


Memorandum

Date: July 6, 2012

To: Ms. Barbara Evoy, Chief
Division of Water Rights
State Water Resources Control Board
PO Box 2000
Sacramento, CA 95812-2000

Attention: Mr. Mark Matranga

From: **NEIL MANJI**, Regional Manager 
Department of Fish and Game
Region 1 – Northern

Subject: **Department of Fish and Game's Protest of Water Application A031910 to Appropriate Water from an Unnamed Tributary to Perry Gulch, Tributary to the Navarro River, Mendocino County**

Project Description

In its Water Application (WA) A031910, Ardzrooni Vineyard Management, LLC. (Applicant) seeks to appropriate 12 acre-feet per annum (afa) of water by storage from an unnamed tributary to Perry Gulch, tributary to the Navarro River. The instantaneous rate of diversion is 0.23 cubic feet per second. The proposed season of diversion is November 1 through May 31. Water is currently stored in one existing onstream reservoir, Point of Diversion (POD) 1, and one upslope reservoir, POD 2, constructed without an appropriative water right. No bypass flows are proposed for the project. Water from POD 1 is used to fill POD 2. The purposes of use are heat, frost, fire protection, and irrigation. The water storage reservoirs are located in the area covered by the State Water Resources Control Board (SWRCB) Policy for Maintaining Instream Flows in Northern California Coastal Streams (Policy).

Basis of Protest

Under Fish and Game Code (FGC) §§711.7 and 1802, the Department of Fish and Game (Department) is trustee for the State's fish and wildlife resources and has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of those species. The Department seeks to maintain native fish, wildlife, plant species, and natural communities for their intrinsic and ecological value and for their benefits to all citizens in the State. This includes habitat protection and maintenance of habitat in sufficient amounts and quality to ensure the survival of all native species and natural

communities. The Department's right to protest is based on State Water Code §1330, Title 23 California Code of Regulations §843, and other provisions of law.

SWRCB Policy Principles

SWRCB Policy Section 2.1 states the primary objective of the Policy is to "ensure that the administration of water rights occurs in a manner that maintains instream flows needed for the protection of fishery resources."

Five principles are established in the Policy to meet this objective:

1. Water diversions shall be seasonally limited to periods in which instream flows are naturally high to prevent adverse effect to fish and fish habitat;
2. Water shall be diverted only when streamflows are higher than the minimum instream flows needed for fish spawning, rearing, and passage;
3. The maximum rate at which water is diverted in a watershed shall not adversely affect the natural flow variability needed for maintaining adequate channel structure and habitat for fish;
4. The cumulative effects of water diversions on instream flows needed for the protection of fish and their habitat shall be considered and minimized; and
5. Construction or permitting of new onstream dams shall be restricted. When allowed, onstream dams shall be constructed and permitted in a manner that does not adversely affect fish and their habitat.

Beneficial Uses of Water and Ecological Significance of Project Setting

Categories of beneficial uses of water in the Navarro River Hydrologic Area relevant to fish and wildlife resources include Cold Freshwater Habitat; Migration of Aquatic Organisms; Commercial and Sport Fishery; Rare, Threatened, or Endangered; Spawning, Reproduction, and/or Early Development; and Wildlife Habitat. State Water Code §1257 requires the SWRCB to consider the relative benefit to be derived from all beneficial uses of the water concerned including, but not limited to, those listed for fish and wildlife resources in the Navarro River Hydrologic Area.

The Navarro River and its tributaries are listed as impaired for pollutants including sediment and temperature pursuant to the Clean Water Act, §303(d). Thus, measures such as riparian buffers and erosion control best management practices are necessary to protect the above-listed instream beneficial uses.

Perry Gulch and the Navarro River are regionally-important fish-bearing streams that support steelhead trout (*Oncorhynchus mykiss*), a federally-listed "threatened" species. Perry Gulch also supports steelhead trout critical habitat (Figure 1). Listed salmonids in the Navarro River include Chinook (*O. tshawytscha*) and coho salmon (*O. kisutch*).

The Navarro River watershed also supports western pond turtles (*Actinemys marmorata*) and foothill yellow-legged frog (*Rana boylei*) both California Species of Special Concern.

A search of the Department's Biographical Information and Observation System (BIOS) database indicates sensitive plant and terrestrial wildlife may be present in the project area (Figure 1). Sensitive plant and wildlife species potentially present in or near the project area include coast fawn lily (*Erythronium revolutum*), spotted owl (*Strix occidentalis*), and other sensitive terrestrial species. Thus, unnamed tributaries, Perry Gulch, the Navarro River, and the surrounding area are extremely important aquatic life and wildlife habitats.

Considering the project's complexity, the presence of listed and other sensitive species and the potential that this project may, in conjunction with numerous other existing water diversion projects in this watershed, cause adverse cumulative impacts, we believe that the project may potentially have a significant effect on the environment. The Department believes an environmental document such as a mitigated negative declaration or an environmental impact report is required rather than a categorical exemption as described in the application.

Bypass Flows

Short- and long-term droughts are well documented in California and reliable water availability for human use and fisheries habitat maintenance is a major issue (Johnson and Loux, 2004). Water diversions in the Navarro River watershed have the potential to cause site-specific and cumulative adverse impacts by degrading established instream habitat for fish. Thus, measures to ensure adequate instream flows such as installing meters and bypass flow are needed. No such measures appear to be proposed in the application.

Bypass flow requirements for WA A031910 are necessary to: 1) protect instream flows during critical life stages of coho salmon and steelhead trout; 2) maintain seasonal water temperatures; 3) provide sufficient holding and rearing habitat; and 4) ensure adequate attraction flows for migration. Preserving sufficient flows in the Unnamed Tributary and in Salt Hollow Creek watershed will protect instream habitat, thereby protecting fish and other native aquatic life in those waters and meet the requirements of FGC §5937 to maintain fish in good condition below dams.

Stream Protection Buffers

Stream buffers are of critical importance to protect and conserve the biotic and abiotic integrity of a watershed. Stream buffer functions include providing microclimate and a source of large woody debris acting as filter strips. The width and vegetated condition of buffer strips influence their effectiveness for filtering out sediment, waste, and other substances that may reduce the quality of aquatic habitat.

Vegetated stream buffers help maintain important microclimate characteristics such as air temperature and relative humidity for the area adjacent to streams and wetlands. Many amphibians and reptiles rely on a certain microclimate range for all or

some of their habitat needs (Petranka et al. 1993, Dupuis et al. 1995, Welsh et al. 2005). Additionally, cold water fish are very sensitive to increases in water temperature. Prolonged exposure to water temperatures approaching 70 degrees Fahrenheit is lethal for salmon and steelhead trout (NRCS 2004). Brosofske et al. (1997) concluded that a minimum 147 feet buffer (as measured along each side of a stream) is necessary to maintain a natural riparian microclimate along streams.

As buffer width increases, the effectiveness of removing pollutants from surface water runoff increases (Castelle et al. 1992). Riparian and wetland vegetation improves stream and wetland water quality by removing sediment, organic and inorganic nutrients, and toxic materials (Belt and O'Laughlin 1994, Mitsch and Gosselink 2000, USDA 2000). Riparian buffers help keep pollutants from entering adjacent waters through a combination of processes including dilution, sequestration by plants and microbes, biodegradation, chemical degradation, volatilization, and entrapment within soil particles.

The Department believes adequate well-vegetated riparian buffers are required to maintain good water quality and support the beneficial uses of water including Cold Freshwater Habitat; Migration of Aquatic Organisms; Commercial and Sport Fishery; Rare, Threatened, or Endangered; Spawning, Reproduction, and/or Early Development; and Wildlife Habitat . FGC §1389 in the California Riparian Conservation Act, requires the Department to have a "primary concern" for the preservation and enhancement of riparian habitat. For the above reasons, its vital to mitigate for the loss of wildlife habitat from land conversion and other project impacts to fish and wildlife resources and implement stream protections and riparian enhancement measures.

Clarification Requested

Several aspects of the application require clarification. In particular, the application did not include specific measures to mitigate for the water diversion, reservoir, dam, and upland development implemented without an appropriate water right or lake or streambed alteration agreement (LSA Agreement).

The application does not adequately depict the entire stream network in the project area (Figure 2). A stream is defined by Title 14, California Code of Regulations, §1.72 as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation." Several unnamed jurisdictional streams are visible from aerial photographs (Figure 2) and a site inspection may reveal more streams.

The application does not appear to identify a parcel owned by Mendocino Redwood Company, Assessor's Parcel Number 026-120-01, where approximately three acres of vineyard were developed. According to a Mendocino Redwood Company representative, the land is being leased for 10 years to Applicant.

In addition, the Department seeks clarification on the following issues:

1. How will water storage be managed with regard to instream flows for resources of concern and channel maintenance?
2. What mitigations will Applicant develop for reduced stream flows and riparian buffers?
3. The Department cannot determine at this time if the unnamed tributaries provide aquatic species habitat, however, at a minimum, they contribute flows to fish habitat. Will Applicant implement bypass flows to meet the SWRCB Policy Principles and FGC §5937?
4. Have any wetlands, oak woodlands, or other terrestrial resources been assessed for impacts?
5. Will the entire stream network be adequately characterized per the definition of a stream?
6. Will riparian buffers be applied to protect fish and wildlife resources and prevent discharge of pollutants including sediment and temperature pursuant to the Clean Water Act §303(d)?
7. Will the application be updated with all parcel and landowner of record information?

Protest Dismissal Terms

Protest dismissal terms, if adopted as enforceable conditions of the water rights permit, are intended to mitigate adverse impacts to fisheries and wildlife resources. At this time, the Department is unable to determine to what extent the changes have impact aquatic and terrestrial resources.

The Department recommends the following be included as enforceable conditions of the permit to reduce project impacts to less than significant on fish and wildlife resources in the Navarro River watershed, to prevent further water quality degradation under the Clean Water Act §303(d), and to meet the SWRCB Policy Principles and FGC §5937:

1. To ensure the rate and quantity of water diverted in the watershed does not adversely affect the natural streamflow necessary for maintaining adequate channel structure and all life stages of fish, Applicant shall perform a hydrologic study. The hydrologic study shall determine if the production of the watershed is sufficient to provide the water requested without having significant adverse or cumulative impacts to aquatic and riparian resources of the unnamed tributaries, Perry Gulch and downstream in the Navarro River. The study and the cumulative impacts evaluation must consider all other diversions within the watershed, including any diversions under riparian water use.

2. Site-specific biological studies shall be conducted in consultation with the Department and the National Marine Fisheries Service to determine what bypass flows are adequate to protect all life stages of aquatic life in the unnamed tributaries and downstream habitat in Perry Gulch.
3. No water shall be diverted until the measure of flow being bypassed around the POD is of sufficient quantity and quality to allow upstream and downstream fish passage and to maintain in good condition any aquatic resources that would exist in downstream reaches under unimpaired flows.
4. Bypass flows shall be by a passive system designed to only divert flow when the terms of the SWRCB permit are met. At low flows, water shall automatically bypass the diversion points.
5. Unless site-specific studies (conducted following methods and principles in the Policy) indicate otherwise, under the exercise of all bases of rights, the season of diversion shall be limited to December 15 to March 31 each year. Under the exercise of all bases of rights, Applicant shall bypass all natural flow in the unnamed tributary from April 1 to December 14.
6. Applicant shall install a water meter at the POD to ensure only the allowed amount of water is being diverted.
7. Under the exercise of all bases of rights and only if water is available for the diversion; the diversion of water shall be limited to a combined total of 12 cfs.
8. Applicant shall develop a plan to monitor compliance, the effectiveness of the stipulated flows, and procedures for making subsequent modifications, if necessary.
9. Because stream class, stream network extent, and resources supported could not be assessed from the application, Applicant shall allow Department staff to assess the extent of the stream network and resources of concern present in the streams.
10. Buffer zones shall be established along any riparian corridors in the affected project site. Stream buffers shall be of adequate width to protect aquatic life, provide for microclimate and wildlife corridors, and restore habitat in the unnamed tributaries to Perry Gulch. Factors to consider when determining buffer widths are slope, potential for source discharge, large woody debris recruitment potential, channel width, and ecological and geomorphic function of the stream buffer. Stream buffers should be assessed from the top of bank or outer edge of riparian habitat, whichever is greater. The Department recommends the following stream and wetland buffers as minimums:
 - a. 150-foot vegetated, no-disturbance buffers on major rivers (e.g., Navarro River);
 - b. 100-foot vegetated, no-disturbance buffers on smaller streams supporting aquatic life or with habitat to support aquatic life;

- c. 50-foot no-disturbance buffers on streams that do not support aquatic life or habitat; and
 - d. up to 100-foot vegetated, no-disturbance buffers for wetlands.
11. Applicant shall not apply herbicide within stream protective buffers consistent with the U.S. District Court Order for protecting salmonid streams available at <http://agr.wa.gov/pestfert/natresources/buffers.aspx>.
 12. To prevent erosion, Applicant shall seed, mulch, plant trees and implement other erosion control measures on all exposed areas susceptible to erosion.
 13. Applicant shall conduct an assessment of impacts to terrestrial and amphibian resources and habitat. The assessment shall be conducted by a qualified biologist for the development of the place of use. If warranted, 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. The mitigation plan shall include a survey which quantifies loss of resources that have or will occur as a result of this project.
 14. For the protection of western pond turtle and foothill yellow-legged frog, Applicant shall:
 - a. develop and implement a plan to eliminate or prevent from becoming established any invasive species inhabiting the reservoirs, the eradication plan shall be approved by the Department;
 - b. not stock fish in the reservoirs; and
 - c. provide basking sites for western pond turtles in the reservoirs.
 15. Applicant must agree to allow access for Department personnel to monitor compliance.
 16. An LSA Agreement is required to substantially divert water from a stream pursuant to FGC §1602. This water diversion is considered substantial and the Applicant shall notify the Department. Information on the process for notifying can be obtained at <http://www.dfg.ca.gov/habcon/1600/>. Applicant shall extend and renew its LSA Agreement to divert water over the life of the reservoirs and diversions. If the dams are modified or removed, then an LSA Agreement shall be obtained for such work.

All or some of these terms may be subject to modification or cancellation should facts warranting such action come to light based on the requested studies. The Department will dismiss this protest if the above terms and if any additional terms, which may come to light during environmental review, are met.

If you have any questions or comments regarding this matter, please contact Staff Environmental Scientist Ms. Jane Arnold at 619 Second Street, Eureka, California 95501 or telephone (707) 441-5671.

References

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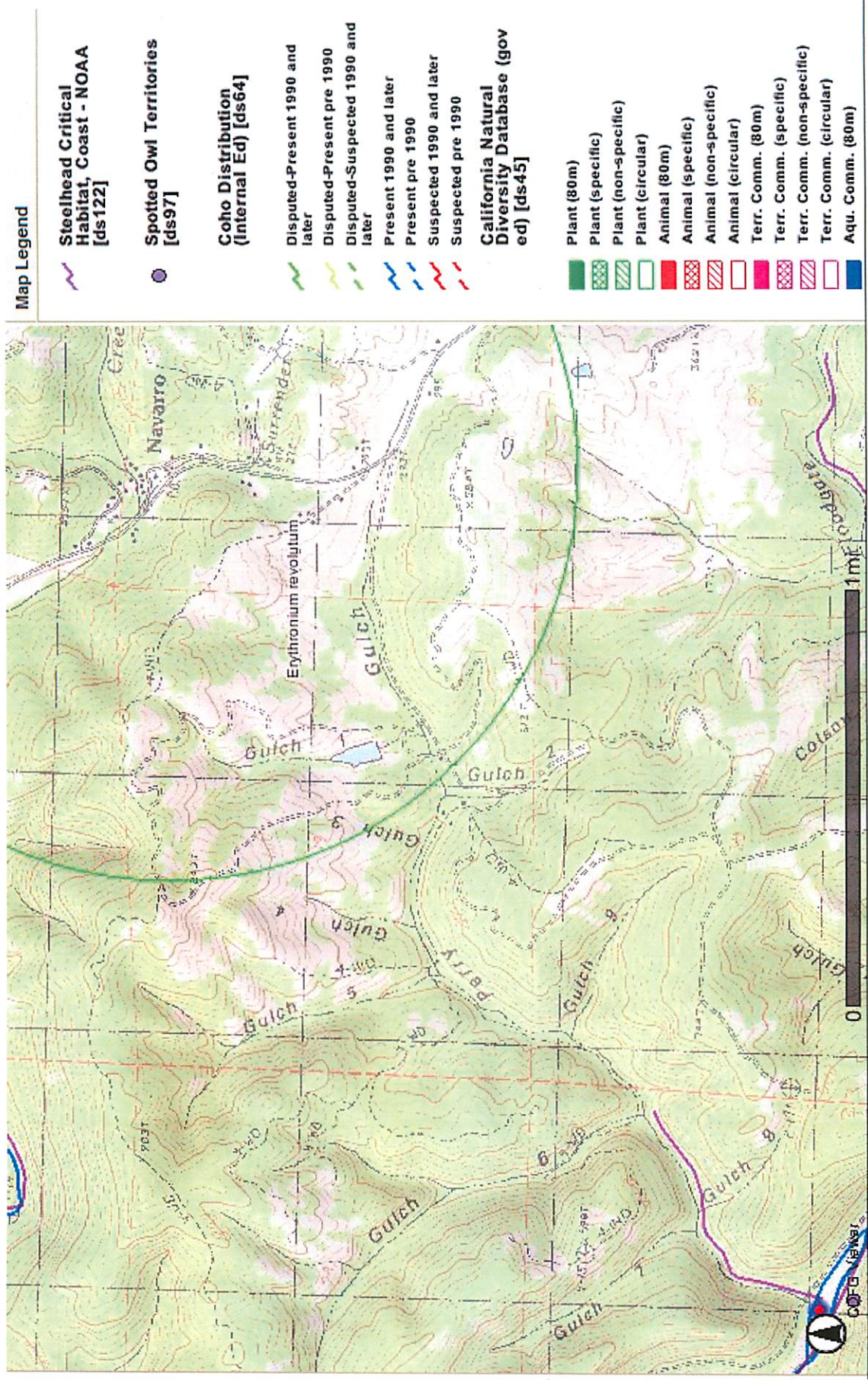


Figure 1. BIOS layers depicting steelhead critical habitat, spotted owl territories, plant species, and coho salmon distribution.

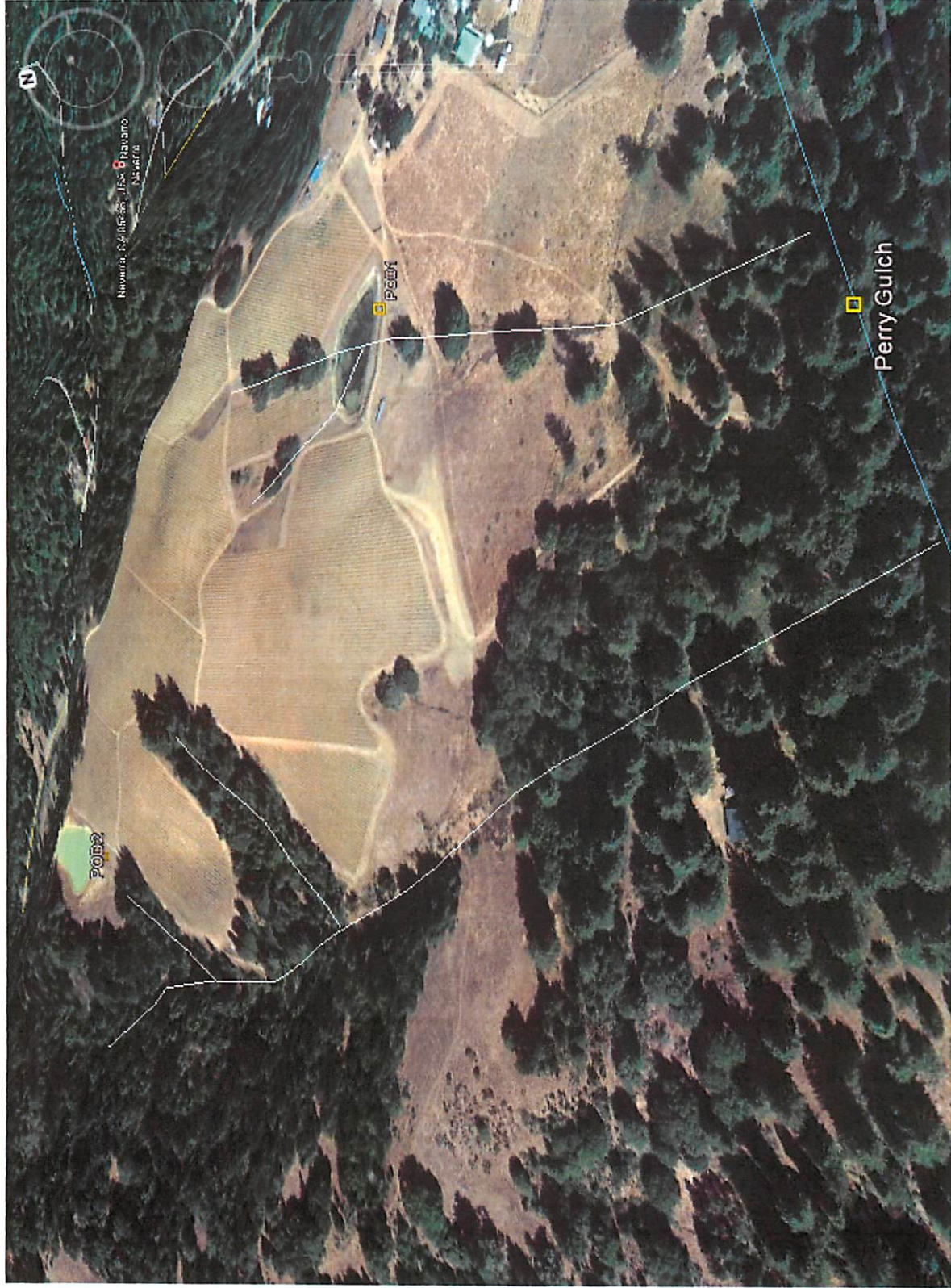


Figure 2. Google Earth image of the project area with PODs 1 and 2 and potential jurisdictional streams depicted with white lines.