FEDERAL ENERGY REGULATORY COMMISSION
Washington, DC 20426
September 18, 2017

OFFICE OF ENERGY PROJECTS

Project No. 77-285 – California
Potter Valley Project
Pacific Gas & Electric Company

Subject: Scoping Document 2 for the Potter Valley Project

To the Party Addressed:

The Federal Energy Regulatory Commission (Commission) is currently reviewing the Pre-Application Document submitted by Pacific Gas & Electric Company (PG&E) for relicensing the 9.959-megawatt (MW) Potter Valley Project (FERC No. 77). The proposed project is located on the Eel and East Fork Russian Rivers, in Lake and Mendocino Counties, California. The project occupies lands owned by PG&E and National Forest System Lands administered by the United States Forest Service, Mendocino National Forest.

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended, Commission staff intends to prepare an Environmental Impact Statement (EIS), which will be used by the Commission to determine whether, and under what conditions, to issue a new license for the project. To support and assist our environmental review, we are beginning the public scoping process to ensure that all pertinent issues are identified and analyzed and that the EIS is thorough and balanced.

Our preliminary review of the environmental issues to be addressed in our EIS was contained in Scoping Document 1 (SD1), which was issued on June 1, 2017. We requested comments on SD1 and held scoping meetings on June 28, 2017, to hear the views of all interested entities on the scope of issues to be included in the EIS. We revised SD1 based on the verbal comments we received at the scoping meetings and written comments we received throughout the scoping process. The enclosed Scoping Document 2 (SD2) describes the proposed action and alternatives, the environmental analysis process we will follow to prepare the EIS, and a revised list of issues to be addressed in the EIS.

We appreciate the participation of governmental agencies, non-governmental organizations, and the general public in the scoping process. Key changes from SD1 to SD2 are identified in ***bold, italicized type***. SD2 is being distributed to all entities on the Commission's mailing list for this project. SD2 can also be accessed online at: http://www.ferc.gov/docs-filing/elibrary.

The enclosed SD2 supersedes the June 1, 2017, SD1. SD2 is issued for informational use by all interested entities; no response is required. Please direct any questions about the scoping process to John Mudre at (202) 502-8902 or john.mudre@ferc.gov. Additional information about the Commission's licensing process and the Potter Valley Project may be obtained from our website, www.ferc.gov.

Enclosure: Scoping Document 2

cc: Mailing List
Public Files

SCOPING DOCUMENT 2

POTTER VALLEY PROJECT

CALIFORNIA

PROJECT NO. 77-285

Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Licensing
Washington, DC

September 2017

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1.0 INTRODUCTION

The Federal Energy Regulatory Commission (Commission or FERC), under the authority of the Federal Power Act (FPA),[1] may issue licenses for terms ranging from 30 to 50 years for the continued operation, and maintenance of non-federal hydroelectric projects (relicensing). On April 6, 2017, Pacific Gas & Electric Company (PG&E) filed a Pre-Application Document (PAD) and Notice of Intent to seek a new license for the Potter Valley Project (FERC Project No. 77).[2]

The Potter Valley Project (project) is located on the Eel and East Fork Russian Rivers, in Lake and Mendocino Counties, California. The project diverts water from the Eel River southward, through a series of tunnels, conduits and penstocks, to the project's powerhouse located in the headwaters of the Russian River Basin. Water not diverted remains in the Eel River, flowing northward about 150 miles to the Pacific Ocean near Fortuna. The project has a total installed capacity of 9.959 megawatts (MW) and, under current operation (since 2007), an average annual generation of 19,900 megawatt-hours (MWh).

Section 3.0 provides a detailed description of the project, and figure 1 shows the project location within the Eel and Russian River basins. The project occupies lands owned by PG&E and National Forest System Lands administered by the United States Forest Service, Mendocino National Forest.

The National Environmental Policy Act (NEPA) of 1969,[3] the Commission's regulations, and other applicable laws require that we independently evaluate the environmental effects of relicensing the Potter Valley Project as proposed, and also consider reasonable alternatives to the licensee's proposed action. At this time, we intend to prepare an Environmental Impact Statement (EIS) that describes and evaluates the probable effects, including an assessment of the site-specific and cumulative effects, if any, of the proposed action and alternatives. The EIS preparation will be supported by a scoping process to ensure identification and analysis of all pertinent issues.

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[1] 16 U.S.C. § 791(a)-825(r) (2012).

[2] The current license for the Potter Valley Project was issued with an effective date of October 1, 1983, and expires on April 14, 2022.

[3] National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4370(f) (2012).

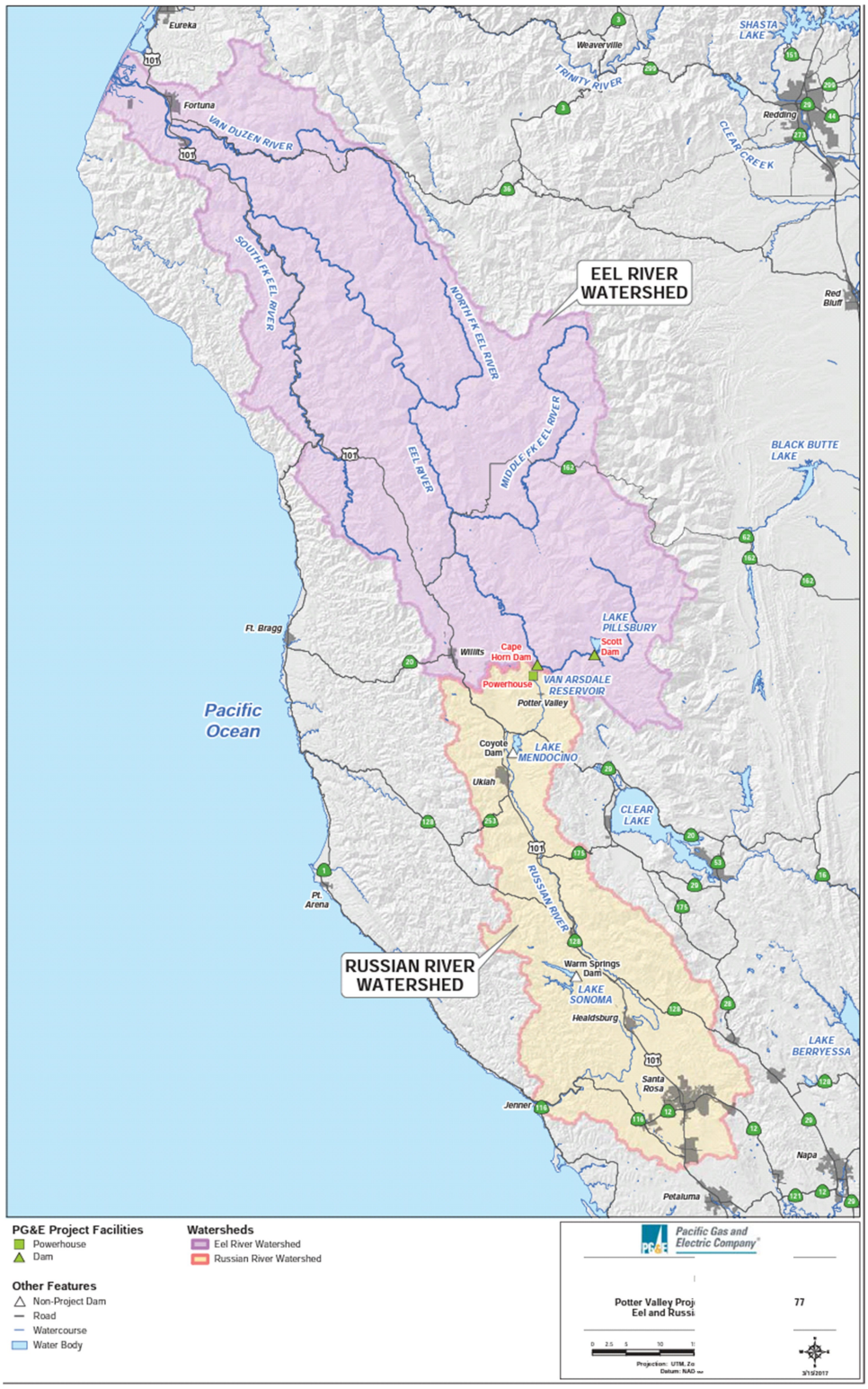

Figure 1. Location of the project (Source: PG&E).

2.0 SCOPING

This Scoping Document 2 (SD2) is intended to advise all participants as to the proposed scope of the EIS. This document contains: (1) a description of the scoping process and schedule for the development of the EIS; (2) a description of the proposed action and alternatives; (3) a preliminary identification of environmental issues and proposed studies; (4) a proposed EIS outline; and (5) a preliminary list of comprehensive plans that are applicable to the project.

2.1 PURPOSES OF SCOPING

Scoping is the process used to identify issues, concerns, and opportunities for enhancement or mitigation associated with a proposed action. In general, scoping should be conducted during the early planning stages of a project. The purposes of the scoping process are as follows:

- invite participation of federal, state, and local resource agencies; Indian tribes; non-governmental organizations (NGOs); and the public to identify significant environmental and socioeconomic issues related to the proposed project;
- determine the resource issues, depth of analysis, and significance of issues to be addressed in the EIS;
- identify how the project would or would not contribute to cumulative effects in the project area;
- identify reasonable alternatives to the proposed action that should be evaluated in the EIS;
- solicit from participants available information on the resources at issue, including existing information and study needs; and
- determine the resource areas and potential issues that do not require detailed analysis during review of the project.

2.2 COMMENTS, SCOPING MEETINGS, AND ENVIRONMENTAL SITE REVIEW

Commission staff issued SD1 on June 1, 2017. On June 27, 2017, staff conducted an environmental site review. On June 28, 2017, staff conducted morning and evening scoping meetings in Ukiah, California. Public notice of the meetings was published in the Federal Register and in the *Lake County Record Bee*, the *Lake County News* and the *Mendocino Beacon*. A court reporter recorded and transcribed both of the scoping meetings.

The following individuals provided verbal comments at the scoping meetings.

Speaker	**Organization**
Janet Pauli	Potter Valley Irrigation District
Jerry Albright	Eel River Stakeholders
Guinness McFadden	Potter Valley Irrigation District
Tito Sasaki	Sonoma County Farm Bureau
Candace Horsley	Inland Water and Power Commission
Redgie Collins	California Trout
Carre Brown	County of Mendocino
Scott Greacen	Friends of the Eel River
Theresa Simsiman	American Whitewater
David Keller	Friends of the Eel River
Al White	Russian River Flood Control & Water Conservation Improvement District
Chris Shutes	California Sportfishing Protection Alliance
Pam Jeane	Sonoma County Water Agency
Vivian Heliwell	Pacific Coast Federation of Fishermen's Associations
Devon Jones	Mendocino County Farm Bureau
Frank Lynch	Lake Pillsbury Homesite Association
Regina Chichizola	Save California Salmon
George Cinquini	Public
James Russ, President	Round Valley Indian Tribes
Chris Love	Public

In addition to the verbal comments received during the scoping meetings, written comments were received from the following agencies and entities:

Commenting Entity	**Filing Date**
California Department of Fish and Wildlife	August 2, 2017
California State Water Resources Control Board	August 4, 2017
Center for Biological Diversity	August 7, 2017
City of Petaluma	August 3, 2017
City of Santa Rosa	August 2, 2017
Conservation Groups[4]	August 4, 2017

[4] American Whitewater, California Sportfishing Protection Alliance, California Trout, Friends of the Eel River, Friends of the River, Native Fish Society, and Trout Unlimited and the Redwood Empire Chapter of Trout Unlimited.

County of Lake Board of Supervisors	July 28, 2017
Humboldt County 3rd District Supervisor	August 1, 2017
Lake County Board of Supervisors	July 28, 2017
Lake Pillsbury Homesite Association	August 3, 2017
Mendocino County Board of Supervisors	August 4, 2017
Mendocino County Farm Bureau	August 4, 2017
Mendocino County Inland Water and Power Commission	July 28, 2017
National Marine Fisheries Service	August 4, 2017
National Park Service	August 4, 2017
Native Fish Society	August 4, 2017
North Coast Rivers Alliance and San Francisco Crab Boat Owners Association	August 7, 2017
North Coast Regional Water Quality Control Board	August 4, 2017
North Marin Water District	August 3, 2017
Pacific Coast Federation of Fishermen's Association	August 7, 2017
Pacific Gas and Electric Company	August 2, 2017
Pacific Rivers	August 7, 2017
Potter Valley Irrigation District	August 1, 2017
Round Valley Indian Tribes	August 4, 2017
Save California's Salmon	August 7, 2017
Sherwood Valley Band of Pomo Indians	August 4, 2017
Sonoma County Water Agency and County of Sonoma	August 4, 2017
Town of Windsor	August 8, 2017
United Winegrowers of Sonoma County	August 7, 2017
Upper Russian River Water Agency	August 4, 2017
U.S. Department of Agriculture, Forest Service	August 2, 2017
U.S. Fish and Wildlife Service	August 3, 2017
Valley of the Moon Water District	August 4, 2017
Wildlands Conservancy	July 24, 2017
Willits Environmental Center	August 4, 2017
Wiyot Tribe	August 4, 2017

In addition to the comments from the entities listed above, the Commission received about 400 comment letters from the general public.

Key changes from SD1 are identified in ***bold, italic type***. Note that the primary purpose of SD2 is to identify issues to be analyzed in the EIS, not to identify all recommended and/or potential protection, mitigation, and enhancement (PM&E) measures. All proposed and recommended PM&E measures will be analyzed in the EIS.

2.2.1 Issues Raised During Scoping

The issues raised by participants in the scoping process are summarized and addressed below. The summaries do not include every verbal and written comment made during the scoping process. For instance, we do not address comments that are recommendations for license conditions, including PM&E measures such as installation of stream gages. Such comments will be addressed in the EA or any license order that is issued for this project. We will request final terms, conditions, recommendations, and comments when we issue our Ready for Environmental Analysis (REA) notice, following the filing of the license application. We also do not address comments or recommendations that are administrative in nature, such as requests for changes to the mailing lists. Those items will be addressed separately.

General Comments

Alternatives

Comment: Numerous entities comment that SD1 should be revised to add a decommissioning alternative for evaluation in the EIS. These entities included the Water Board, National Marine Fisheries Service, Round Valley Indian Tribes, Wildlands Conservancy, Willits Environmental Center, Humboldt County 3rd District Supervisor, Pacific Rivers, Native Fish Society, Center for Biological Diversity, Save California's Salmon, Pacific Coast Federation of Fishermen's Associations, and San Francisco Crab Boat Owners Association, American Whitewater, California Sportfishing Protection Alliance, California Trout, Friends of the Eel River, Friends of the River, Trout Unlimited, the Redwood Chapter of Trout Unlimited, and North Coast Rivers Alliance. Suggested alternatives ranged from full decommissioning with removal of project facilities, to removal or lowering of Scott Dam.

Response: We realize that relicensing the project could continue certain adverse environmental and developmental effects, such that decommissioning some of the project's facilities could be an outcome of the relicensing process. For this reason, we are including in the EIS outline in section 7 a decommissioning alternative(s).

Comment: Upper Russian River Water Agency, Valley of the Moon Water District, City of Petaluma, City of Santa Rosa, Mendocino County Farm Bureau, Mendocino County Inland Water and Power Commission, North Marin Water District, and the County of Mendocino BOS state that they support SD1's conclusion that project decommissioning was an alternative that should be eliminated from detailed study, including project decommissioning.

Response: Please see our response to the previous comment.

Comment: Water Board states that, as the CEQA lead agency, it will be required to examine environmental effects associated with PG&E's proposed project of continued operations. It states that given recent decisions made by PG&E on their other hydroelectric projects in California, and the public interest in project removal expressed during the Commission's scoping process, the State Water Board recommends the Commission consider a dam removal alternative in its relicensing proceedings.

Response: As noted above, we have modified SD2 to include a decommissioning alternative.

Comment: The Round Valley Tribes propose five alternatives for evaluation in the EIS: 1) retention of all existing project facilities, refinement of river flow management to provide improved conditions for Eel River fisheries, construction of volitional or other fish passage around the project facilities on the Eel River (adult migration, juvenile outmigration) for both salmonids and lamprey, and investigation and implementation of water management and fisheries improvements to minimize impacts on the Russian River, including Potter Valley Irrigation District (PVID); 2) removal of all project facilities, restoration of full fish access for all native species, restoration of the Eel River within the footprint of project facilities, and investigation and implementation of water management and fisheries improvements to minimize impacts on the Russian River, including PVID; 3) removal of Scott Dam to restore fish access for all native species, retention of Van Arsdale Dam and diversion, maintenance of the Van Arsdale fish ladder, retention of diversion and powerplant structures but with seasonal operation (December-April/May), and investigation and implementation of water management and fisheries improvements to minimize impacts on the Russian River, including PVID; 4) retention of all existing facilities for cold water pool and climate change opportunities, shifting primary flow management focus to provide improved conditions for Eel River fisheries, providing volitional or other fish passage around the project facilities on the Eel River (adult migration, juvenile outmigration) for both salmonids and lamprey, and investigation and implementation of water management and fisheries improvements to minimize impacts on the Russian River, including PVID; and 5) phased implementation of the Second Alternative, based on resolution of water supply and fisheries impacts on the Russian River, project ownership changes, funding, and/or improved scientific understanding of future fisheries response.

Response: We appreciate the Tribes' efforts towards developing alternatives for analysis in the EIS. Alternatives including: 1) retention of all project facilities with flow and fish passage measures (Tribes' alternatives 1 and 4); 2) removal of Scott Dam to restore fish passage to the upper watershed, while retaining the diversion facilities which would be operated seasonally (Tribes' alternative 3); and 3) removal of all project facilities to restore unimpeded fish access to the upper watershed, either starting immediately or in a phased approach (Tribes' alternatives 2 and 5, respectively) represent the range of decommissioning alternatives recommended by commenters in this

proceeding. We consider them to be an appropriate starting point for our analysis, but caution that some of the Tribes' mitigation measures included as part of their alternatives may be outside of the Commission's jurisdiction.

Comment: Pacific Rivers requests the following additional alternatives be considered including: 1) decommissioning both Van Arsdale and Scott dams; 2) decommissioning of Scott Dam; 3) exploring the feasibility of installing fish passage sufficient to safely pass all salmonids and Pacific Lamprey at Scott Dam; and 4) evaluating the water rights associated with the Potter Valley Diversion and the associated impacts to Eel and Russian river salmonid populations. Pacific Rivers also supports a full accounting of legal and illegal water diversions in the basin to determine the likelihood of replacing water currently diverted at the Project with the enforced curtailment of illegal water use in the watershed or through the use of groundwater.

Response: Pacific Rivers' alternatives 1, 2, and 3, overlap with the Round Valley Tribes' alternatives discussed above. With respect to alternative 3, we plan to evaluate various fish passage options in EIS section 3.3.3 *Fishery Resources*. With respect to alternative 4, we do not consider this to be a stand-alone alternative but plan to discuss water rights in section 3.2.2 *Water Resources* of the EIS. However, please note that "a full accounting of legal and illegal water diversions" is outside of the Commission's jurisdiction.

Comment: The Native Fish Society states that given the current imperiled status of the upper Eel River's salmon and steelhead, and projected future changes in air and water temperatures resulting from climate change, the Commission should evaluate alternatives that provide opportunities to restore volitional upstream and downstream access to threatened salmonids to the critical cold water sources above Scott Dam and the Potter Valley Project. The Native Fish Society states that the Commission should also evaluate the likely impacts to downstream water quality that will result from increased air and water temperatures and the cumulative effects of the project resulting from a changing climate.

Response: As stated above, we plan to evaluate various fish passage options in EIS section 3.3.3 *Fishery Resources*. Water quality changes attributable to the project will be evaluated in section 3.3.2. With respect to climate change impacts, we do not plan on predicting future hydrologic conditions over potential 30-50 year license term as part of our environmental analysis because of uncertainty over the predictive ability of existing models, particularly at the individual project level. We will assess the effects of climate change on environmental resources of the project area using conventional hydrologic studies, monitoring techniques, and predictive models. Nevertheless, if the project is licensed and there is a need to adjust the conditions of the license as a result of changed climate, such adjustments can be addressed through the Commission's standard reopener article that would be included in any issued license.

Dam Safety

Comment: PG&E requests that we clarify the meaning of text in section 3.3 Dam Safety. Some commenters understood the existing text to mean that there were known dam safety issues at the project

Response: The purpose of the text in section 3.3 is to inform participants that proposed modifications to project structures, such as the installation of fish passage facilities or certain operational changes, must be evaluated with respect to their potential for causing dam safety problems. It does not mean that dam safety issues are known to exist. The text in section 3.3 Dam Safety has been revised for clarity.

Comment: Conservation Groups state our EIS must include consideration of known and projected information regarding dam safety (including issues related to the current status of the dams, geology, and soils) and climate change.

Response: The dam safety program at the Potter Valley Project and other Commission projects is set forth in part 12 of the Commission's regulations and is independent of the relicensing process. However, any information relating to dam safety concerns developed during this relicensing proceeding will be forwarded to our Division of Dam Safety and Inspections (D2SI) for their review. Because the dam safety program is ongoing throughout the license term, any changes in climate that could affect dam safety, such as changes in hydrology, would be addressed as they occur. Under part 12, the project is inspected annually by D2SI engineers. Further, part 12, subpart D requires a comprehensive analysis of the project, including the adequacy of the inflow design flood by independent consultants every five years.

Comment: The Conservation Groups and many individuals downstream of project facilities on the Eel River comment that dam safety should be evaluated as part of this relicensing process. Concerns were expressed about the age of the project dams, and nearby geologic faults.

Response: As an existing licensed project, dam safety is continuously evaluated by personnel within the Division of Dam Safety and Inspections. Please see response to previous comment for additional information.

Comment: Many commenters express their concern that information pertaining to dam safety was classified as Critical Energy Infrastructure Information (CEII) and, as a result, unavailable for public review.

Response: Documents classified as CEII are available for public review, under certain conditions. For more information visit the Commission's website at https://www.ferc.gov/legal/ceii-foia/ceii.asp.

Other

Comment: PVID and others comment that the 2004 Order Amending License that established the existing minimum flow release schedule incorporated a version of the National Marine Fisheries Service (NMFS) Reasonable and Prudent Alternative (RPA) that did not include certain assumptions that were incorporated into the modeling used to develop/evaluate the RPA. As a result, implementation of the RPA contained in the license resulted in decreases in diversions through the powerhouse of 30 to 50 percent, rather than the 15 percent predicted by the modeling. PVID requests that we analyze the effects of current license requirements versus the modeled effects.

Response: While the requested analysis would serve to establish the degree to which the modeled versus licensed RPA resulted in decreased diversions to the Russian River, it is unclear how such an analysis would aid the development of a flow regime for any new license. Our analysis of any new flow proposals would be conducted *de novo* using analytical methods, including modeling, that can best represent current and predicted conditions.

Comment: PG&E states that according to its records, the capacity of the Potter Valley Project is 9.2 megawatts (MW), and this was the number used throughout PG&E's PAD; however, SD1 refers to the project's capacity as 9.4 MW.

Response: By order issued May 1, 1995, the Commission amended the license for the Potter Valley Project to reflect the installed capacity of the generators. The project's authorized capacity was changed to 9.959 MW. SD2 has been revised to reflect the project's authorized capacity.

Comment: PG&E states that the Potter Valley Project is located on the East Branch Russian River, and not the East Fork Russian River, as stated in SD1.

Response: The U.S. Board on Geographic Names (BGN) is a federal body created in 1890 and established in its present form by Public Law in 1947 to maintain uniform geographic name usage throughout the Federal Government. According to the BGN, the name of the water body in question is the East Fork Russian River. That said, we have no objection to others referring to the water body as the East Branch Russian River.

Comment: PG&E states that SD1 refers to PG&E's "Potential Studies," as listed in section 6 of the PAD, as its "Proposed Studies" and requests we correct this in SD2.

Response: We have revised section 5.0 of this SD2 accordingly and added a sentence explaining the PG&E's Proposed Study Plan is due to be filed by September 18, 2017.

Comment: Conservation Groups state the draft EIS must adequately describe and consider the "Environmental Setting." An evaluation of the environmental effects of a project requires that the draft EIS consider not only the impacts of the project but also the setting in which those impacts will occur. In the present case, the draft EIS must consider information regarding the environmental setting on both the Eel and Russian Rivers.

Response: As shown in the EIS outline (Section 7 of this SD2), we will describe the "Environmental Setting" in Section 3 of our EIS. We refer to the "Environmental Setting" as the "Affected Environment."

Comment: Conservation Groups state that the EIS should undertake an adequate evaluation of the project's impacts over the expected life of the project.

Response: As explained in section 4.1.3, our temporal scope for cumulative analysis will look 30 to 50 years into the future to the extent feasible, concentrating on resource effects stemming from reasonably foreseeable future actions.

Comment: The Round Valley Tribes state that the proposed EIS outline is incomplete because Section 1.3, Statutory and Regulatory Requirements, omits mention of FERC's trust obligation to Indian tribes under established law. *Nance v. EPA*, 645 F.2d 701 (9th Cir. 1981), *cert. denied*, 454 U.S. 1081 (1981). Further, they state that the outline omits reference to the Magnuson Stevens Act and that statute should be included because impacts on the fishery resources of the Eel River will be felt in the Pacific Ocean.

Response: The Commission has acknowledged in previous cases that it is "subject to the United States fiduciary responsibilities toward Indian tribes, which, in essence, consists of acting in the interests of the tribes." The Commission, however, exercises this responsibility within the context of the FPA. The environmental analysis will focus on the effects of the project on resources of concern to the Tribes rather than on the legal requirements of trust responsibilities. By focusing on the resource interests and the measures necessary to protect and enhance those resources, we believe we would be fulfilling our responsibilities to the Tribes.

We have added the Magnuson-Stevens Act to the list of statutory and regulatory requirements in the EIS outline found in section 7.0 of this SD2.

Cumulative Effects – Geographic Scope

Comment: California Fish and Wildlife, NMFS, the Wiyot Tribe, the North Coast Rivers Alliance and the San Francisco Crab Boat Owners Association (SFCBOA), The Round Valley Tribes and others state that because Scott Dam prevents upstream migrating anadromous fishes from spawning habitat that exists above Lake Pillsbury, the geographic scope for fisheries analyses should be modified to include those tributaries.

Response: We agree and have modified section 4.1.2 *Geographic Scope* of this SD2 accordingly.

Comment: Sonoma County Water Agency and Sonoma County (Sonoma) states the geographic scope of our analysis should be expanded to include the potential impacts of relicensing on storage levels in Lake Mendocino and the resources of the Russian River from Lake Mendocino to the Pacific Ocean, including anadromous fish species listed as threatened and endangered under the federal Endangered Species Act.

Response: We agree and have modified section 4.1.2 *Geographic Scope* of this SD2 accordingly.

Comment: Valley of the Moon Water District, City of Petaluma, City of Santa Rosa, Mendocino County Farm Bureau, North Marin Water District, United Winegrowers of Sonoma County, the Town of Windsor, the Round Valley Tribes, Conservation Groups, and Water Board state that the geographic scope of our analyses in the Russian River Basin should extend downstream to, at least, the river's confluence with Dry Creek.

Response: As noted above, we have modified our geographic scope in the Russian River Basin to extend downstream to the Pacific Ocean.

Comment: California Fish and Wildlife states that because fisheries habitat in the Russian River below Lake Mendocino could be affected by curtailment or reduction in project diversions, Lake Mendocino and the Russian River below Lake Mendocino should be included in the geographic scope for fisheries analyses.

Response: Please see our response to previous comment.

Comment: NMFS states that the geographic scope in the Russian River Basin should be expanded to include Lake Mendocino downstream to its mouth at the Pacific Ocean.

Response: We agree and, as noted above, have modified the geographic scope accordingly.

Comment: Conservation Group and Pacific Rivers request our geographic scope of analysis be expanded to include the Eel River from the headwaters to the Pacific Ocean.

Response: We agree and have modified the geographic scope accordingly.

Comment: The Wiyot Tribe states that the geographic scope for potential impacts specified in SD1 should include habitat above Scott dam and the Middle mainstem Eel River downstream to the Pacific Ocean. It states that besides obvious impediments to upstream migration, the project also affects water quantity/quality of downstream habitats for culturally important fish species such as gou'dow (lamprey), salmonids, and b'am (sturgeon).

Response: As noted above, we have modified the geographic scope to extend from the Eel River headwaters to the Pacific Ocean.

Geologic and Soils Resources

Comment: NMFS states that the Scott Dam and Cape Horn dam affect the supply and transport of spawning gravels and that affects operation at Scott Dam and the fish screen at Cape Horn Dam.

Response: We have added the effects of project dams on the supply and transport of spawning gravels under section 4.2.1 *Geology and Soils*.

Comment: The Round Valley Tribes state that SD1 lists no issues to be addressed in the EIS under Geologic and Soils Resources. They note that this conclusion overlooks significant geologic and soil-related impacts caused by the project. For example, geofluvial impacts should be assessed, particularly the extent to which the project's dams alter natural sediment and large wood routing downstream, cause riparian encroachment and channel morphology changes, and limit habitat complexity. They state that, in addition, sediment storage and contaminants within the reservoir should also be evaluated to inform the effects of the project on the downstream sediment budget and channel form, as well as informing potential impacts of routing this stored sediment into downstream reaches with a decommissioning alternative.

Response: We have added the effects of project operation and maintenance on riparian encroachment and channel morphology as an issue under section 4.2.1 *Geology and Soils*. As noted in the previous comment, we also plan to address the supply and transport of spawning gravels. With respect to specific studies, we expect these to be addressed during the Study Plan development process and decisions on needed studies will be made in the OEP Director’s Study Plan Determination.

Water Resources

Comment: The Upper Russian River Water Agency comments that its members are very concerned about the impact any changes in operation of the Project might have on water supply availability for meeting the demands of existing water rights. It states that hundreds of land owners and agencies have been granted rights to this water by the Water Board. It further states that the project diversions, and the rights granted to use the

diverted water, have been in place for so long that the Water Board describes the Potter Valley Project as having the appearance of "apparent naturalness and permanence" (D1030, August 17, 1961). Therefore, it concludes that any change in the operation of the project requires an analysis of the impacts to existing water rights and how those impacts would be mitigated. The Mendocino County Board of Supervisors and the Mendocino County Inland Water and Power Commission made similar comments.

Response: Although water rights are administered by the Water Board, we will evaluate the effects of relicensing alternatives on water rights in section 3.3.2 of the EIS.

Comment: The Round Valley Tribes comment that the discussion of water rights in the Scoping Document omits entirely the federal reserved water rights of the Round Valley Indian Tribes, which derive from the creation of their reservation with a priority date as early as 1856. In support of their argument, they cite *Winters v. United States*, 207 U.S. 564 (1908), as holding that reservation of lands for Indians by the federal government also includes by implication the right to sufficient amounts of water to carry out the purposes of the reservation. As such, the Round Valley Tribes state that we should evaluate the likely impacts of the relicensing and continued operation of the project on the Tribes' water rights.

Response: The environmental analysis will focus on the effects of the project on resources of concern to the Tribes rather than on the legal requirements of federal reserved water rights. By focusing on the resources' interests and the measures necessary to protect and enhance those resources, we believe we would be fulfilling our responsibilities to the Tribes.

Comment: Conservation Groups state that the EIS should also include a detailed description of the water rights associated with the project. They state that while SD1 generally describes PG&E's claimed water rights, it does not provide data or evidence of PG&E's actual beneficial use of water. They further state that SD1 does not discuss PVID's contract for irrigation purposes based on actual water rights, or the legal status of the project's abandoned water in the Russian River. They opine that understanding project water rights is critical to an adequate evaluation of the project's impacts and feasible mitigation measures and alternatives. Finally, Conservation Groups state that not only must the EIS consider the relative values and efficiencies of the various uses of finite water resources, but the EIS must also evaluate whether alternative sources of water could supply those uses, or whether alternative uses could secure substantial benefits while using significantly less water.

Response: As relevant and to the extent necessary, our environmental analysis will assess project effects on resources of concern, including socioeconomics and water rights. The legal status of water rights is not relevant to our environmental analysis. Further, we will not evaluate alternative sources of water to satisfy water rights in the Eel

and Russian River Basins as the Commission must only consider those actions and their effects that are related to the application pending before it.

Comment: Pacific Coast Federation of Fishermen's Association and Institute for Fisheries Resources (PCFFA/IFR) request the full investigation of water rights and use of the Eel River water. They believe that if an investigation of water rights and reasonable use was done, it would become apparent that the Potter Valley Project has less rights existing than are claimed and could get by with less water than is currently used. They state that it is highly possible that the Potter Valley Diversion could be easily replaced by enforcement of unlawful diversions and by raising Lake Mendocino and exploring groundwater resources.

Response: Please see response to previous comment. Further, the Commission has no jurisdiction over state water rights. Section 27 of the FPA states that nothing in Part I of the FPA "shall be construed as affecting or intending to affect or in any way to interfere with the laws of the respective States relating to the control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses, or any vested right acquired therein."[5] Any investigation of water rights or water use would fall under the purview of the Water Board.

Fishery Resources

Comment: Forest Service requests that we add "project maintenance" to the three bullets under aquatic resources and effects of project-related recreation on water quality

Response: We agree that project maintenance could affect aquatic resources and have added "project maintenance" to the three bullets in section 4.2.2 of this SD2 as requested.

Comment: The Round Valley Tribes state that the list of issues to be addressed in Aquatic Resources (Section 4.2.2) is incomplete They state that additional aquatic resource issues to be addressed include toxic blue-green algae, fish habitat quality and availability, mercury, and fish habitat access to the upper watershed. The Tribes add that Pacific lamprey should be included as an anadromous fish species.

Response: We indicated in section 4.2.2 *Water Resources* and section 4.2.3 *Fishery Resources* that we would address the effects of project operation and maintenance on water quality and fisheries resources, which would include the items mentioned by the tribes. As noted above, with respect to specific studies, we expect these to be addressed during the Study Plan development process and decisions on needed studies will be made in the OEP Director's Study Plan Determination.

[5] 16 U.S.C. § 821 (2012).

We have added Pacific lamprey to the list of species in section 4.2.3 of this SD2.

Comment: Sonoma comments that we should consider the effects of continued project operation on streamflow and aquatic habitat, including water temperature in the Russian River for salmon, steelhead, and residential and special status fishes in our cumulative effects analysis.

Response: We have revised section 4.2.3 to indicate that we will consider the direct and cumulative effects of project-related changes in water quality on anadromous and resident fishes in the Eel and Russian Rivers.

Comment: Water Board states it is likely it will consider fish passage at Scott Dam in its California Environmental Quality Act (CEQA) document, which will be developed as part of the Clean Water Act Section 401 water quality certification process. To streamline the relicensing process, the Water Board recommends that the Commission evaluate fish passage options (volitional and/or non-volitional) for Scott Dam as part of its National Environmental Policy Act (NEPA) process in this relicensing proceeding.

Response: We will evaluate fish passage options at Scott Dam in EIS section 3.3.3 *Fishery Resources*.

Terrestrial Resources

Comment: Forest Service recommends that the Pallid bat, Townsend's big-eared bat, and fringed myotis be added to the list of special-status species that could be affected by the project.

Response: We agree that the above-mentioned special-status bat species could potentially be affected by project-related activities. Section 4.2.3 has been modified accordingly.

Comment: Forest Service recommends that we should clarify which species protected under the Endangered Species Act could be affected by the project.

Response: Section 4.2.4 has been modified accordingly.

Comment: The Round Valley Tribes state that riparian vegetation should be included among the issues to be addressed in the EIS, because the project has likely had an effect immediately below the project facilities, and various native and threatened and endangered species use riparian habitat or are affected by changes in riparian vegetation and habitat. In addition, the Tribes state that birds are not mentioned as a resource issue, other than northern goshawk and bald eagles, and that there are other bird species, and potentially bats, that may be affected by riparian habitat changes or project operations.

Response: The effects of project operation and maintenance activities on riparian habitat was identified as an issue in SD1. As discussed above, we have modified SD2 to include an evaluation of effects on special-status bat species. Section 4.2.3 has been clarified that special-status species would include birds of conservation concern as designated by FWS.

Comment: Water Board staff recommends that the Commission also include terrestrial resources (specifically related to amphibians and aquatic reptiles) and water supply in its cumulative impacts analysis.

Response: We have modified Section 4.1.1 to include special-status aquatic reptiles and amphibians (specifically the foothill yellow-legged frog and western pond turtle) as species that could be potentially by the project in combination with other water uses in the East Branch Russian River and Eel River.

Threatened and Endangered Species

Comment: The Round Valley Tribes state that under Threatened and Endangered Species (Section 4.2.4), SD1 provides few details about the issues to be addressed. With regard to these species, the Tribes state that the EIS should address flow timing, duration, and magnitude; water quality and water temperature; habitat quality and availability; habitat access; and effects of predatory species. The Tribes add that with the recent State candidacy listing for foothill yellow-legged frogs, the foothill yellow-legged frog should be moved from the Terrestrial Resources Section to this Section to ensure they are treated with the same care and priority as a resource issue.

Response: We have revised the bullet under section 4.2.4 *Threatened and Endangered Species* to include the requested additional details.

With respect to the foothill yellow-legged frog, this species would be appropriately addressed in section 3.3.4 *Terrestrial Resources*, along with its status under the California Endangered Species Act. The Threatened and Endangered Species section of the EIS focuses on federally listed species and designated critical habitats.

Recreation

Comment: PG&E states that PAD Section 4.5.10, correctly identified Westshore Camp as a non-project private recreation facility; however, it contains incorrect information regarding land ownership. PG&E states that this incorrect information was carried over into SD1 and requests we update SD2 accordingly. Forest Service also requests that we correct the information regarding land ownership.

Response: We have revised section 3.1.1 *Existing Project Facilities* of this SD2 accordingly.

Comment: The Forest Service states that Lake Pillsbury Resort is the only private recreational resort at Lake Pillsbury.

Response: We have revised section 3.3.1 *Existing Project Facilities* of this SD2 accordingly.

Comment: Many commenters state that the NMFS RPA release protocols implemented in 2004 have greatly reduced Lake Pillsbury levels in peak recreation season, resulting in unreliable lake access, decreased recreational use of the lake, and decreased aesthetic quality.

Response: We have revised section 4.2.6 *Recreation Resources* of this SD2 to clarify that we will analyze the effects of project operation, including flow releases and lake levels on Lake Pillsbury recreational access. The effects of project operation, which includes flow releases and lake levels, on aesthetics is already identified as an issue in section 4.2.7 *Land Use and Aesthetics* of this SD2.

Comment: The National Park Service and other commenters state that PG&E did not fully address the Eel River's designation as a National and State-designated Wild and Scenic River. The commenters note that PG&E identified only one river segment in the project vicinity as recreational. However, the commenters identified and delineated four additional segments downstream, in the project-affected area, as scenic (1 segment), recreational (2 segments), and wild (1 segment). Commenters also state the Outstanding Remarkable Values for each segment should be described.

Response: Analysis of the Eel River Wild and Scenic River segments (i.e. wild, scenic, and recreational) will be included when we address the effects of project operation and maintenance on recreational access, recreational use, and aesthetic quality in the project-affected area.

Comment: Sonoma comments that SD1, Section 4.2.5 does not refer to recreation in Lake Mendocino or the Russian River.

Response: We have revised section 4.2.6 *Recreation Resources* of this SD2 to include the effects of continued project operation and maintenance on recreation within the project-affected area, which includes Lake Mendocino and the Russian River.

Comment: Sonoma requests that the effects of project operation and maintenance on recreation use in Lake Mendocino, and on the Russian River from Lake Mendocino to the Pacific Ocean be added to the list of resource issues that could be cumulatively affected.

Response: Analysis of these concerns will be included when we address the effects of project operation and maintenance on recreational access, recreational use in

the project-affected area and we have revised section 4.2.6 *Recreation Resources* of this SD2 to indicate this as a resource that could be cumulatively affected.

Land Use, and Aesthetics

Comment: The Conservation Groups and other commenters state that the EIS should evaluate effects of project decommissioning on public and private development around Lake Pillsbury.

Response: We have revised section 4.2.7 *Land Use and Aesthetics* of this SD2 to include the impacts of project decommissioning on existing public and private development around Lake Pillsbury.

Comment: The Forest Service states that a Fire Management and Response Plan (FMRP), developed by PG&E, in cooperation with the Mendocino National Forest, would be an appropriate document to address fire management and fire history of the Pillsbury Basin.

Response: We have revised section 4.2.7 *Land Use and Aesthetics* of this SD2 to indicate we will analyze analysis of local forest fire history, and effects of potential forest fires to project lands and facilities. Additionally, we have revised the same section of this SD2 to indicate we will analyze the effects of project decommissioning on forest fire fighting preparedness and effectiveness.

Socioeconomics

Comment: PVID comments that SD1 should be revised to address the discrepancy between the NMFS RPA as modeled and the Commission's description of the NMFS RPA in the 2004 order amending license. PVID states that the result of this discrepancy has resulted in decreases in diversions through the project of 30 percent, as opposed to the 15 percent reduction modeled by NMFS.

Response: We will discuss implementation of the NMFS RPA in section 2.1.3 *Existing Project Operation* of the EIS.

Comment: The Upper Russian River Water Agency comments that SD1 does not address the impacts of changes to the project on the agricultural economy that is essential to the developmental resources of Redwood and Ukiah Valleys. It states that without the water from the project, there would be severe impacts to agriculture, including the potential conversion of agricultural lands to other, more water intensive land uses. It further states that impacts from the project on all agricultural lands that use water from the Upper Russian River and their economic value must be analyzed if changes to project operations are proposed.

Response: We have added a *Socioeconomics* section (section 4.2.9) to this SD2 to indicate we will address this this and similar comments.

Comment: Mendocino County Farm Bureau states that impacts to the entirety of the agricultural industry that benefit from Potter Valley Project water, from the powerhouse to the confluence at Dry Creek, would need to be fully vetted in any alternative considered during this re-licensing process.

Response: Please see response to previous comment.

Comment: Sonoma states that the EIS should evaluate the effects of continued project operation on Lake Mendocino water levels and reliability for agricultural and municipal water supply in the Russian River Basin

Response: We will address this issue in our *Socioeconomics* section, as indicated in section 4.2.9 of this SD2.

Comment: PCFFA and the North Coast Rivers Alliance and SFCBOA state that the EIS should address the ocean commercial fishery that is influenced by the project's presence on the Eel River, and the resulting economic impacts to the North Coast Region.

Response: We are not aware of an analytical approach that would allow us to quantitatively parse out the effects of Potter Valley Project operation and maintenance on the ocean commercial fishery from the myriad of other variables that affect oceanic salmonid fisheries.

Comment: The Center for Biological Diversity, the Lake Pillsbury Homeowners Association, and other commenters state that the economic impacts of project-related recreation on the local economy should be analyzed in the EIS.

Response: We have revised the scoping document to include section 4.2.9, where we indicate our intent to analyze the economic impacts of project-related recreation on the local economy within the project-affected area.

Comment: The Center for Biological Diversity, the Lake Pillsbury Homeowners Association, and other commenters state that the economic benefits and costs to recreation from project decommissioning should be analyzed in the EIS.

Response: We have revised the scoping document to include section 4.2.9 *Socioeconomics*, where we indicate our intent to include evaluation of the economic benefits and costs to recreation from project decommissioning.

Developmental Resources

Comment: The Upper Russian River Water Agency comments that SD1 does not address impacts of changes to the project on developmental resources, including drinking water users along the Russian River, where the health and safety of hundreds of thousands of people may be threatened. It states that without the water from the project diversion, over half a million people could be placed into a regulatory drought, distressing businesses and residences throughout three counties. Thus, Upper Russian River Water Agency states that project effects on drinking water and its critical role in maintaining public health must be addressed in the relicensing process.

Response: We have revised this SD2 to include section 4.2.10 *Developmental Resources*, where we indicate our intent to address these issues.

Comment: Numerous entities comment that given that consumptive water use in the Russian River Basin is dependent on continuation of diversions by the project.

Response: Please see response to previous comment.

3.0 PROPOSED ACTION AND ALTERNATIVES

In accordance with NEPA, the environmental analysis will consider the following alternatives, at a minimum: (1) the no-action alternative, (2) PG&E's proposed action, and (3) alternatives to the proposed action.

3.1 NO-ACTION ALTERNATIVE

Under the no-action alternative, the Potter Valley Project would continue to operate as required by the current project license (i.e., there would be no change to the existing environment). No new environmental protection, mitigation, or enhancement measures would be implemented. We use this alternative to establish baseline environmental conditions for comparison with other alternatives.

3.1.1 Existing Project Facilities

Dams

Scott Dam

Scott Dam is a concrete, gravity-type, ogee-shaped structure having a maximum height of 130 feet and a total length of 805 feet. The ogee crest, which is at an elevation

of 1,818.3 feet msl[6] is surmounted by five radial gates, each 32 feet wide by 10 feet high, and 26 steel slide gates, each 10 feet high and varying in width from 7.5 to 10.08 feet. The gates are manually operated with the exception of Gate 13, which is automated. Storage releases are made through a 72-inch-diameter, riveted-steel outlet pipe passing through the dam at invert elevation 1,730.3 feet, which is controlled by a 42-inch Lauren-Johnson needle valve. The needle valve is remotely operated.

Cape Horn Dam

Cape Horn Dam is 520 feet long and consists of an earthfill section and a concrete, gravity overflow spillway section. The earthfill section on the right side of the dam is approximately 237 feet long and has a 10-foot-wide crest at elevation 1,519 feet. The maximum height of the embankment is roughly 60 feet at the concrete retaining wall on the left side of the embankment. The embankment is comprised of earthfill with a concrete corewall. The concrete, gravity overflow spillway section forms the left side of the dam and has a maximum height of 63 feet. The spillway crest is at elevation 1,490.3 feet and is 283 feet long.

There is a 5-foot-diameter outlet through the spillway structure, which was abandoned in place in 1987 due to an accumulation of sediment preventing its operation, and the construction of a weir associated with fish ladder improvements that flooded the downstream side of the outlet. Currently, water passing downstream of the dam flows through the east and west release gates at the center of the dam, through the fish ladder on river left, or over the length of the spillway crest.

A pool-and-weir-type fish ladder provides fish passage over Cape Horn Dam allowing fish access to the Eel River and its tributaries between Cape Horn and Scott Dams. The fish ladder is 434 feet long and rises a vertical distance of 40 feet. It is comprised of 49 pools, each measuring 8 feet long, 4 to 10 feet wide, and 3 to 4 feet deep. The path of the ladder is roughly u-shaped, with the entrance located approximately 80 feet downstream from the toe of the dam and the exit at the west end of the dam crest. The ladder passes through the Van Arsdale Fisheries Station, operated by the California Department of Fish and Wildlife (CDFW). The station is currently used to enumerate migrating salmon and steelhead and collect fish tissue for genetic analysis. Downstream migrant fish screened at the Van Arsdale Intake, located approximately 400 feet upstream of Cape Horn Dam, are introduced into the fish ladder just upstream of the counting station. A corrugated pipe along the ladder provides alternative upstream passage for adult lamprey.

[6] All elevations included in this document are presented in feet above mean sea level (msl).

Reservoirs

Lake Pillsbury

Lake Pillsbury, formed by the construction of Scott Dam on the Eel River, has a surface area of approximately 2,275 acres at the normal maximum water surface elevation of 1,828.3 feet and a current storage capacity of 76,876 acre-feet (ac-ft). Due to concerns of bank instability in the reservoir and the potential for sloughing material to block the outlet needle valve or be released downstream creating high turbidity and streambed sedimentation, the reservoir is operated to maintain a minimum reservoir storage of at least 10,000 ac-ft, resulting in a normal usable storage of 66,876 ac-ft.

Van Arsdale Reservoir

Van Arsdale Reservoir was formed by the construction of Cape Horn Dam on the Eel River. The reservoir has a surface area of approximately 106 acres at the normal maximum water surface elevation of 1,494.3 feet. The gross storage capacity of Van Arsdale Reservoir was originally 1,457 ac-ft with a usable capacity of 1,140 ac-ft. Accumulation of sediment over time has resulted in significant loss of reservoir capacity. Based on the most recent bathymetric and topographic surveys conducted in 2002 and 2006, the current reservoir capacity is less than 390 ac-ft.

Diversion System

Van Arsdale Intake

Van Arsdale Intake diverts water upstream of Cape Horn Dam and conveys it to the Potter Valley Powerhouse, approximately 9,257 feet to the south. The intake structure, located on the southwest bank of Van Arsdale Reservoir, is approximately 400 feet upstream from Cape Horn Dam. At the entrance to the diversion tunnel, the intake consists of two fish screen bays, an inclined plane screen in each bay, an Archimedes screw pump, and a fish return channel.

The fish return channel leads to a secondary fish screen that reduces the fish return flow from 4 cubic feet per second (cfs) to 2 cfs. This reduced flow carries screened fish and debris through a series of fish return pipes to a half-round ogee spillway and a baffled flume, where it discharges into the fish ladder just upstream of CDFW's Van Arsdale Fisheries Station.

Each of the inclined plane fish screens is approximately 82 feet long and 8 feet wide, and is comprised of wedge wire screening material with 1/8-inch slotted openings. The screens are cleaned by an automated compressed air sparging system that blows debris off the screens from below. The debris is then carried by water flowing over the top of the screens to the fish bypass system. A series of flow and fish passage acceptance

tests of the screens were conducted to determine if the screens satisfied specific and general guidelines that had been developed by PG&E, California Department of Fish and Game (CDFG) (now CDFW), National Marine Fisheries Service (NMFS), and U.S. Fish and Wildlife Service (USFWS). The results of the tests indicated that the screens met the majority of the acceptance criteria. Issues that were identified as needing attention to fully meet the acceptance criteria were later addressed.

The fish screens and fish return system remain in continuous operation from October through July, except during periods of storm runoff when flows are 7,000 cfs or greater, at which time diversion is ceased to avoid damage to the screens. During August and September, the fish screens and the return system may be taken out of service for maintenance as long as entrainment below the powerhouse is monitored 1 day (24-hour duration) per week when the diversion is unscreened to document the absence of fish. Typically, one screen is taken off-line to be cleaned at a time, allowing diversion to occur through the other screen, and thus avoiding fish entrainment. Each screen is designed to pass 240 cfs with an approach velocity of 0.4 foot per second (i.e., 600 square feet of screen). However, the screens have been derated to 50 percent capacity due to current mechanical limitations, and so only 240 cfs total can be diverted through the screens.

Tunnels/Conduits

A trans-basin diversion system comprised of tunnels, steel pipes, and wood stave conduits passes through two ridges transporting water from Van Arsdale Reservoir to Potter Valley Powerhouse. The first ridge is crossed by a 5,826-foot-long underground tunnel (Tunnel No. 1). The second ridge is crossed by an 807-foot-long underground tunnel (Tunnel No. 2). Tunnel No. 1 and Tunnel No. 2 are connected by an approximately 457-foot-long aboveground conduit which crosses the valley between the two ridges (Conduit No. 1). A second aboveground conduit section (Conduit No. 2), approximately 367 feet in length, connects the downstream end of Tunnel No. 2 to Penstock No. 1 (1,793 feet long) and Penstock No. 2 (1,812 feet long).

Penstocks and Penstock Bypass

Penstock No. 1

Penstock No. 1 is a 1,793-foot-long, riveted-steel pipe varying in diameter from 62 inches at the gate valve to 48 inches at the Potter Valley Powerhouse. Penstock No. 1 supplies water to Unit No. 1.

Penstock No. 2

Penstock No. 2 is a 1,812-foot-long, riveted-steel pipe varying in diameter from 62 inches at the gate valve to 48 inches at the Potter Valley Powerhouse. A 30-inch-diameter wye branch from Penstock No. 2 supplies water to Unit No. 3 and Unit No. 4.

Penstock Bypass Channel and Powerhouse Bypass System

A butterfly valve house is located at the junction of Tunnel No. 1 and Conduit No. 1. Beginning near the butterfly valve house and terminating in the discharge canal downstream of the powerhouse, a seasonal creek is used as a penstock bypass channel to maintain flows in the East Fork Russian River during powerhouse outages that include dewatering of the entire penstock system. The capacity of the penstock bypass channel is approximately 25 cfs.

PG&E constructed a powerhouse bypass system in November 2009 with a capacity of 140 cfs. This is a fully automated system that is used to maintain required flow releases through the powerhouse as measured at gage E-16. The powerhouse bypass system can only be used when the penstock is in service (the limited-capacity penstock bypass channel is still used when the penstock is taken out of service).

Powerhouse, Switchyard, and Tailrace

Potter Valley Powerhouse

The ***9.959***-MW Potter Valley Powerhouse has three generating units. Water surface at Van Arsdale Reservoir at spill crest elevation (1,490.3 feet), yields a static powerhouse head equal to 475.5 feet. The powerhouse is a steel-frame structure approximately 101 feet long by 53 feet wide.

The three generating units are Francis turbines and are further described below.

- Unit No. 1[7] is a 6,500-horsepower, single horizontal reaction turbine operating at 720 revolutions per minute (RPM) that is directly connected to a 4,400-kilowatt (kW) generator rated at 5,500 kilovolt-amperes (kVA).
- Unit 3 is a 4,000-horsepower, single horizontal reaction turbine operating at 450 RPM that is directly connected to a 2,559-kW generator rated at 3,187 kVA.
- Unit 4 is a 4,000-horsepower, single horizontal reaction turbine operating at 450 RPM that is directly connected to a 3,060-kW generator rated at 3,400 kVA.

[7] Original Units Nos. 1 and 2 were replaced in 1939 as Unit No. 1.

Potter Valley Switchyard

The Potter Valley Switchyard, located adjacent to the powerhouse, contains a main transformer bank with a total capacity of 12,000 kVA and steps up the powerhouse output from 2.4 kilovolts (kV) to 60 kV. The bank consists of four 4,000-kVA, single-phase, 60-cycle, air-cooled, outdoor-type transformers with one used as a spare. One station service transformer bank provides station light and power to the powerhouse. Three transformer banks (one is a backup) and related facilities associated with PG&E's 12-kV distribution system, are non-project.[8]

Potter Valley Tailrace

The three generating units discharge water into the Potter Valley Powerhouse tailrace. The tailrace is comprised of three individual concrete channels that join together into a common channel approximately 60 feet downstream from the powerhouse. This common channel continues another 25 feet to the 12-foot by 6-foot tailrace radial gate, and forms the head works for the Potter Valley Irrigation District (PVID) East and West Canals. Water not diverted to the PVID canals flows into a 60-foot-long Venturi flume that discharges into the 6,325-foot-long Powerhouse Discharge Canal. Water from the Powerhouse Discharge Canal flows into the East Fork Russian River.

Project Recreation Facilities

A variety of developed project recreation facilities are located in the immediate vicinity of the project. The developed project recreation facilities include family campgrounds, group campgrounds, and day use facilities that are open to the public.

Five family campgrounds and one group campground are located along the shoreline of Lake Pillsbury. In addition, one campground with both family and group capacity is located along the Eel River upstream of Van Arsdale Reservoir. Developed day use facilities in the vicinity of Lake Pillsbury include a visitor information kiosk, three day use areas, three boat launches, and associated parking and picnic areas.

A variety of non-project private recreation facilities, including ***the Lake Pillsbury Resort***, private camps, and private residence tracts are also located around Lake Pillsbury. With the exception of Westshore Camp, all of the private recreation facilities in the vicinity of Lake Pillsbury are located on U.S. Forest Service lands, and therefore, operated under long-term lease agreements with the Forest Service. ***A small portion of the Westshore Camp is located on Forest Service lands, however, the majority of the camp is located on PG&E land. The grounds are operated by the Westshore Campers***

[8] Transmission lines are not part of the project. Power is fed directly to PG&E's interconnected transmission system, which passes through the powerhouse switchyard.

Association under a long-term lease agreement with PG&E. The owners of the private recreation facilities around Lake Pillsbury maintain boat docks and/or launches along the shoreline. These boat docks and launches are located within the FERC project boundary, on land owned by PG&E, and are therefore operated under long-term agreements with PG&E.

3.1.2 Existing Project Operation

The project is operated in compliance with existing regulatory requirements, agreements, and water rights to generate power and deliver consumptive water to local water users. The following sections summarize water management, regulatory requirements, water rights, and water supply agreements associated with the project.

Water Management

The project began operating in 1908. As environmental values have evolved, so too has PG&E's operation of the project. Historically (i.e., prior to 1979), PG&E was required by the Federal Power Commission, FERC's predecessor, to maintain a minimum year-round streamflow of 2 cfs in the Eel River below Cape Horn Dam. However, beginning in the fall of 1979, minimum streamflow requirements were increased substantially to mimic the pattern and timing of the natural hydrograph of the Upper Eel River. Over the years since then, the flow regime has been modified periodically based on the results of extensive fisheries studies and water modeling efforts, but has continued to mimic the natural hydrograph.

Beginning in 2004, a flow regime prescribed by NMFS (the federal agency under the Endangered Species Act [ESA] with jurisdiction over listed anadromous fish species) was incorporated into PG&E's FERC license via a license amendment. The flow regime was included in the Reasonable and Prudent Alternative (RPA) of the Biological Opinion prepared by NMFS in 2002 for project operations, and is designed to protect salmon and steelhead populations in the Upper Eel River Watershed. The flow regime was developed based on data from years of study conducted by PG&E and others, including: an initial 3-year relicensing study (1979–1982); a 10-year license compliance study (1985–1996); input from many stakeholders, including federal and state resource agencies, Native American tribes, water supply and agricultural interests, and non-governmental organizations. It remains the currently required flow regime.

Today, NMFS continues to closely evaluate flows in the Eel and Russian Rivers, seeking to balance the benefits to salmon and steelhead in both rivers while considering other beneficial uses. PG&E continues to conduct annual fisheries monitoring studies in the Eel River and closely communicates with NMFS, CDFW, and Native American tribes regarding the protection of salmon and steelhead populations.

The current Eel River flow schedule below Cape Horn Dam is very complex and is designed to mimic the natural hydrograph. For example, minimum summer flow requirements in the Eel River below Cape Horn Dam range from 3 to 5 cfs in very dry years, 9 to 20 cfs in dry years, 15 to 25 cfs in wet years, and 30 to 35 cfs in very wet years. During the fall through spring period, the flow schedule incorporates natural flow variability, by adjusting flows *on a daily basis*, based on natural inflows to the project. During years of moderate to high inflows, minimum flow requirements increase during the fall to 140 cfs, increase in early spring to 200 cfs, and then decrease back to the summer flow minimums during late spring and early summer. During years of low inflow, minimum flow requirements increase during the early fall to 25 cfs, increase in late fall to 100 cfs, and then decrease back to summer minimums during spring. This highly complex flow schedule evolved from a prior study flow schedule initiated in late 1979 and later modified based on the results of extensive fisheries studies. Salmon and steelhead habitat was substantially enhanced through implementation of the current flow schedule.

Minimum flow requirements in the East Fork Russian River below the powerhouse are also specified in the RPA. These minimum flows range from 5 to 75 cfs between May 15 and September 15, and range from 5 to 35 cfs between September 16 and May 14 depending on water year classification. Releases for PVID are subject to a flow cap. During the growing season, defined as April 15 to October 15, the maximum release to PVID is 50 cfs. During the rest of the year, the maximum release to PVID is 5 cfs. Brief exceptions to this flow cap are allowed for frost protection purposes. As specified in the RPA, diversions from the Eel River to the East Fork Russian River are limited to the amounts set out in the RPA when the actual amount of water stored in Lake Pillsbury ("storage") is below a particular threshold, which changes daily. The storage thresholds for limiting diversions are referred to as the Target Storage Curve. When the amount of water stored in Lake Pillsbury exceeds the Target Storage Curve value on a given day, PG&E can divert water above and beyond the minimum releases to East Fork Russian River plus PVID's allotment. However, when the amount of water stored in Lake Pillsbury is below the Target Storage Curve, PG&E's diversion is capped at making the minimum releases to East Fork Russian River and delivering PVID's required allotment. To ensure that every possible effort was made to maximize the amount of water stored during the important pre-dry-season period, Target Storage Curve values were set at levels higher than can be attained during the spring.

Regulatory Requirements

Project operations are regulated by requirements contained in: (1) the existing 1983 FERC license; (2) the 2004 license amendment, which incorporated the terms of NMFS' RPA; and (3) a 2007 operational "reinterpretation" of the terms of the 2002 RPA. The project is further limited by PG&E's existing water rights and water supply agreement with PVID.

Water Rights

PG&E holds water rights for both power and consumptive uses. Water is diverted from the Eel River for generation at Potter Valley Powerhouse in the East Fork Russian River Watershed. After passing through the Potter Valley Powerhouse, a portion of the powerhouse outflow is diverted via canals to PVID for consumptive use. The remaining outflow is abandoned to the East Fork Russian River. This abandoned water from powerhouse operations adds significant inflow to Lake Mendocino and benefits downstream users.

PG&E has three licensed water rights for project diversions and two pre-1914 water rights. License 1424, with a priority date of March 12, 1920, allows PG&E to divert and store up to 102,366 acre-feet per annum (afa) at Lake Pillsbury for the beneficial uses of hydropower generation and incidental Fish and Wildlife Protection and Enhancement. License 1199, with a priority date of August 15, 1927, allows PG&E to divert and store up to 4,500 afa at Lake Pillsbury for irrigation purposes within the PVID service area. License 5545, with a priority date of March 11, 1930, allows PG&E to divert to storage up to 4,908 afa of water at Lake Pillsbury and to directly divert up to 40 cfs from the Eel River for irrigation purposes within the PVID service area in the Russian River Watershed.

PG&E claims a pre-1914 water right to directly divert up to 340 cfs from the Eel River, as specified in Statement of Water Diversion and Use (SWDU) 1010, for power generation and irrigation use. PG&E also claims a pre-1914 water right to store up to 1,457 afa in Van Arsdale Reservoir, as specified in SWDU 4704, for power, irrigation and domestic use.

Water Supply Agreement

PG&E has a contract to sell and deliver water to PVID at the tailrace of the Potter Valley Powerhouse. PG&E's obligation under the current contract is to deliver up to 19,000 ac-ft of water to PVID at a rate not to exceed 50 cfs, provided the water is available and permitted per PG&E's applicable water rights

3.2 APPLICANT'S PROPOSAL

3.2.1 Proposed Project Facilities and Operations

PG&E proposes to continue to operate and maintain the Potter Valley Project as required by its existing license. PG&E does not propose any new development or changes in project operation at this time.

The PAD states that PG&E proposes to modify the existing project boundary to: (1) include all facilities necessary for operation and maintenance of the project; and

(2) exclude lands within the current FERC project boundary not necessary for the operation and maintenance of the project. However, the PAD does not specify which lands it proposes to add to, or subtract from, the existing project boundary.

3.2.2 Proposed Environmental Measures

The existing environmental measures implemented at the Potter Valley Project are described in section 4.6 of the PAD. PG&E does not propose any additional PM&E measures at this time. The PAD states that additional PM&E measures may be developed by PG&E during the preparation of the Preliminary Licensing Proposal and/or License Application after a thorough evaluation of any new resource issues identified and following a rigorous examination of the appropriateness, potential benefit, and cost-effectiveness of any new measure.

3.3 DAM SAFETY

It is important to note that ***certain proposed or recommended modifications to the dam structure, such as the addition of flashboards or fish passage facilities, could impact the integrity of the dam structure and may be constrained by dam safety concerns. Such constraints should be taken into consideration in the development of proposals and alternatives considered in the pending proceeding.*** As the proposal and alternatives are developed, the applicant must evaluate the effects and ensure that the project would meet the Commission's dam safety criteria found in Part 12 of the Commission's regulations and the engineering guidelines (http://www.ferc.gov/industries/hydropower/safety/guidelines/eng-guide.asp).

3.4 ALTERNATIVES TO THE PROPOSED ACTION

Commission staff will consider and assess all alternative recommendations for operational or facility modifications, as well as protection, mitigation, and enhancement measures identified by the Commission, the agencies, Indian tribes, NGOs, and the public.

3.5 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

At present, we propose to eliminate the following alternatives from detailed study in the EIS.

3.5.1 Federal Government Takeover

In accordance with § 16.14 of the Commission's regulations, a federal department or agency may file a recommendation that the United States exercise its right to take over a hydroelectric power project with a license that is subject to sections 14 and 15 of the

FPA.[9] We do not consider federal takeover to be a reasonable alternative. Federal takeover of the project would require congressional approval. While that fact alone would not preclude further consideration of this alternative, there is currently no evidence showing that federal takeover should be recommended to Congress. No party has suggested that federal takeover would be appropriate, and no federal agency has expressed interest in operating the project.

3.5.2 Non-power License

A non-power license is a temporary license the Commission would terminate whenever it determines that another governmental agency is authorized and willing to assume regulatory authority and supervision over the lands and facilities covered by the non-power license. At this time, no governmental agency has suggested a willingness or ability to take over the project. No party has sought a non-power license, and we have no basis for concluding that the Potter Valley Project should no longer be used to produce power. Thus, we do not consider a non-power license a reasonable alternative to relicensing the project.

4.0 SCOPE OF CUMULATIVE EFFECTS AND SITE-SPECIFIC RESOURCE ISSUES

4.1 CUMULATIVE EFFECTS

According to the Council on Environmental Quality's regulations for implementing NEPA (40 C.F.R. 1508.7), a cumulative effect is the effect on the environment that results from the incremental effect of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time, including hydropower and other land and water development activities.

4.1.1 Resources that could be Cumulatively Affected

Based on information in the PAD for the Potter Valley Project, ***information received during the scoping process***, and preliminary staff analysis, we have identified ***water quantity,*** water quality (dissolved oxygen and water temperature), fisheries, ***and special-status aquatic reptile and amphibian species (foothill yellow-legged frog and western pond turtle)*** as resources that could be cumulatively affected by the proposed continued operation and maintenance of the Potter Valley Project in combination with other activities in the Eel River Basin.

[9] 16 U.S.C. §§ 791(a)-825(r).

4.1.2 Geographic Scope

Our geographic scope of analysis for cumulatively affected resources is defined by the physical limits or boundaries of: (1) the proposed action's effect on the resources, and (2) contributing effects from other hydropower and non-hydropower activities within the Eel River Basin and Russian River Basin. We have identified the geographic scope for water quality ***(water temperature and dissolved oxygen concentration)*** to include the Eel River from ***its headwaters*** to its confluence with the Middle Fork Eel River, and the East Fork Russian River from the Potter Valley powerhouse to Lake Mendocino. We chose this geographic scope because the operation and maintenance of the Potter Valley Project, in combination with other water development activities in these drainages may cumulatively affect water quality throughout the geographic reaches identified. We have identified the geographic scope for ***water quantity,*** fishery resources, ***foothill yellow-legged frog and Western pond turtle, threatened and endangered Pacific salmon and steelhead, and recreation*** to include the Eel River from ***its headwaters*** to its mouth ***near Fortuna,*** and ***in the*** Russian River ***Basin*** from the Potter Valley powerhouse to ***the mouth of the Russian River, near Jenner***. We chose these geographic scopes because the operation and maintenance of the Potter Valley Project***, including the inter-basin transfer of water***, in combination with other activities in these drainages may cumulatively affect ***these resources*** throughout the geographic reaches identified.

4.1.3 Temporal Scope

The temporal scope of our cumulative effects analysis in the EIS will include a discussion of past, present, and reasonably foreseeable future actions and their effects on each resource that could be cumulatively affected. Based on the potential term of a new license, the temporal scope will look 30 to 50 years into the future, concentrating on the effect on the resources from reasonably foreseeable future actions. The historical discussion will, by necessity, be limited to the amount of available information for each resource. The quality and quantity of information, however, diminishes as we analyze resources further away in time from the present.

4.2 RESOURCE ISSUES

In this section, we present a preliminary list of environmental issues to be addressed in the EIS. We identified these issues, which are listed by resource area, by reviewing the PAD and the Commission's record for the Potter Valley Project, ***including information received during the scoping process***. This list is not intended to be exhaustive or final, but contains the issues raised to date. After the scoping process is complete, we will review the list and determine the appropriate level of analysis needed to address each issue in the EIS. Those issues identified by an asterisk (*) will be analyzed for both cumulative and site-specific effects.

4.2.1 Geologic and Soils Resources

- ***Effects of continued project operation on the supply and transport of spawning gravels.***

- ***Potential effects of project decommissioning on sediment transport in the Eel River***

4.2.2 *Water Resources*

- ***Effects of continued project operation on water quantity in the Eel River and East Fork Russian River.****

- Effects of continued project operation ***and maintenance*** on dissolved oxygen and water temperature in the Eel River and East Fork Russian River.*****

- ***Effects of project-related recreation on water quality in Lake Pillsbury.***

- ***Potential effects of project decommissioning on water quantity and water rights in the Eel and Russian River Basins.***

4.2.3 Fishery Resources

- Effects of continued project operation ***and maintenance*** on streamflow and aquatic habitat in the Eel River and East Fork Russian Rivers on salmon, ***Pacific Lamprey,*** resident and special status fishes, amphibians, and benthic macroinvertebrates.*****

- ***Effects of project-related changes in water quality on anadromous and resident fishes in the Eel and Russian Rivers.****

- Effects of continued project operation, ***maintenance,*** and related recreational use on the introduction and spread of aquatic invasive species***, including the Sacramento Pikeminnow.***

- ***Potential effects of Sacramento Pikeminnow on the success of mitigation and enhancement measures intended to aid restoration of anadromous salmonids in the Eel River.***

- ***Potential effects of project decommissioning on fishery resources in the Eel and Russian Rivers.***

4.2.4 Terrestrial Resources

- Effects of project operation and maintenance activities on riparian habitat.
- Effects of project maintenance activities and recreational use on the spread of non-native invasive plant species.
- Effects of project operation, maintenance activities, and recreational use on special-status plant species.
- Effects of project operation, maintenance activities, and recreational use on special-status wildlife species, including the foothill yellow-legged frog, western pond turtle,***** northern goshawk and bald eagle ***(and other birds of conservation concern), Pallid bat, Townsend's big-eared bat, and fringed myotis***.
- ***Potential effects of project decommissioning on wetland and riparian habitats and wildlife populations in the Eel and Russian River Basins.***

4.2.5 Threatened and Endangered Species

- Effects of continued project operation, maintenance, and recreational use on federally listed and proposed endangered, threatened, and candidate species**,** ***including the Southern Oregon/Northern California (SONC) coho salmon, the Central California Coast (CCC) coho salmon, the Northern California (NC) steelhead, the Central California Coast (CCC) steelhead, and the California Coastal (CC) chinook salmon, and, in the Eel River and on the Russian River from Lake Mendocino to the Pacific Ocean.* Our analysis will include flow timing, duration, and magnitude; water quality and water temperature; habitat quality and availability; habitat access; and effects of predatory species.***
- Effects of continued project operation, maintenance, and recreational use on ***the northern spotted owl and its critical habitat.***
- ***Potential effects of project decommissioning on listed species and critical habitats in the Eel and Russian River Basins.***

4.2.6 Recreation Resources

- Effects of continued project operation and maintenance on recreational access and use in the ***project-affected area, including Lake Pillsbury and Lake Mendocino.****

- Adequacy of existing recreational access and ***types of facilities present in the project-affected area*** to meet current and future recreation demand.

- Effects of continued project operation and maintenance on recreational whitewater boating use ***within the project-affected area.***

- ***Effects of project operation and maintenance on Wild & Scenic River segments of the Eel River downstream of Cape Horn Dam.***

- ***Potential effects of project decommissioning on recreational whitewater boating use within the project-affected area.***

- ***Potential effects of project decommissioning on recreational access, facilities, and use in project-affected area.***

4.2.7 Land Use and Aesthetic Resources

- Effects of continued project operation and maintenance on the aesthetic quality of the ***project-affected area***.

- ***Effects of forest fires on project lands and facilities, and analysis of local forest fire history.***

- ***Potential effects of project decommissioning on preparedness and effectiveness of forest fire fighting.***

- ***Potential effects of project decommissioning on existing and future public and private development around Lake Pillsbury.***

- ***Potential effects of project decommissioning on aesthetic quality at Lake Pillsbury and other affected areas.***

4.2.8 Cultural Resources

- Effects of continued project operation and maintenance on historic or archeological resources, or traditional cultural properties that may be eligible for inclusion in the National Register of Historic Places.

- ***Potential effects of project decommissioning on cultural resources.***

4.2.9 Socioeconomics

- ***Effects of project operation, specifically inter-basin flow diversions, on agriculture and other consumptive uses in the upper and middle Russian River watershed.***

- ***Effects of continued project operation on Lake Mendocino water levels and reliability for agricultural and municipal water supply in the Russian River Basin.***

- ***Effects of project-related recreation on local economy within the project-affected area.***

- ***Potential effects of project decommissioning on water supply, including agricultural and municipal water deliveries in the Russian River Basin.***

4.2.10 Developmental Resources

- Effects of any proposed or recommended environmental measures on project economics***, including power generation.***

- ***Effects of any proposed or recommended environmental measures on water supply, including agricultural and municipal water deliveries.***

- ***Potential effects of project decommissioning on water supply, including agricultural and municipal water deliveries in the Russian River Basin.***

5.0 PROPOSED STUDIES

Section 6.2 of PG&E's PAD identifies a number of potential studies and analyses that could be used to address data gaps identified by the review of existing information. Each identified potential study includes the following subsections: (1) Potential Resource Issue; (2) Project Nexus; (3) Relevant Information; (4) Potential Information Gaps; and (5) Potential Studies to Address Identified Significant Information Gaps. Table 1 identifies PG&E's potential studies by resource area; the PAD contains detailed information on the potential studies. Further studies may be needed based on comments provided to the Commission and PG&E from interested participants, including Indian tribes. ***The deadline for PG&E to file its Proposed Study Plan with the Commission is September 18, 2017.***

Table 1. PG&E's ***potential*** studies for the Potter Valley Project. (Source: Potter Valley Project PAD)

Resource Area	***Potential Study***
Aquatic Resources	
	Study AQ 1 – Hydrology and Project Operations Modeling
	Study AQ 2 – Water Temperature
	Study AQ 3 – Water Quality
	Study AQ 4 – Geomorphology
	Study AQ 5 – Instream Flow
	Study AQ 6 – Lake Pillsbury Fish Habitat
	Study AQ 7 – Fish Passage
	Study AQ 8 – Fish Entrainment
	Study AQ 9 – Fish Populations
	Study AQ 10 – Special-Status Amphibians and Aquatic Reptiles
	Study AQ 11 – Macroinvertebrates and Special-Status Mollusks
Terrestrial Resources	
	Study TERR 1 – Botanical Resources
	Study TERR 2 – Wildlife Resources
Recreation, Land Use, and Aesthetics	
	Study REC 1 – Recreation Facility Assessment
	Study REC 2 – Reservoir Recreation Opportunities
	Study REC 3 – Whitewater Boating Flow Assessment
	Study LAND 1 – Project Roads and Trails Assessment
	Study LAND 2 – Visual Resource Assessment
Cultural Resources	
	Study CUL 1 – Cultural Resources
	Study CUL 2 – Tribal Resources

6.0 EIS PREPARATION

At this time, we anticipate the need to prepare a draft and final EIS. The EIS will be sent to all persons and entities on the Commission's service and mailing lists for the Potter Valley Project. The EIS will include our recommendations for operating procedures, as well as environmental protection and enhancement measures that should be part of any license issued by the Commission. All recipients will then have 45 days to review the EIS and file written comments with the Commission.

The major milestones, with pre-filing target dates, are as follows:

Major Milestone	Target Date
Scoping Meetings	June 2017
Applicant files Final License Application	April 2020
Ready for Environmental Analysis Notice Issued	-
Deadline for Filing Comments, Recommendations, and-Agency Terms and Conditions/Prescriptions	-
Draft EIS Issued	-
Comments on draft EIS Due	-
Deadline for Filing Modified Agency Recommendations	-
Final EIS Issued	-
Order Issued	-

Post-filing milestones will be established following the applicant's filing of the final license application. A copy of the applicant's process plan and schedule, which has a complete list of pre-filing relicensing milestones for the Potter Valley Project, including those for developing the license application, is attached as appendix B to this SD2.

7.0 PROPOSED EIS OUTLINE

The preliminary outline for the Potter Valley EIS is as follows:

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1.0 INTRODUCTION
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- 1.2 Purpose of Action and Need for Power
- 1.3 Statutory and Regulatory Requirement
  - 1.3.1 Federal Power Act
    - 1.3.1.1 Section 18 Fishway Prescriptions
    - 1.3.1.2 Section 10(j) Recommendations
  - 1.3.2 Clean Water Act
  - 1.3.3 Endangered Species Act
  - 1.3.4 Coastal Zone Management Act
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  - ***1.3.6 Magnuson-Stevens Act***
  - Other statutes as applicable
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- 2.1 No-action Alternative
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- 2.2 Applicant's Proposal
  - 2.2.1 Proposed Project Facilities
  - 2.2.2 Proposed Project Operation
  - 2.2.3 Proposed Environmental Measures
  - 2.2.4 Modifications to Applicant's Proposal—Mandatory Conditions
- ***2.3 Decommissioning Alternative(s)***
- 2.4 Staff Alternative
- 2.5 Staff Alternative with Mandatory Conditions
- 2.6 Other Alternatives (as appropriate)
- 2.7 Alternatives Considered but Eliminated from Detailed Study

8.0 COMPREHENSIVE PLANS

Section 10(a)(2) of the FPA, 16 U.S.C. section 803(a)(2)(A), requires the Commission to consider the extent to which a project is consistent with federal and state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by a project. PG&E has preliminarily identified and reviewed the plans listed below that may be relevant to the Potter Valley Project. Agencies are requested to review this list and inform the Commission staff of any changes. If there are other comprehensive plans that should be considered for this list that are not on file with the Commission, or if there are more recent versions of the plans already listed, they can be filed for consideration with the Commission according to 18 CFR 2.19 of the Commission's regulations. Please follow the instructions for filing a plan at http://www.ferc.gov/industries/hydropower/gen-info/licensing/complan.pdf.

The following is a list of comprehensive plans currently on file with the Commission that may be relevant to the Potter Valley Project.

Bureau of Land Management. Forest Service. 1994. Standards and Guidelines for Management of Habitat for Late-successional and Old-growth Forest related Species within the Range of the Northern Spotted Owl. Washington, D.C. April 13, 1994.

California Department of Fish and Game. U.S. Fish and Wildlife Service. 2010. Final Hatchery and Stocking Program Environmental Impact Report/Environmental Impact Statement. Sacramento, California. January 2010.

California Department of Fish and Game. 2007. California Wildlife: Conservation Challenges, California's Wildlife Action Plan. Sacramento, California.

California Department of Fish and Game. 1996. Steelhead Restoration and Management Plan for California. February 1996.

California Department of Fish and Game. 2003. Strategic Plan for Trout Management: A Plan for 2004 and Beyond. Sacramento, California. November 2003.

California Department of Fish and Wildlife. 2008. California Aquatic Invasive Species Management Plan. Sacramento, California. January 18, 2008.

California Department of Parks and Recreation. 1980. Recreation Outlook in Planning District 2. Sacramento, California. April 1980.

California Department of Parks and Recreation. 1980. Recreation Outlook in Planning District 3. Sacramento, California. June 1980.

California Department of Parks and Recreation. 1998. Public Opinions and Attitudes on Outdoor Recreation in California. Sacramento, California. March 1998.

California Department of Parks and Recreation. 1994. California Outdoor Recreation Plan (SCORP). Sacramento, California. April 1994.

California Department of Water Resources. 1994. California Water Plan Update. Bulletin 160–93. Sacramento, California. October 1994. Two Volumes and Executive Summary.

California State Water Resources Control Board. 1995. Water Quality Control Plan Report. Sacramento, California. Nine Volumes.

California State Water Resources Control Board. 1999. Water Quality Control Plans and Policies Adopted as Part of the State Comprehensive Plan. April 1999.

California State Water Resources Control Board. 2011. Water Quality Control Plan for the North Coast Region. Sacramento, California. May 2011.

Forest Service. 1995. Mendocino National Forest Land and Resource Management Plan. Department of Agriculture, Willows, California. September 2005.

National Marine Fisheries Service. Pacific Fishery Management Council. 1978. Fishery Management Plan for Commercial and Recreational Salmon Fisheries off the Coasts of Washington, Oregon and California Commencing in 1978. March 1978.

National Marine Fisheries Service. Pacific Fishery Management Council. 1988. Eighth Amendment to the Fishery Management Plan for Commercial and Recreational Salmon Fisheries off the Coasts of Washington, Oregon and California Commencing in 1978. Portland, Oregon. January 1988.

National Marine Fisheries Service. 2014. Final Recovery Plan for the Southern Oregon/Northern California Coast Evolutionarily Significant Unit of Coho Salmon.

National Marine Fisheries Service. 2016. Final Coastal Multispecies Recovery Plan for California Coastal Chinook Salmon, Northern California Steelhead, and Central California Coast Steelhead.

National Park Service. 1993. The Nationwide Rivers Inventory. Department of the Interior, Washington, D.C.

U.S. Fish and Wildlife Service. Canadian Wildlife Service. 1986. North American Waterfowl Management Plan. Department of the Interior. Environment Canada. May 1986.

U.S. Fish and Wildlife Service. 2001. Final Restoration Plan for the Anadromous Fish Restoration Program. Department of the Interior, Sacramento, California. January 9, 2001

U.S. Fish and Wildlife Service. n.d. Fisheries USA: The Recreational Fisheries Policy of the U.S. Fish and Wildlife Service. Washington, D.C.

9.0 MAILING LIST

The list below is the Commission's official mailing list for the Potter Valley Project (FERC No. 77). If you want to receive future mailings for the Potter Valley and are not included in the list below, please send your request by email to efiling@ferc.gov or by mail to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street, N.E., Room 1A, Washington, DC 20426. All written and emailed requests to be added to the mailing list must clearly identify the following on the first page: Potter Valley Project No. 77-285. You may use the same method if requesting removal from the mailing list below.

Register online at http://www.ferc.gov/esubscribenow.htm to be notified via email of new filings and issuances related to this or other pending projects. For assistance, please contact FERC Online Support at FERCOnlineSupport@ferc.gov or toll free at 1-866-208-3676, or for TTY, (202) 502-8659.

Official Mailing List for the Potter Valley Project

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APPENDIX A
STUDY PLAN CRITERIA
18 CFR Section 5.9(b)

Any information or study request must contain the following:

1. Describe the goals and objectives of each study proposal and the information to be obtained;

2. If applicable, explain the relevant resource management goals of the agencies or Indian tribes with jurisdiction over the resource to be studied;

3. If the requester is not a resource agency, explain any relevant public interest considerations in regard to the proposed study;

4. Describe existing information concerning the subject of the study proposal, and the need for additional information;

5. Explain any nexus between project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied, and how the study results would inform the development of license requirements;

6. Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate filed season(s) and the duration) is consistent with generally accepted practice in the scientific community or, as appropriate, considers relevant tribal values and knowledge; and

7. Describe considerations of level of effort and cost, as applicable, and why proposed alternative studies would not be sufficient to meet the stated information needs.

APPENDIX B
POTTER VALLEY PROJECT PROCESS PLAN AND SCHEDULE
(SOURCE: PAD)

Table 2-1 Process Plan and Schedule

FERC 18 CFR §	Relicensing Activity	Responsible Party	Activity Time Frame	Deadline[1]
Initiation of Relicensing Process				
5.5 5.5(d)	**Filing of Notification of Intent (NOI)**	Licensee	Five to five and one half years prior to existing license expiration. Filed concurrent with Pre-application Document.	4/6/2017
5.5(e)	Request to be non-Federal representative under Section 7 of the Endangered Species Act (ESA)	Licensee	Provide simultaneously with filing of NOI.	4/6/2017
5.5(e)	Request to initiate consultation under Section 106 of the National Historic Preservation Act (NHPA)	Licensee	Provide simultaneously with filing of NOI.	4/6/2017
5.6 5.6(a)	**Filing of Pre-application Document (PAD)**	Licensee	Five to five and one half years prior to existing license expiration. Filed concurrent with NOI.	4/6/2017
FERC Scoping				
5.7	**Initial Tribal Consultation Meeting**	FERC	Within 30 days following filing of NOI/PAD.	5/6/2017
5.8 5.8(a)	**Notice of Commencement of Proceeding and Scoping Document**	FERC	Within 60 days of filing NOI/PAD.	6/5/2017
5.8(a)(b) 5.8(b)(iv)	Issue notice of NOI/PAD and request for comments	FERC	Included in notice of commencement of proceeding.	6/5/2017
5.8(b)(2)	Decision regarding licensee request to initiate informal consultation under Section 7 of the ESA, or Section 106 of the NHPA	FERC	Included in notice of commencement of proceeding.	6/5/2017
5.8(c)	Issue Scoping Document 1 (SD1)	FERC	Concurrent with notice of commencement of proceeding.	6/5/2017
5.8(b)(3)(viii)	**Conduct public scoping meeting and site visit**	FERC	Within 30 days of the notice of commencement of proceeding.	7/5/2017
5.9(a)	File comments on NOI/PAD and SD1, and provide study requests	Participants	Within 60 days following the notice of commencement of proceeding.	8/4/2017

Table 2-1 Process Plan and Schedule

FERC 18 CFR §	Relicensing Activity	Responsible Party	Activity Time Frame	Deadline[1]
5.10	Issue Scoping Document 2 (if necessary)	FERC	Within 45 days following the deadline for filing of comments on SD1.	9/18/2017
Study Plan Development				
5.11 5.12	**Proposed Study Plan and Study Requests**			
5.11(a)	**File Proposed Study Plan**	Licensee	Within 45 days following the deadline for filing of comments on the PAD and providing study plan requests.	9/18/2017
5.11(e)	File proposal for conducting study plan meeting(s) during 90-day Proposed Study Plan review period.	Licensee	Concurrent with Proposed Study Plan	9/18/2017
5.11(e)	**Conduct initial study plan meeting**	Licensee	No later than 30 days after the deadline date for filing the Proposed Study Plan.	10/18/2017
5.12	File comments on Proposed Study Plan or submit revised study requests	Participants	Must be filed within 90 days after the Proposed Study Plan is filed.	12/17/2017
5.13	**Revised Study Plan and Study Plan Determination**			
5.13(a)	File Revised Study Plan	Licensee	Within 30 days following the deadline for filing comments on the Proposed Study Plan.	1/16/2018
5.13(b)	File comments on Revised Study Plan	Participants	Within 15 days following filing of the Revised Study Plan.	1/31/2018
5.13(c)	**Issue Study Plan Determination**	FERC	Within 30 days following filing of the Revised Study Plan.	2/15/2018
5.13(d) 5.14(a)	File notice of study dispute	Mandatory Conditioning Agencies	Within 20 days of the Study Plan Determination.	3/7/2018
5.13(d)	Study Plan approved, if no notice of study dispute is filed	FERC	Twenty days following the notice of study dispute filing period.	3/7/2018
5.14	**Formal Study Dispute Resolution Process**			
5.14(d)	Convene Dispute Resolution Panel, if notice of Study Plan dispute is filed	FERC	Within 20 days of the notice of study dispute.	3/27/2018
Study Plan Development (continued)				
5.14(i)	File with Commission and serve upon panel members comments and information regarding dispute	Licensee	No later than 25 days following the notice of study dispute.	4/1/2018
5.14(k)	Issue findings and recommendations regarding the study plan dispute to Director of	Dispute Resolution	No later than 50 days following the notice of study dispute.	4/26/2018

Table 2-1 Process Plan and Schedule

FERC 18 CFR §	Relicensing Activity	Responsible Party	Activity Time Frame	Deadline[1]
	the Office of Energy Projects	Panel		
5.14(l)	**Issue written determination on study plan dispute**	FERC	No later than 70 days from the date of filing of the notice of study dispute.	5/16/2018
Conduct Studies				
5.15(a)	Conduct First Year Studies (for study plans not under dispute)	Licensee	March–December 2018	
5.15(b) 5.15(c)(1)	File progress report and Initial Study Report	Licensee	Within one year after Commission approval of the study plan.	2/15/2019
5.15(c)(2)	Conduct Initial Study Report Meeting	Licensee	Within 15 days of filing the Initial Study Report.	3/2/2019
5.15(c)(3)	File Initial Study Report Meeting Summary, including any study modifications or new studies	Licensee	Within 15 days following the Initial Study Report Meeting.	3/17/2019
5.15(c)(4)	File disagreement with Initial Study Report Meeting Summary	FERC and Participants	Within 30 days following the filing of the Initial Study Report Meeting Summary.	4/16/2019
5.15(c)(7)	If no disagreements are filed, approve Initial Study Report Meeting Summary and any proposed study plan amendments	FERC	Thirty days following the filing of the Initial Study Report Meeting Summary.	4/16/2019
5.15(c)(5)	If disagreements are filed, file responses to disagreement with Initial Study Report Meeting Summary	FERC, Licensee and Participants	Within 30 days of the filing of a disagreement with Initial Study Report Meeting Summary	5/16/2019
5.15(c)(6)	Resolve disagreement and amend approved study plan	FERC	Within 30 days following the due date for responses to disagreement.	6/15/2019
5.15(f)	Conduct Second Year Studies (for study plans not under dispute)	Licensee	January–December 2019	
Conduct Studies (continued)				
5.15(f)	File progress report and Updated Study Report	Licensee	Within two years after Commission approval of the study plan.	2/15/2020
5.15(c)(2)	Conduct Updated Study Report Meeting	Licensee	Within 15 days of filing the Updated Study Report.	3/1/2020
5.15(c)(3)	File Updated Study Report Meeting Summary, including any study modifications or new studies	Licensee	Within 15 days following the Updated Study Report Meeting.	3/16/2020
5.15(c)(4)	File disagreement with Updated	FERC and	Within 30 days following the	4/15/2020

Table 2-1 Process Plan and Schedule

FERC 18 CFR §	Relicensing Activity	Responsible Party	Activity Time Frame	Deadline[1]
	Study Report Meeting Summary	Participants	filing of the Updated Study Report Meeting Summary.	
5.15(c)(7)	If no disagreements are filed, approve Updated Study Report Meeting Summary and any proposed study plan amendments	FERC	Thirty days following the filing of the Updated Study Report Meeting Summary.	4/15/2020
5.15(c)(5)	If disagreements are filed, file responses to disagreement with Updated Study Report Meeting Summary	FERC, Licensee and Participants	Within 30 days of the filing of a disagreement with Updated Study Report Meeting Summary.	5/15/2020
5.15(c)(6)	Resolve disagreement and amend approved study plan	FERC	Within 30 days following the due date for responses to disagreement.	6/14/2020
Filing of License Application				
5.16(a)	**File Preliminary Licensing Proposal or Draft Application**	Licensee	No later than 150 days prior to the deadline for filing a new license application.	11/15/2019
5.16(e)	File comments on Preliminary Licensing Proposal or Draft License Application	FERC and Participants	Within 90 days of the filing date of the Preliminary Licensing Proposal or Draft Application.	2/13/2020
5.17(a)	**File License Application**	Licensee	No later than 24 months before the existing license expires.	4/14/2020

- Notes:
- [1]Dates indicate the day or timeframe within which an activity must occur. If the deadline falls on a weekend or holiday, the deadline is the following business day.

Document Content(s)