Mitigation Areas on an annual basis for a period of five years from the time fencing is installed around the perimeter of the Snow Creek mitigation area and within the Unnamed Stream mitigation area.*
- Permittee shall mitigate for tree removal within riparian areas by planting at least three trees for every tree removed (a 3:1 mitigation ratio). Permittee shall plant trees at least 20 feet apart and within Stream Mitigation Areas as shown on Stream Mitigation Area Map No. SM-01 dated July 10, 2007 on file with the Division of Water Rights. Permittee shall plant trees in accordance with the provisions in the December 2006 Conceptual Riparian Zone Mitigation and Monitoring Plan prepared for the California Department of Fish and Game's Streambed Alteration Agreement (Notification Number 1600-2006-320-3) or a comparable mitigation plan, that has subsequently been approved by the Department of Fish and Game. At a minimum the following trees shall be*

planted and maintained until the plantings achieve an overall 5-year survival rate of 75 percent:

<b>Species</b>	<b>Number of trees to be planted</b>
Valley Oak	147
Coast Live Oak	111
California Laurel	108
Red Willow	3
Oregon White Oak	3
Black Oak	126
Pacific Madrone	51
<b>Total</b>	<b>549</b>

- Prior to the start of construction or diversion or use of water under this permit, Permittee shall submit a Department of Fish and Game (DFG) approved Riparian Zone Mitigation and Monitoring Plan to the Chief of the Division of Water Rights. Prior to licensing of this permit, Permittee shall submit evidence to the Chief of the Division of Water Rights indicating that mitigation was completed in accordance with a Department of Fish and Game approved plan. Evidence shall include confirmation by the Department of Fish and Game or submittal of monitoring data verifying that required mitigation was implemented in accordance with the specifications in the approved Mitigation and Monitoring Plan.
- No work shall commence and no water shall be diverted, stored, or used under this permit until a signed copy of a Streambed Alteration Agreement between the Department of Fish and Game and the Permittee is filed with the State Water Resources Control Board Division of Water Rights. Compliance with the terms and conditions of the agreement is the responsibility of the Permittee. If a Streambed Alteration Agreement is not necessary for this permitted project, the Permittee shall provide the Division of Water Rights a copy of a waiver signed by the State Department of Fish and Game.
- For the protection of wetlands, Permittee shall establish setbacks within the places of use as shown on Setback Maps SB-01, SB-02, and SB-03, dated July 10, 2007 on file with the Division of Water Rights. The setback shall extend at least 50 feet from the edge of any wetland. No ground disturbing activities shall occur within the setback area, including, but not limited to, grading, herbicide spraying, roads, fencing, and use or construction of storage areas. Planting, maintenance, and irrigation of native wetland vegetation within the setback area are allowed.
- For the mitigation of disturbed wetlands, 2.1 acres of wetlands shall be created and 7.3 acres of existing wetland shall be preserved. Mitigation shall be conducted in accordance with the provisions in the March 2007 Mitigation and Monitoring Plan prepared for the U.S. Army Corps of Engineers (USACE) in association with the 404 Permit application process or a comparable mitigation plan that has subsequently been approved by USACE and the Division of Water Rights. Prior to licensing of this permit, Permittee shall submit evidence

to the Chief of the Division of Water Rights indicating that mitigation was completed in accordance with a USACE approved mitigation plan. Evidence shall include confirmation by the USACE or submittal of a monitoring report verifying that required mitigation was completed and that 2.1 acres of created wetlands meet the diagnostic environmental characteristics of a wetland as defined in the 1987 Corps of Engineers Wetlands Delineation Manual (Technical Report Y-87-1).

- *Prior to the start of construction or diversion or use of water under this permit, Permittee shall obtain the appropriate permit from the U.S. Army Corps of Engineers (USACE) and file a copy with Division of Water Rights. If a permit from the USACE is not necessary for this permitted project, the Permittee shall provide the Division of Water with a letter from the USACE affirming that a permit is not needed.*
- *Prior to the start of construction or diversion or use of water under this permit, Permittee shall obtain Clean Water Act section 401 Water Quality Certification from the State Water Resources Control Board or the North Coast Regional Water Quality Control Board, if such certification is required by law.*
- *Should any buried archaeological materials be uncovered during project activities, such activities shall cease within 100 feet of the find. Prehistoric archaeological indicators include: obsidian and chert flakes and chipped stone tools; bedrock outcrops and boulders with mortar cups; ground stone implements (grinding slabs, mortars and pestles) and locally darkened midden soils containing some of the previously listed items plus fragments of bone and fire affected stones. Historic period site indicators generally include: fragments of glass, ceramic and metal objects; milled and split lumber; and structure and feature remains such as building foundations, privy pits, wells and dumps; and old trails. The Chief of the Division of Water Rights shall be notified of the discovery and a professional archaeologist shall be retained by the Permittee to evaluate the find and recommend appropriate mitigation measures. Proposed mitigation measures shall be submitted to the Chief of the Division of Water Rights for approval. Project-related activities shall not resume within 100 feet of the find until all approved mitigation measures have been completed to the satisfaction of the Chief of the Division of Water Rights.*
- *If human remains are encountered, then the Permittee shall comply with section 15064.5 (e) (1) of the CEQA Guidelines and the Health and Safety Code section 7050.5. All project-related ground disturbance within 100 feet of the find shall be halted until the county coroner has been notified. If the coroner determines that the remains are Native American, the coroner will notify the Native American Heritage Commission within 24 hours. The Native American Heritage Commission will identify the person or persons believed to be the most likely descendants from the deceased Native American. The most likely descendent may make recommendations regarding the means of treating or disposing of the remains with appropriate dignity. Project-related ground disturbance, in the vicinity of the find, shall not resume until the process detailed under section 15064.5 (e) has been completed and evidence of completion has been submitted to the Chief of the Division of Water Rights.*

- *All trees with a diameter greater than 6 inches breast height (dbh) within the place of use identified in this permit shall be avoided, with a no disturbance buffer that extends to the dripline of the tree.*

**The following permit terms will be included in any permits or licenses issued pursuant to Application 31304:**

- *Prior to diversion or use of water under this permit, Permittee shall install in-line flow meters, satisfactory to the Chief of the Division of Water Rights, that measure the instantaneous rate and the cumulative amount of water withdrawn from the reservoir at Point of Diversion (POD) 2, and from diversion facilities at POD 4 and POD 5.*

*These in-line flow meters must be maintained in operating condition as long as water is being diverted or used under this permit. Permittee shall maintain a record of the end-of-the-month meter readings and of the days of actual diversion, and shall submit these records with all required Reports of Permittee, Reports of Licensee, or whenever requested by the staff of the Division of Water Rights.*

- *For the protection of fish and wildlife, diversion from Points of Diversion (PODs) 2 and 4 shall be limited to November 1 of each year to March 1 of the succeeding year.*
- *For the protection of fish and wildlife, under all bases of right, Permittee shall during the period from November 1 of each year through March 1 of each succeeding year bypass a minimum of 0.18 cubic foot per second (cfs) at Point of Diversion (POD) 2 and 0.23 cfs at POD 4. Under all bases of right Permittee shall bypass the total stream flow at POD 2 and POD 4 from March 2 through October 31 of each year. The total stream flow at POD 2 shall be bypassed whenever it is less than 0.18 cfs. The total stream flow at POD 4 shall be bypassed whenever it is less than 0.23 cfs.*
- *For the protection of riparian and aquatic habitat, diversion at Point of Diversion (POD) 5 shall be limited to November 1 of each year to May 1 of the succeeding year.*
- *For the protection of riparian and aquatic habitat, under all bases of right, Permittee shall during the period from November 1 of each year through May 1 of each succeeding year bypass a minimum of 0.06 cubic foot per second (cfs) at Point of Diversion (POD) 5. Under all bases of right Permittee shall bypass the total stream flow at POD 5 from May 2 through October 31 of each year. The total stream flow at POD 5 shall be bypassed whenever it is less than 0.06 cfs.*
- *Release of water through the outlet pipes at Reservoir 2 is prohibited between March 1 and September 1, unless warranted by emergency conditions or prior approval is granted by the Division of Water Rights.*

- *The well casings for Points of Diversion (PODs) 4 and 5 shall be backfilled with native material, and channel contours shall be restored to pre-construction configurations. If shallow bedrock is encountered during trenching for the well casings, the streambed shall be excavated to design grade and the intake pipe shall be bedded in Class 2 permeable gravel up to top of bedrock. The remaining backfill shall consist of native gravels. Construction of PODs 4 and 5 shall occur only between June 15 and October 15. Wastewater generated from dewatering construction areas shall not be discharged to surface waters.*
- *The maximum rate of diversion at Points of Diversion (PODs) 4 and 5 shall not exceed 1 cubic foot per second (cfs) at each POD.*
- *The prehistoric site identified as the Split Rock Shelter, by Tom Origer & Associates in the report titled "A Cultural Resource Survey of Portions of the Cooley Ranch, West of Cloverdale Sonoma County, California" shall be avoided during project construction, development, and operation. The site shall not be impacted by any of the features of the proposed project (e.g., water diversion, storage reservoirs, and distribution facilities, including installation of buried pipelines; and ripping, trenching, grading or planting related to conversion to and maintenance of the place of use vineyards). An archaeologist who has been approved by the California Historical Information System to work in the area, and who is acceptable to the staff of the Division of Water Rights, shall determine the boundaries of the site and placement of permanent fencing with concurrence of the Division's staff archeologist. The archeologist shall be present during installation of the fencing to prevent any inadvertent damage to the site. The boundaries of the permanent fencing shall include a buffer zone of fifteen feet at a minimum around the site. Permanent fencing with a height of five feet at a minimum (to ensure that it is clearly visible for heavy equipment operators) shall be installed prior to project-related activities and shall remain in place for as long as water is being diverted. Any future project-related activities or developments at the location of the above-listed site may be allowed only if an archaeologist who has been approved by the California Historical Information System to work in the area, and who is acceptable to the staff of the Division of Water Rights is retained to determine the significance of the site. If mitigation is determined to be necessary, then the archeologist shall design, conduct, and complete an appropriate mitigation plan that must be approved by the Chief of the Division of Water Rights prior to any activities related to any new developments. Permittee shall be responsible for all costs associated with the cultural resource related work.*
- *The prehistoric petroglyphs identified as Rock 2 and Rock 3, by Tom Origer & Associates in the report titled "A Cultural Resource Survey of Portions of the Cooley Ranch, West of Cloverdale Sonoma County, California" shall be avoided during project construction, development and operation. They shall not be impacted by any of the features of the proposed project (e.g., water diversion, storage reservoirs, and distribution facilities, including installation of buried pipelines and ripping, trenching, grading, or planting related to conversion of the place of use to vineyard). An archaeologist who has been approved by the California Historical Information System to work in the area,*

and who is acceptable to the staff of the Division of Water Rights shall determine the boundaries of the petroglyphs and placement of permanent fencing, and shall be present during installation of the fencing to prevent any inadvertent damage to the petroglyphs. The boundaries of the permanent fencing shall include a buffer zone of ten feet at a minimum around the petroglyphs. Permanent fencing with a height of five feet at a minimum (to ensure that it is clearly visible for heavy equipment operators) shall be installed prior to project-related activities and shall remain in place as long as water is being diverted.

**The following permit terms will be included in any permits or licenses issued pursuant to Application 31362:**

- *Prior to diversion or use of water under this permit, Permittee shall install in-line flow meters, satisfactory to the Chief of the Division of Water Rights that measures the instantaneous rate and the cumulative amount of water withdrawn from the reservoir at Point of Diversion (POD) 2, and from diversion facilities at POD 3 and POD 4.*

*These in-line flow meters must be maintained in operating condition as long as water is being diverted or used under this permit. Permittee shall maintain a record of the end-of-the-month meter readings and of the days of actual diversion, and shall submit these records with all required Reports of Permittee, Reports of Licensee, or whenever requested by staff of the Division of Water Rights.*

- *For the protection of fish and wildlife, diversion at Points of Diversion (PODs) 2 and 4 shall be limited to November 1 of each year to March 1 of the succeeding year.*
- *For the protection of fish and wildlife, under all bases of right, Permittee shall during the period from November 1 of each year through March 1 of each succeeding year bypass a minimum of 0.22 cubic foot per second (cfs) at Point of Diversion (POD) 2 and 0.61 cfs at POD 4. Under all bases of right Permittee shall bypass the total stream flow at POD 2 and POD 4 from March 2 through October 31 of each year. The total stream flow at POD 2 shall be bypassed whenever it is less than 0.22 cfs. The total stream flow at POD 4 shall be bypassed whenever it is less than 0.61 cfs.*
- *For the protection of riparian and aquatic habitat, diversion at Point of Diversion (POD) 3 shall be limited to November 1 of each year to May 1 of the succeeding year.*
- *For the protection of riparian and aquatic habitat, under all bases of right, Permittee shall during the period from November 1 of each year through May 1 of each succeeding year bypass a minimum of 0.2 cubic foot per second (cfs) at POD 3. Under all bases of right Permittee shall bypass the total stream flow at POD 3 from May 2 through October 31 of each year. The total stream flow at POD 3 shall be bypassed whenever it is less than 0.2 cfs.*

- *Release of water through the outlet pipes at Reservoir 2 is prohibited between March 1 and September 1, unless warranted by emergency conditions or prior approval is granted by the Chief of the Division of Water Rights.*
- *The springs located at North 415,600 feet and East 1,680,550 feet and North 415,200 feet and East 1,682,075 feet (North American Datum 1927 Zone 2) shall be captured and conveyed via pipeline to the nearest natural watercourse. Prior to diversion or use of water under this permit, Permittee shall furnish evidence to the Chief of the Division of Water Rights that substantiates that the spring flow management system has been adequately sized and installed. Evidence shall include photographs showing completed works and certification by a registered Civil or Agricultural Engineer.*
- *The well casings for Points of Diversion (PODs) 3 and 4 shall be backfilled with native material, and channel contours shall be restored to pre-construction configurations. If shallow bedrock is encountered during trenching for the well casings, the streambed shall be excavated to design grade and the intake pipe shall be bedded in Class 2 permeable gravel up to top of bedrock. The remaining backfill shall consist of native gravels. Construction of POD 3 shall occur only between June 15 and October 15.*
- *Construction of point of diversion (POD) 4 shall occur between July 15 and September 15. A temporary cofferdam shall be constructed upstream of the POD 4 construction site if flowing water is present during construction. All water intercepted at the temporary cofferdam shall be conveyed by pipeline back to the stream channel downstream of the construction site. Wastewater generated from dewatering construction areas shall not be discharged to surface waters.*
- *Maximum rate of diversion at points of diversion (PODs) 3 and 4 shall not exceed 1 cubic foot per second (cfs) at each POD.*
- *The prehistoric sites identified as the Northwest Site, by Tom Origer & Associates in the report titled "A Cultural Resource Survey of Portions of the Cooley Ranch, West of Cloverdale Sonoma County, California" shall be avoided during project construction, development and operation. The site shall not be impacted by any of the features of the proposed project (e.g., water diversion, storage-reservoirs, and distribution facilities, including installation of buried pipelines; and ripping, trenching, grading, or planting related to conversion to and maintenance of the place of use vineyards). An archaeologist that has been approved by the California Historical Information System to work in the area and who is acceptable to the staff of the Division of Water Rights, shall determine the boundaries of the site and placement of permanent fencing, and shall be present during installation of the fencing to prevent any inadvertent damage to the site. The boundaries of the permanent fencing shall include a buffer zone of a minimum of fifteen feet around the site. Permanent fencing with a height of five feet at a minimum (to ensure that it is clearly visible for heavy equipment operators) shall be installed prior to project-related activities and shall remain in place for as long as water is being*



diverted. Any future project-related activities or developments at the location of the above listed site may be allowed only if an archaeologist who has been approved by the California Historical Information System to work in the area and who is acceptable to the staff of the Division of Water Rights is retained to determine the significance of the site. If mitigation is determined to be necessary, the archeologist shall design, conduct, and complete an appropriate mitigation plan that must be approved by the Chief of the Division of Water Rights and be completed prior to any activities related to the new developments. Permittee shall be responsible for all costs associated with the cultural resource related work.

- The prehistoric petroglyph identified as Rock 1, by Tom Origer & Associates in the report titled "A Cultural Resource Survey of Portions of the Cooley Ranch, West of Cloverdale Sonoma County, California" shall be avoided during project construction, development and operation. The site shall not be impacted by any of the features of the proposed project (e.g., water diversion, storage reservoirs, and distribution facilities, including installation of buried pipelines and ripping, trenching, grading or planting related to conversion of the place of use to vineyard). An archaeologist who has been approved by the California Historical Information System to work in the area and who is acceptable to the staff of the Division of Water Rights shall determine the boundaries of the petroglyph and placement of permanent fencing, and shall be present during installation of the fencing to prevent any inadvertent damage to the petroglyph. The boundaries of the permanent fencing shall include a buffer zone of a minimum of ten feet around the petroglyph. Permanent fencing with a height of five feet at a minimum (to ensure that it is clearly visible for heavy equipment operators) shall be installed prior to project-related activities and shall remain in place as long as water is being diverted.
- The archaeologically sensitive area identified during the survey by Tom Origer & Associates in the report titled "A Cultural Resource Survey of Portions of the Cooley Ranch, West of Cloverdale Sonoma County, California" shall be avoided during project construction, development and operation. The area shall not be impacted by any of the features of the proposed project (e.g., water diversion, storage, and distribution facilities, including installation of buried pipelines and ripping, trenching, grading, or planting related to conversion of the place of use to vineyard). An archaeologist who has been approved by the California Historical Information System to work in the area and who is acceptable to the staff of the Division of Water Rights shall determine the boundaries of the archaeologically sensitive area and placement of permanent fencing, and shall be present during installation of the fencing to prevent any inadvertent damage to the area. The boundaries of the permanent fencing shall include a buffer zone of fifteen feet at a minimum around the area. Permanent fencing with a height of five feet at a minimum (to ensure that it is clearly visible for heavy equipment operators) shall be installed prior to project-related activities and shall remain in place as long as any water is being diverted. Any future project-related activities or developments at the location of the listed archaeologically sensitive area may be allowed only if an archaeologist who has been approved by the California Historical Information System to work in the area and who is acceptable to the staff of the Division of Water Rights is retained by the Permittee to determine the significance of the

sensitive area. If mitigation is determined to be necessary, the archeologist shall design, conduct, and complete an appropriate mitigation plan, which must be approved by the Chief of the Division of Water Rights prior to any activities related to any new developments. Permittee shall be responsible for all costs associated with the cultural resource related work.

**The following permit terms will be included in any permits or licenses issued pursuant to Application 31363:**

- *Prior to diversion or use of water under this permit, Permittee shall install in-line flow meters, satisfactory to the Chief of the Division of Water Rights that measure the instantaneous rate and cumulative amount of water withdrawn from the reservoirs at Points of Diversion (PODs) 1 and 3, Reservoir A, and from diversion facilities at POD 6 and POD 7.*

*These in-line flow meters must be maintained in operating condition as long as water is being diverted or used under this permit. Permittee shall maintain a record of the end-of-the-month meter readings and of the days of actual diversion, and shall submit these records with all required Reports of Permittee, Reports of Licensee or whenever requested by the staff of the Division of Water Rights.*

- *For the protection of fish and wildlife, diversion at POD 7 shall be limited to November 1 of each year to March 1 of the succeeding year.*
- *For the protection of fish and wildlife, under all bases of right, Permittee shall during the period from November 1 of each year through March 1 of each succeeding year bypass a minimum of 0.84 cubic foot per second (cfs) at POD 7. Under all bases of right, Permittee shall bypass the total stream flow at POD 7 from March 2 through October 31 of each year. The total stream flow at POD 7 shall be bypassed whenever it is less than 0.84 cfs.*
- *For the protection of riparian and aquatic habitat, diversion at Points of Diversion (PODs) 1 and 3 shall be limited to November 1 of each year to May 1 of the succeeding year.*
- *For the protection of riparian and aquatic habitat, under all bases of right, Permittee shall during the period from November 1 of each year through May 1 of each succeeding year bypass a minimum of 0.4 cubic foot per second (cfs) at point of diversion (POD) 6. Under all bases of right Permittee shall bypass the total stream flow at POD 6 from May 2 through October 31 of each year. The total stream flow at POD 6 shall be bypassed whenever it is less than 0.4 cfs.*
- *The spring located at North 414,100 feet and East 1,685,225 feet (North American Datum 1927 Zone 2) shall be captured and conveyed via pipeline to the nearest natural watercourse. Prior to diversion or use of water under this permit, Permittee shall furnish evidence to the Chief of the Division of Water Rights that substantiates that the spring flow management system has been*

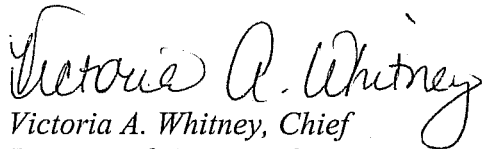
adequately sized and installed. Evidence shall include photographs showing completed works and certification by a registered Civil or Agricultural Engineer.

- *The well casings for Points of Diversion (PODs) 6 and 7 shall be backfilled with native material, and channel contours shall be restored to pre-construction configurations. If shallow bedrock is encountered during trenching for the well casings, the streambed shall be excavated to design grade and the intake pipe shall be bedded in Class 2 permeable gravel up to top of bedrock. The remaining backfill shall consist of native gravels. Construction of PODs 6 and 7 shall only occur between June 15 and October 15. Wastewater generated from dewatering construction areas shall not be discharged to surface waters.*
- *The maximum rate of diversion at Points of Diversion (PODs) 6 and 7 shall not exceed 1 cubic foot per second at each POD.*
- *The prehistoric resources identified as the Low Rise and Poplar sites by Tom Origer & Associates in the report titled "A Cultural Resource Survey of Portions of the Cooley Ranch, West of Cloverdale Sonoma County, California" shall be avoided during project construction, development, and operation. The sites shall not be impacted by any of the features of the proposed project (e.g., water diversion, storage, and distribution facilities, including installation of buried pipelines; and ripping, trenching, grading or planting related to conversion of the place of use vineyards). An archaeologist that meets the requirements of the California Historical Information System to work in the area and that has been approved and is acceptable to the staff of the Division of Water Rights shall determine the boundaries of the sites and placement of permanent fencing, and shall be present during installation of the fencing to prevent any inadvertent damage to the sites. The boundaries of the permanent fencing shall include a buffer zone of a minimum of fifteen feet around the sites. Permanent fencing with a height of five feet at a minimum (to ensure that it is clearly visible for heavy equipment operators) shall be installed prior to project-related activities and shall remain in place as long as water is being diverted. Any future project-related activities or developments at the location of the two above listed sites may be allowed only if an archaeologist that has been approved by the California Historical Information System to work in the area and that has been approved and is acceptable to the staff of the Division of Water Rights, is retained to determine the significance of the sites. If mitigation is determined to be necessary, the archeologist shall and design, conduct, and complete an appropriate mitigation plan that must be approved by the Chief of the Division of Water Rights prior to any activities related to the any new developments. Permittee shall be responsible for all costs associated with the cultural resource related work.*
- *The prehistoric petroglyph identified as CA-SON-591, by Tom Origer & Associates in the report titled "A Cultural Resource Survey of Portions of the Cooley Ranch, West of Cloverdale Sonoma County, California" shall be avoided during project construction, development, and operation. It shall not be impacted by any of the features of the proposed project (e.g., water diversion, storage reservoirs, and distribution facilities, including installation of buried pipelines and ripping, trenching, grading, or planting related to conversion of the*

place of use to vineyard). An archaeologist who has been approved by the California Historical Information System to work in the area, and who is acceptable to the staff of the Division of Water Rights shall determine the boundaries of the petroglyph and placement of permanent fencing, shall be present during installation of the fencing to prevent any inadvertent damage to the petroglyph. The boundaries of the permanent fencing shall include a buffer zone of ten feet at a minimum around the petroglyphs. Permanent fencing with a height of five feet at a minimum (to ensure that it is clearly visible for heavy equipment operators) shall be installed prior to project-related activities and shall remain in place as long as water is being diverted.

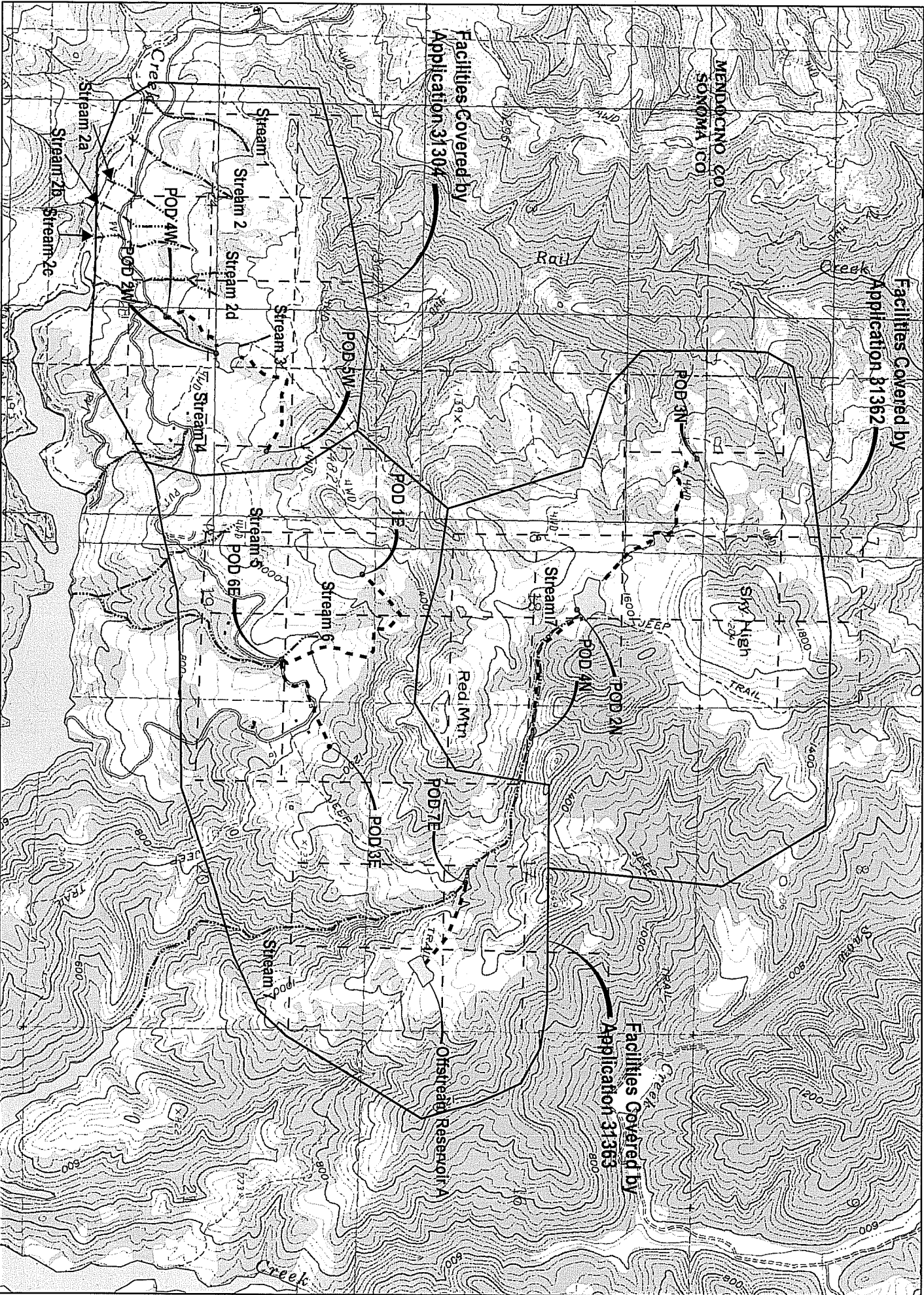
- Prior to project development, the 15-inch diameter culvert described in the engineered plan dated February 18, 2006, prepared by Atterbury & Associates and as submitted to the Division of Water Rights shall be installed to route runoff from the road around CA-SON-591. This engineered plan for channeling runoff, to prevent any erosion around CA-SON-591, shall be maintained as long as water is being diverted. Prior to any proposed modifications of this plan the Permittee must obtain approval of the Chief of the Division of Water Rights.

STATE WATER RESOURCES CONTROL BOARD



*Victoria A. Whitney, Chief  
Division of Water Rights*

Dated: **AUG 07 2008**



COOLEY RANCH DIVISION DECISION REFERENCE MAP

SCALE 1" = 2000'