



## **VIA ELECTRONIC FILING**

May 13, 2020

Ms. Kimberly D. Bose  
Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, DC 20426

### **Re: FERC Project No. 77-285; Feasibility Study Report for the Potter Valley Project**

Dear Secretary Bose:

Pursuant to the Federal Energy Regulatory Commission's (Commission) Notice of Continuation of Relicensing Proceeding,<sup>1</sup> Mendocino County Inland Water and Power Commission, Sonoma County Water Agency, California Trout, Inc., the County of Humboldt, and Round Valley Indian Tribes (collectively, the NOI Parties) hereby file the Feasibility Study Report of Potential Licensing Proposal (Feasibility Study Report, attached hereto as Appendix A) for the Potter Valley Project (Project). The NOI Parties are extremely pleased to report that the Feasibility Study Report has identified a potential project for relicensing consistent with the June 28, 2019 Notice of Intent (NOI)<sup>2</sup> to file a license application.

The NOI reflected commitments made by the parties to an Amended Planning Agreement, including the commitment to undertake a feasibility study of a potential project proposal for relicensing that would meet the Shared Objectives of a Two-Basin Solution for the mutual benefit of the Eel River and Russian River basins. Since the NOI, the Round Valley Indian Tribes signed this agreement (attached hereto as Appendix B) and has participated fully in the study and development of the Feasibility Study Report. We respectfully request that the Commission deem the Round Valley Indian Tribes to be one of the NOI Parties for the purpose of this filing and all other purposes stated in the Notice of Continuation.

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<sup>1</sup> "Notice of Continuation of Relicensing Proceeding" (Aug. 1, 2019), eLibrary 20190801-3060 (Notice of Continuation).

<sup>2</sup> "Pre-Application Document and Notice of Intent to File an Application for a New License for the Potter Valley Project" (June 28, 2019), eLibrary 20190628-5207.

Following the Commission's Notice of Continuation, the NOI Parties undertook an intensive effort over the ensuing months which culminated in the attached Feasibility Study Report. Major elements of the effort included: issuing a request for proposals and retaining a consulting firm, Stillwater Sciences, to assist in reviewing existing information and analyzing alternatives in support of the NOI Parties' deliberations; hiring a mediator, CBI West, to facilitate discussion of alternatives; and working groups which developed potential solutions for each principal topic covered by the Feasibility Study Report. The NOI Parties have spent hundreds of hours over the last several months investigating a wide range of potential Project configurations and elements, evaluating costs and benefits of those configurations and elements, and evaluating performance towards the Shared Objectives stated in the Amended Planning Agreement. In addition, the NOI Parties cooperated with the existing licensee, Pacific Gas and Electric Company (PG&E), in facilitating a study by the California Coastal Commission regard sediment behind Scott Dam. The NOI Parties initiated discussions with PG&E regarding potential terms for acquisition of the Project. The NOI Parties cooperated with the Potter Valley Project Ad Hoc Committee led by Congressman Jared Huffman.

The Feasibility Study Report is organized to address the key topics identified in the Amended Planning Agreement. It includes sections on: Regional Entity, Project Plan, Fisheries Restoration Plan, Application Study Plan, and Financial Plan. The Application Study Plan describes new and modified studies related to the proposed project, and it proposes modifications to the Commission's February 15, 2018 Study Plan Determination in the relicensing proceeding.<sup>3</sup> As set forth in the procedural schedule attached to the NOI as Appendix C, the NOI Parties are requesting public and Commission staff comment on any recommended modifications to the Application Study Plan within 45 days of this filing.

The NOI Parties again appreciate the Commission's ongoing cooperation and support, and stand ready to answer any questions the Commission may have regarding the Feasibility Study Report.

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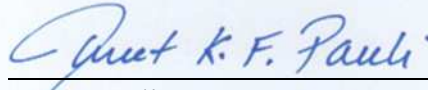
<sup>3</sup> "Study Plan Determination for the Potter Valley Project" (Feb. 15, 2018), eLibrary 20180215-3070.

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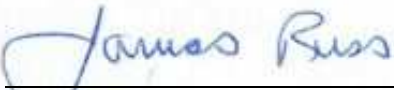
Respectfully submitted,



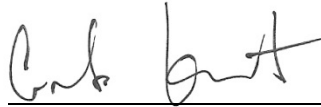
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Cc: Service List, P-77-285  
Distribution List (attached as Appendix C)

Attachments

## **APPENDIX A**

### **Feasibility Study Report**

**FEASIBILITY STUDY REPORT ON  
POTENTIAL LICENSING PROPOSAL FOR POTTER VALLEY PROJECT  
(FERC P. 77-285)**

**Mendocino County Inland Water and Power Commission  
Sonoma County Water Agency  
California Trout, Inc.  
Humboldt County  
The Round Valley Indian Tribes**

**May 13, 2020**

## **I. EXECUTIVE SUMMARY**

In May 2019, the Mendocino County Inland Water and Power Commission, Sonoma County Water Agency, California Trout, Inc., and Humboldt County entered into an Amended Planning Agreement to explore potential terms of a new license for the Potter Valley Project (Project) to protect fisheries and water supply in the Eel and Russian River Basins.<sup>1</sup> The agreement commits to eight Shared Objectives for this Two-Basin Solution.<sup>2</sup> In June 2019, these parties filed, before the Federal Energy Regulatory Commission (FERC), a Notice of Intent (NOI) to seek a new license for the Project. The Round Valley Indian Tribes subsequently joined the Amended Planning Agreement.<sup>3</sup> In October 2019, the parties initiated the preparation of this Feasibility Study Report to develop a potential licensing proposal.

The parties investigated a wide range of potential Project configurations and elements, evaluated costs and benefits of those configurations and elements, and evaluated performance towards the Shared Objectives based on the best available information at this time. The Feasibility Study Report now describes a potential licensing proposal for the Potter Valley Project. This proposal includes: Regional Entity, Project Plan, Fisheries Restoration Plan, Application Study Plan, and a Finance Plan.<sup>4</sup>

The NOI Parties propose to create a new Regional Entity as a special district authority authorized by the State of California, to allow public agencies and non-agency stakeholders to serve on the governing board of the entity. The Regional Entity would have broad authority to undertake the tasks necessary to operate the Project and generate revenue needed to operate and maintain the Project. The Feasibility Study Report includes a preliminary Finance Plan that focuses on power generation and water sales revenue for annual operations and maintenance of the

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<sup>1</sup> Amended Planning Agreement (May 17, 2019), Appendix A to June 28, 2019 filing, eLibrary 20190628-5207, Recital H.

<sup>2</sup> Amended Planning Agreement, Recital I.

<sup>3</sup> In response to the NOI, FERC issued its “Notice of Continuation of Relicensing Proceeding” (August 1, 2019), eLibrary 20190801-3060. It referred to the four signatories of the NOI as the “NOI Parties.” On August 6, 2019, the Round Valley Indian Tribes signed the Amended Planning Agreement and has participated fully in the development of the Feasibility Study Report. In a May 14, 2020 filing, the original signatories of the NOI requested that FERC deem Round Valley Indian Tribes to be a “NOI Party.” This Feasibility Study Report refers to the five entities as NOI Parties.

<sup>4</sup> Amended Planning Agreement, section 1.

Project, as well as a capital funding approach to support modifications to Project works.

The Project Plan includes continued power generation and water diversions, but shifts the timing and magnitude of diversions to winter and spring months to improve and protect fishery resources while maintaining water supply reliability. The Project Plan includes removal of Scott Dam using methods and on conditions that minimize risks to the Van Arsdale Diversion and other downstream infrastructure, as well as sediment management and re-vegetation within the Lake Pillsbury footprint. Lastly, the Project Plan includes modifications to Van Arsdale Diversion and Cape Horn Dam to improve power generation, water supply reliability, and upstream and downstream fish passage; and a new water-supply pipeline from Lake Mendocino to Potter Valley Irrigation District.<sup>5</sup>

The Fisheries Restoration Plan is intended to restore volitional anadromous fish access to the Eel River watershed upstream of Scott Dam and Lake Pillsbury. Scott Dam removal provides the most effective and reliable means of upstream and downstream fish passage. The Project Plan will also contribute to fisheries restoration via the improvements of natural riverine processes within the Lake Pillsbury footprint and reaches downstream of Scott Dam. Lastly, modifications to Van Arsdale Diversion and Cape Horn Dam will improve upstream fish passage efficiency and survival, as well as downstream fish passage efficiency and survival.

The Feasibility Study Report proposes amendments to the approved Study Plan to reflect the Project Plan. In addition, the NOI Parties propose two additional studies to further investigate options for Scott Dam removal, as well as the socio-economic impacts of Scott Dam removal to local communities and tribes.

## **II. BACKGROUND**

The Project is located on the Eel River and the East Branch Russian River in Mendocino and Lake Counties, California. The Project is approximately 15 miles northeast of the City of Ukiah. Project features include Lake Pillsbury, a 2,300-acre storage reservoir impounded by Scott Dam; the 106-acre Van Arsdale Reservoir, impounded by the Cape Horn Diversion Dam; and a tunnel and penstock across a natural divide to the Project's powerhouse located in the headwaters of the Russian River Basin. The Project stores winter runoff from the upper Eel River Basin and annually diverts an average of approximately 60,000 acre-feet of Eel River water

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<sup>5</sup> The pipeline would be a non-licensed Project facility.

into the Russian River to generate hydroelectric power. The authorized capacity of the Project under the current license is 9.9 megawatts (MW).<sup>6</sup>

The Project is licensed to Pacific Gas and Electric Company (PG&E). The license expires on April 14, 2022.<sup>7</sup> On April 6, 2017, PG&E filed a Pre-Application Document (PAD) and Notice of Intent (NOI) to formally initiate the relicensing process for the Project. On January 25, 2019, PG&E withdrew its NOI and PAD and formally discontinued its efforts to relicense the Project. On January 29, 2019, PG&E filed a petition for reorganization under Chapter 11 of the U.S. Bankruptcy Code. On March 1, 2019, FERC issued the Notice soliciting interested potential applicants other than PG&E to file an NOI and PAD and request to complete the pre-filing stages of the licensing process.

In 2017, U.S. Representative Jared Huffman convened stakeholders in a Potter Valley Project Ad Hoc Committee to enable dialogue among stakeholders to develop recommendations on the terms of any new license for the Project. The Ad Hoc Committee is comprised of over 25 federal and state resource agencies, PG&E as licensee, local counties, tribes, and environmental organizations.<sup>8</sup> The Ad Hoc Committee formed two technical working groups to examine fish passage alternatives at the site of Scott Dam and water supply conditions under various operations alternatives. The working groups developed information and analysis of potential solutions to these issues. The Ad Hoc Committee has a charter committed to reaching a Two-Basin Solution with co-equal goals of improving fish passage and habitat on the Eel River sufficient to support recovery of naturally reproducing, self-sustaining and harvestable native anadromous fish populations including migratory access upstream and downstream at current Project dam locations and minimizing or avoiding adverse impacts to water supply reliability, fisheries, water quality, and recreation in the Russian River and Eel River basins.<sup>9</sup>

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<sup>6</sup> *Pac. Gas & Elec. Co.*, 71 FERC ¶ 62,082 (1995).

<sup>7</sup> *Pac. Gas & Elec. Co.*, 25 FERC ¶ 61,010, *order denying reh'g*, 25 FERC ¶ 61,334 (1983).

<sup>8</sup> Ad Hoc Committee participants include: California Department of Fish and Wildlife, Cal Trout, City of Ukiah, Congressman Jared Huffman's Office, Coyote Valley Band of Pomo Indians, Friends of the Eel River, Humboldt County, Lake County, Mendocino County, National Marine Fisheries Service, Pacific Coast Federation of Fishermen's Association, PG&E, Potter Valley Irrigation District, the Round Valley Indian Tribes, Russian Riverkeeper, Sonoma County, Sonoma Water, California State Water Resources Control Board, Trout Unlimited, U.S. Fish and Wildlife Service, U.S. Forest Service, and the Wiyot Tribe.

<sup>9</sup> See Potter Valley Project, Overview, <http://pottervalleyproject.org/overview/> (last visited April 17, 2020).



On May 14, 2019, Mendocino County Inland Water and Power Commission, Sonoma County Water Agency, California Trout, Inc., and Humboldt County entered into a Planning Agreement to explore pathways to obtain a new license for the Project. The agreement was later amended to include the Round Valley Indian Tribes. The Amended Planning Agreement provides that any new license application for the Project will advance Shared Objectives for a Two-Basin Solution. These objectives are: (1) minimizing or avoiding adverse impacts to water supply reliability, fisheries, water quality, and recreation in both basins; (2) improving fish passage and habitat on the Eel River sufficient to support recovery of native anadromous fish populations, including passage at existing dam locations; (3) reliance on best available science and engineering analyses to evaluate options for restoration, water delivery, and hydroelectric generation under a new license; (4) collaboration on funding; (5) active participation of tribes and other stakeholders supportive of the Shared Objectives; (6) economic welfare of both basins; (7) continued hydroelectric generation; and (8) protecting tribal cultural, economic, and other interests in both basins.

On June 28, 2019, the signatories to the Amended Planning Agreement filed an NOI before FERC. The NOI Parties stated an intent that a Regional Entity will be formed to file a new license application for the Project modified to achieve the Shared Objectives. The NOI included a Proposed Process Plan and Schedule for the continued relicensing proceeding for the Project. On August 1, 2019, FERC issued a “Notice of Continuation of Relicensing Proceeding.” This notice acknowledged that the NOI Parties will file a Feasibility Study Report on May 14, 2020. On August 6, 2019, the Round Valley Indian Tribes signed the Amended Planning Agreement.

Under the Amended Planning Agreement, the NOI Parties have worked together to prepare this Feasibility Study Report, which describes a Project modified to promote the Shared Objectives. The parties engaged a consultant team to assist with related analysis. This report makes recommendations on the following topics: (1) a description of the Regional Entity that will be formed and will apply for the new license; (2) a Project Plan showing capital modifications, as well as operations and maintenance requirements, for the continued delivery of water and generation of hydroelectric power; (3) a Fisheries Restoration Plan with measures to be implemented under the new license; (4) an Application Study Plan, detailing additional studies necessary to develop a new license application; and (5) a Financial Plan, including the specific sources of initial funding and subsequent revenues to fund the licensing, capital improvements, and operations and maintenance of the Project under a new license.

### **III. REGIONAL ENTITY**

The NOI Parties believe that the most appropriate way to relicense the Project is through forming a Regional Entity that will be the successor licensee to PG&E. This will require state legislation. Creating the Regional Entity as a special district allows for the legislation specifically to identify representatives of public agencies and tribes to serve on the governing board and allows the California Governor or other state official to appoint representatives from the conservation community and other stakeholders to that governing board.

Once the special district is established, the Regional Entity will have broad authority to undertake the tasks necessary to operate the Project during the term of the new license. In addition to having authority to operate and maintain a hydropower facility, the Regional Entity will have all of the normal authorities associated with a public agency, including the authority to levy charges or taxes and the authority to issue revenue bonds and engage in other financing arrangements. As a public agency, the Regional Entity will be eligible for state and federal grant/loan programs, as well as being eligible to receive proceeds from state bonds. The entity will have the capacity to apply for, accept, implement and comply with a license for this Project.

The NOI Parties propose to have legislation forming the Regional Entity introduced in the California legislature by January 2021. Under normal circumstances, that means that the Regional Entity will be organized during the first quarter of 2022.<sup>10</sup> However, the NOI Parties may be able to make the necessary arrangements for the introduction of legislation during the 2020 legislative session, which would allow the Regional Entity to be organized during the first quarter of 2021.

### **IV. PROJECT PLAN**

The Project consists of the project works, rights to use lands and waters within the Project boundary, and the operations and maintenance requirements as licensed by FERC in 1983.<sup>11</sup> The license will expire on April 14, 2022. This section describes a Project Plan, which consists of the licensed Project as proposed to be modified to achieve the Shared Objectives. The NOI Parties may modify the

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<sup>10</sup> California legislation, as a general rule, becomes effective on January 1 of the year after its enactment, so the Regional Entity would be organized during the first quarter of 2022 if legislation were enacted during 2021.

<sup>11</sup> *Pac. Gas & Elec. Co.*, 25 FERC ¶ 61,010, *order denying reh'g*, 25 FERC ¶ 61,334 (1983), as subsequently amended.

Proposed Project as they undertake further studies and proceed towards development of a new license application, as appropriate to advance the Shared Objectives. As stated in the NOI, they are undertaking this work as a proxy for a Regional Entity, which will be the applicant for any new license.

The NOI Parties commit to the removal of Scott Dam as the only feasible fish passage option, and further commit to continued diversion of Eel River water as the only feasible option to provide a reliable Russian River water supply to meet hydropower generation and other beneficial public uses of water.

### **Plan Elements**

The NOI Parties have developed a Project Plan that includes the following elements.

- Scott Dam Removal
- Lake Pillsbury Sediment Management
- Lake Pillsbury Vegetation Management
- Van Arsdale Diversion Modifications
- Cape Horn Dam Fish Passage Modifications
- Revised Operational Plan, including instream flow schedule below Cape Horn Dam, seasonal Potter Valley Project diversion schedule, and associated changes in instream flows on the East Branch Russian River.

Other actions will be studied by the NOI Parties to achieve the Shared Objectives of the Two-Basin Solution, to be implemented through a cooperative agreement outside of the new FERC license.

The following provides more detail on each of the above Project elements, which will be refined through the Study Plan process and development of the new license application.

### **Scott Dam Removal**

The NOI Parties will conduct detailed studies to analyze the potential effects of Scott Dam removal and address uncertainties around Scott Dam removal and water supply reliability. Once those uncertainties are resolved, the Project Plan proposes to remove Scott Dam in a phased process that is integrated with the Lake Pillsbury Sediment Management Plan. Such removal will remove the primary water storage components of the Potter Valley Project, and will be implemented in

coordination with infrastructure modifications to ensure continued power generation and water supply reliability for the Potter Valley Irrigation District. In addition, such removal will be implemented in coordination with implementation of Forecast Informed Reservoir Operations (FIRO) on Lake Mendocino in the Russian River Basin, and approval by the California State Water Resources Control Board (SWRCB) on alternative minimum instream flows on the Russian River.

The specific details and schedule of Scott Dam removal and the water diversion schedule will be refined by results from additional water supply analyses and engineering studies conducted under the FERC Study Plan (AQ 12) and by the NOI Parties outside of the FERC Study Plan.

### **Lake Pillsbury Sediment Management Plan**

Preliminary analyses indicate that up to 12 million cubic yards (yd<sup>3</sup>) of sediment stored within Lake Pillsbury could be readily transported downstream by the Eel River in the absence of active sediment management. To reduce risk of sediment deposition in Van Arsdale Reservoir and interruption of service by the Van Arsdale Diversion, the NOI Parties may propose to implement removal of erodible sediment within Lake Pillsbury during or before Scott Dam removal.

The Lake Pillsbury Sediment Management Plan will be conducted in coordination with removal of Scott Dam. It may include the following measures. As the crest of Scott Dam is incrementally lowered over a phased period, the Eel River will begin downcutting through the sediments stored behind Scott Dam, and the sediment will be naturally transported downstream to the remaining pool behind Scott Dam. A sediment dredging program may be implemented to relocate these sediments to a stable spoils area on the north side of the reservoir with each phased reduction in Scott Dam height. Over the phased period, sediment may be removed and stockpiled within the Lake Pillsbury footprint to reduce potential downstream transport of sediment once Scott Dam is fully removed.

Additional sediment transport studies are proposed in the FERC Study Plan to refine the Lake Pillsbury Sediment Management Plan (AQ 12). In combination with FERC Study Plan results and input from regulatory and resource management agencies, a final description of the proposed Lake Pillsbury Sediment Management Plan will be included in the new license application. Naturally produced sediments from the watershed upstream of Scott Dam will naturally route downstream once Scott Dam is fully removed.

### **Lake Pillsbury Vegetation Management Plan**

Once Scott Dam is removed and Lake Pillsbury is dewatered, the former inundation area of Lake Pillsbury will likely require some degree of revegetation to

help stabilize remaining sediments and reclaim the sediment spoils area. The specifics of the Lake Pillsbury Vegetation Management Plan will be developed based on studies and input from regulatory and resource management agencies. The Lake Pillsbury Vegetation Management Plan will be implemented following completion of Scott Dam removal.

### **Van Arsdale Diversion Modifications**

Van Arsdale Diversion is currently limited to a maximum diversion of approximately 240 cubic feet per second (cfs) due to a derated fish screen. The Project Plan will implement modifications (which may include infrastructure replacement) to increase the diversion capacity to approximately 300 cfs to improve water supply reliability to the Russian River, along with power generation capacity, while improving reliability of fish passage. Modifications may occur early in the implementation process, and may include redesigning the fish screen to achieve approximately 300 cfs diversion capacity and redesigning the fish bypass pipe to comply with National Marine Fisheries Service's criteria.

### **Cape Horn Dam Fish Passage Modifications**

The Cape Horn Dam fish ladder currently provides fish passage for anadromous salmonids, and recent modifications now allow passage for Pacific lamprey. Downstream fish passage is provided via the existing downstream fishway for flows up to 124 cfs; higher flows spill over the face of the dam, with a varying proportion of downstream migrating fish also spilling across the dam. The Project Plan includes modifications to the upstream fish ladder, which may include infrastructure replacement. In addition, the NOI Parties will study potential modifications in downstream fish passage, and depending on the results of those studies, may design and implement modifications that will improve downstream fish passage. These modifications may occur early in the implementation process.

### **Revised Project Operations Plan**

With the removal of Scott Dam and Lake Pillsbury storage, the NOI Parties propose to amend the Project Operations Plan to reflect a seasonal diversion from the Eel River to the Russian River basin. The amended Project Operations Plan will remedy the derated fish screen at Van Arsdale Diversion facility to increase diversion capacity and will focus diversions to winter and spring months when Eel River unimpaired flows are higher and potential ecological impacts to the Eel River due to approximately 300 cfs flow diversion are the lowest. This amended plan will

be similar to Water Supply Scenario 2 developed by the Ad Hoc Committee<sup>12</sup> and refined based on results from the studies, consultations with resource agencies and tribes, state and federal regulatory agencies, and negotiated Federal Power Act section 4(e) terms and conditions from applicable resource agencies.

## **V. FISHERIES RESTORATION PLAN**

The NOI Parties propose to develop and implement several actions that will improve and protect fishery resources on the Eel River basin while preserving fishery resources in the Russian River basin. This Fisheries Restoration Plan describes actions to be undertaken by the Regional Entity within the Project boundary or otherwise under authority of the new license.

The Fisheries Restoration Plan includes: (1) restoration of anadromous fish access to habitat upstream of Scott Dam via removal of Scott Dam; (2) management of sediment and vegetation in the Lake Pillsbury footprint to restore historic riverine and riparian habitat along the Eel River, and minimizing impacts to aquatic resources downstream of Scott Dam; (3) restoration of natural physical and biological processes within the reservoir footprint and reaches downstream of Scott Dam via removal of Scott Dam and additional restoration actions; (4) modifications to Cape Horn Dam to improve upstream and downstream fish passage; and (5) modifications to Van Arsdale Diversion infrastructure to reduce risk of fish entrainment.

In addition to these restoration actions under the new license, the NOI Parties propose to investigate additional restoration opportunities within the Eel River watershed (and excluded from obligations of the new license). Combined, these two components of the Fisheries Restoration Plan are intended to improve fishery populations within the entire watershed, and benefit tribal, commercial, and recreational fisheries.

Within the Project boundary, Scott Dam removal will provide anadromous salmonids unimpeded access to more than 300 miles of historically available habitat upstream of Scott Dam. Scott Dam removal, Lake Pillsbury sediment and vegetation management, and additional restoration actions will also restore physical and ecological processes that will improve aquatic habitat conditions in the Eel River within the reservoir footprint and reaches downstream. In addition, modifications to upstream and downstream fish passage facilities at Cape Horn Dam, along with modifications to Van Arsdale Diversion, will contribute further to

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<sup>12</sup> See [http://pottervalleyproject.org/wp-content/uploads/2020/02/Water-Supply-Modeling-Grp-Combined-Deliverables\\_Final.pdf](http://pottervalleyproject.org/wp-content/uploads/2020/02/Water-Supply-Modeling-Grp-Combined-Deliverables_Final.pdf).

fisheries restoration. While restoring anadromous fish access to the watershed upstream of Scott Dam, restoration of the reservoir footprint to a riverine condition, and additional modifications to Van Arsdale Diversion and Cape Horn Dam will go a long way in leveraging the benefits of restoring access to historically available habitat upstream, additional comprehensive watershed restoration efforts will be needed for Eel River salmon and steelhead populations to substantially increase fish populations to levels that fully utilize available habitat, sustain tribal, commercial, and recreational fisheries, and restore and protect cultural resource values.

## **VI. APPLICATION STUDY PLAN**

In January 2019, PG&E suspended implementation of its study plan<sup>13</sup> as approved by FERC.<sup>14</sup> Studies were at various stages of completion as described in our NOI.<sup>15</sup> The Approved Study Plan includes: eleven Aquatic Resources studies, two Cultural Resources studies, three Land Resources studies, three Recreation Resources studies, and three Terrestrial Resources studies. With the exception of AQ 6, the NOI Parties propose to complete the remaining FERC-approved studies, with some modifications based on the Project Plan. In addition, the NOI Parties propose two new studies to fill information gaps as appropriate to evaluate the Project Plan: AQ 12 (Scott Dam Removal Assessment) and SE 1 (Socio-Economic Effects of Scott Dam Removal). The Application Study Plan is intended to address uncertainties in potential impacts of the Project Plan on beneficial public uses.

The NOI Parties propose to implement the Application Study Plan between May 2020 and December 2021,<sup>16</sup> although the actual schedule will be dependent on the NOI Parties securing funding and coordination with regulatory agencies.

### **Status of Approved Study Plan**

As shown in the NOI Appendix B, the following is the status of the Approved Study Plan.

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<sup>13</sup> PG&E, “Revised Study Plan” (January 16, 2018), eLibrary 20180116-5131.

<sup>14</sup> FERC, “Study Plan Determination for the Potter Valley Project” (February 15, 2018), eLibrary 20180215-3070, Appendix B.

<sup>15</sup> NOI Parties, “Pre-Application Document and Notice of Intent to File an Application for a New License for the Potter Valley Project” (June 28, 2019), eLibrary 20190628-5207.

<sup>16</sup> June 28, 2019 filing, Appendix C.

Technical Study Plan	Historical Data Compilation	Key Decision w/ Stakeholders re:	Field Surveys/Data Collection	Data Analysis/Synthesis	Model Development	Draft Report
AQ 1 - Hydrology and Project Operations Modeling	X	X	X	IP	IP	O
AQ 2 -Water Temperature	IP	X	IP	IP	IP	O
AQ 3 -Water Quality		X	X	IP		O
AQ 4 - Fluvial Processes and Geomorphology	X	X	X	IP		O
AQ 5 - Instream Flow	X	X	X	IP	IP	O
AQ 6 - Lake Pillsbury Fish Habitat		X	X	O		O
AQ 7 - Fish Passage	IP	X	IP	IP		O
AQ 8 - Fish Entrainment	IP	X	X	IP		O
AQ 9 - Fish Populations	X	IP	X	IP		O
AQ 10 - Special Status Amphibians and Aquatic Reptiles	X	X	X	IP		O
AQ 11 - Special Status and Invasive Aquatic Mollusks		X	X	X		IP
CUL 1 – Cultural Resources	X	X	IP	O		O
CUL 2 – Tribal Resources	X	X	X	O		O
LAND 1 – Roads and Trails Assessment	IP	X	X	IP		IP
LAND 2 – Visual Resource Assessment	X	X	O	O		O
LAND 3 – Hazardous Fuels Assessment	X	O	O	O		O
REC 1 – Recreation Facility Assessment	IP	IP	O	O		O
REC 2 – Reservoir Recreation Opportunities		IP	O	O		O
REC 3 –Whitewater Boating	X	X	X	X		O
TERR 1 – Botanical Resources	X	X	X	IP		O
TERR 2 –Wildlife Resources	X	X	X	IP		IP

blank - not applicable  
X - Study Element/Activity Complete  
IP - Study Element/Activity In Progress  
O - Study Element/Activity Outstanding

### **Modifications to Approved Study Plan**

The Project Plan envisions Scott Dam removal as well as other major modifications, which envision a different future Project than PG&E proposed in its Pre-Application Document. This necessitates amendments to the Approved Study Plan. The following section provides details for each study with regard to specific revisions to that Study Plan. In addition, some of the proposed study amendments below address information needs unique to the NOI Parties, and thus may expand beyond the minimum of what FERC requires and approved for PG&E.

**AQ 1 - Hydrology and Project Operations Modeling.** No changes to Approved Study Plan except:



- Conduct the Indicators of Hydrologic Alteration (IHA) analysis for a Project Plan that includes Scott Dam removal.
- Conduct the flood frequency analysis for a Project Plan that includes Scott Dam -removal.
- Re-evaluate ramping rates downstream of Cape Horn Dam for a Project Plan that includes Scott Dam removal.
- Modify the existing HEC-ResSim Water Balance Operations Model to incorporate Scott Dam removal and modified Van Arsdale Diversion.
- Perform calibration and validation as necessary. Develop an operations scenario for Project operations upon Scott Dam removal.

**AQ 2 -Water Temperature.** No changes to Approved Study Plan except:

- Conduct multiple regression approach or the HEC-RAS water temperature model to characterize water temperature conditions with Scott Dam removal and modified Van Arsdale Diversion.
- Use the river water temperature model to evaluate river water temperatures reflecting Scott Dam removal and revised Project operations for water diversion timing. Use the existing Lake Pillsbury CE-QUAL water temperature model to model different boundary conditions for with and without dam scenarios.

**AQ 3 -Water Quality.** No changes to Approved Study Plan except:

- Evaluate the effects of Scott Dam removal on water quality by using results from water temperature modeling (AQ-2) to interpret changes to water quality parameters.<sup>17</sup>

**AQ 4 - Fluvial Processes and Geomorphology.** No proposed changes to Approved Study Plan.

**AQ 5 - Instream Flow.** No changes to Approved Study Plan except:

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<sup>17</sup> Restricted access and other safety considerations caused by wildfires resulted in data gaps during summer sampling period. Therefore, NOI Parties must determine whether existing information will be sufficient for completing the study and acceptable with agency/stakeholders, or whether additional data collection is needed. If additional data collection is required, it is uncertain whether wildfires may have caused water quality conditions to change to the extent that a complete resampling would be required.

- Run the PHABSIM model using new hydrology scenarios results (AQ-1) developed to reflect Scott Dam removal and modified Van Arsdale Diversion, and produce habitat time series analysis using the new hydrology scenarios.
- Re-produce as necessary the fish stranding and stage change analysis incorporating using new hydrology scenarios results (AQ-1) developed to reflect Scott Dam removal.
- Re-model the effective spawning habitat at each instream flow study site using the new hydrology scenarios.
- Re-model FYLF habitat vs flow relationships using new hydrology scenarios.

**AQ 6 - Lake Pillsbury Fish Habitat.** Propose deletion of this study because the Project Plan proposes to eliminate Lake Pillsbury.

**AQ 7 - Fish Passage.** No changes to Approved Study Plan except:

- Evaluate improved upstream and downstream fish passage alternatives (including conceptual designs, costs and estimated efficacy) at Cape Horn Dam.
- Eliminate field sampling activities related to the assessment of downstream anadromous fish passage at Cape Horn Dam and downstream passage of adult steelhead kelts at Cape Horn Dam because the Project Plan proposes to implement structural and operational modifications at Cape Horn Dam that improve downstream fish passage.
- Eliminate field sampling activities (operation of sonar array in the mainstem Eel River) related to enumeration of adult salmon escapement.

**AQ 8 - Fish Entrainment.** No changes to Approved Study Plan except:

- Evaluate the effects of revised diversion patterns (seasonal diversions based on the results of AQ-1 and AQ-5), on potential fish entrainment risk at Van Arsdale Diversion or alternative diversion structure.

**AQ 9 - Fish Populations.** No changes to Approved Study Plan except:

- Develop conceptual model that integrates life history, habitat requirements, and distribution of non-native pikeminnow with those of native fish and aquatic species to identify prey vulnerabilities and

predator hot spots to inform effective suppression techniques and/or reduced predation rates.

- Summarize information on pikeminnow suppression and eradication techniques, effectiveness, and cost.

**AQ 10 - Special Status Amphibians and Aquatic Reptiles.** No proposed changes to Approved Study Plan.

**AQ 11 - Special Status and Invasive Aquatic Mollusks.** No proposed changes to Approved Study Plan.

**CUL 1 – Cultural Resources.** No changes to Approved Study Plan except:

- Modify the Area of Potential Effects to include areas potentially impacted by Scott Dam removal.

**CUL 2 – Tribal Resources.** No changes to Approved Study Plan except:

- Modify the Area of Potential Effects to include areas potentially impacted by Scott Dam removal.

**LAND 1 – Roads and Trails Assessment.** No changes to Approved Study Plan except:

- Modify extent of study area to include any new roads or trails required for Scott Dam removal.

**LAND 2 – Visual Resource Assessment.** No changes to Approved Study Plan except:

- Characterize changes in landscape character under Scott Dam removal and post-dam viewsheds.

**LAND 3 – Hazardous Fuels Assessment.** No proposed changes to Approved Study Plan, except:

- Analyze mitigation for lost water sources for fire-fighting.

**REC 1 – Recreation Facility Assessment.** No proposed changes to Approved Study Plan.

**REC 2 – Reservoir Recreation Opportunities.** No proposed changes to Approved Study Plan.

**REC 3 –Whitewater Boating.** No proposed changes to Approved Study Plan

**TERR 1 – Botanical Resources.** No proposed changes to Approved Study Plan.

**TERR 2 –Wildlife Resources.** No proposed changes to Approved Study Plan.

### **Proposed New Studies**

The NOI Parties propose two new studies related to elements of the Project Plan.

**AQ 12 — Scott Dam Removal Assessment.** Evaluate the potential effects of Scott Dam removal, including (1) the geomorphic and ecological tradeoffs of different approaches to Scott Dam removal and associated sediment management; (2) revegetation in the Lake Pillsbury footprint, and (3) effects on downstream riverine ecology and infrastructure. There are approximately 20 million cubic yards of sediment stored in Lake Pillsbury, of which approximately 12 million cubic yards is considered susceptible to mobilization and transport downstream as Scott Dam is removed.

- Collect LiDAR and bathymetry data to support Eel River modeling efforts. If recently flown LiDAR data is not sufficient quality for modeling needs, conduct low flow terrestrial LiDAR flight and ground survey of cross sections (bathymetry) from Scott Dam downstream to the Middle Fork Eel River confluence for use in hydraulic and sediment transport modeling.
- Conduct one dimensional (1D) hydraulic and sediment transport modeling (DREAM-2) to evaluate fate of coarse sediment released from removal of Scott Dam. Compute natural sediment supply rates for Lake Pillsbury based on historic reservoir sedimentation, and estimate natural sediment supply rates at Dos Rios, Fort Seward, and Scotia gages; compare to future sediment supply rates with Scott Dam removed.
- Estimate suspended sediment concentrations expected in the Eel River resulting from Scott Dam removal.
- Evaluate the biological impacts of high suspended sediment concentration and duration (intra- and inter-annual) resulting from Scott Dam removal and compare with background concentrations.
- Evaluate the potential geomorphic effects of Scott Dam removal by developing two dimensional (2-D) or three dimensional (3-D)

morphodynamic model at select sites to better understand potential effects of sediment deposition on channel morphology, bank stability, flooding, and aquatic habitat conditions. Information from 1D model will provide input to 2-D or 3-D model.

- Using sediment transport model results, work with resource agencies and stakeholders to develop a preferred approach for managing Lake Pillsbury sediment, and refine engineering designs for the preferred approach.
- Refine evaluation of Scott Dam removal options based on suspended sediment assessment, sediment transport modeling, and the preferred sediment management approach.
- Depending on (1) model predictions of suspended sediment concentrations for different dam decommissioning and sediment management options, (2) comparisons with background sediment supply from the upper Eel River watershed, and (3) discussions with resource agencies, evaluate the need for downstream biological mitigation measures during the dam removal and sediment management process (off-stream rearing, creating refugia from high suspended sediment concentrations, temporary supplemental fish propagation).

**SE 1 — Socio-Economic Effects of Dam Removal.** Evaluate the socio-economic effects of Scott Dam removal on communities around Lake Pillsbury, Van Arsdale Reservoir, and the lower Eel River. Evaluation would focus primarily on changes to property values (Lake Pillsbury), potential remediation of effects of sedimentation on residences immediately below Van Arsdale Reservoir, and potential remediation of effects of sedimentation on water intake systems in the lower Eel River. The potential economic effects on tribal interests, recreation, and other activities will also be considered.

**Estimated Cost**

Studies	Project Plan	
	FERC-Approved	Proposed Modifications
<i>Existing Studies</i>		
AQ 1 - Hydrology and Project Operations Modeling	\$272,000	\$770,000
AQ 2 -Water Temperature	\$502,000	\$40,000
AQ 3 -Water Quality	\$389,000	\$40,000
AQ 4 - Fluvial Processes and Geomorphology	\$581,000	\$0
AQ 5 - Instream Flow	\$445,000	\$0
AQ 6 - Lake Pillsbury Fish Habitat	\$ 0	\$0

AQ 7 - Fish Passage	\$1,431,000	\$42,000
AQ 8 - Fish Entrainment	\$48,000	\$25,000
AQ 9 - Fish Populations	\$142,000	\$185,000
AQ 10 - Special Status Amphibians and Aquatic Reptiles	\$425,000	\$0
AQ 11 - Special Status and Invasive Aquatic Mollusks	\$77,000	\$0
CUL 1 – Cultural Resources	\$350,000	\$60,000
CUL 2 – Tribal Resources	\$107,000	\$25,000
LAND 1 – Roads and Trails Assessment	\$112,000	\$29,000
LAND 2 – Visual Resource Assessment	\$113,000	\$24,000
LAND 3 – Hazardous Fuels Assessment	\$148,000	\$0
REC 1 – Recreation Facility Assessment	\$207,000	\$0
REC 2 – Reservoir Recreation Opportunities	\$96,000	\$0
REC 3 –Whitewater Boating	\$96,000	\$0
TERR 1 – Botanical Resources	\$192,000	\$0
TERR 2 –Wildlife Resources	\$231,000	\$0
<i>New Studies</i>		
AQ 12 – Dam Removal		\$ 1,073,000
SE 1 - Socio-Economic Effects of Dam Removal		\$ 180,000
<b>Totals</b>	<b>\$5,964,000</b>	<b>\$2,493,000</b>
<b>Grand Totals:</b>	<b>\$8,457,000</b>	

## VII. FINANCIAL PLAN

The NOI Parties propose the Project Plan to achieve co-equal goals of improving fish passage and habitat on the Eel River and avoiding adverse impacts to water supply reliability, fisheries, water quality, and recreation in the Russian River and Eel River basins. In total, the project elements go well beyond achieving the benefits of hydroelectric generation, and seek to find a balance of fisheries and water supply benefits. As a result, the NOI Parties anticipate that financing and ongoing funding for this Project will include not just the revenue from power generation, but also contributions from other revenue sources in accordance with the benefits to fisheries and water supply. The parties further anticipate that the Project Plan will be implemented through a new license application as well as a separate cooperative agreement that will run between the NOI Parties, resource agencies and other stakeholders as appropriate to advance the Two-Basin Solution.

The NOI Parties include three local agencies, a non-profit organization, and one sovereign tribal nation. The Regional Entity’s board will likely include representatives of most or all of those NOI Parties, as well as other critical stakeholders. Additionally, the Regional Entity will be structured with the authority to levy charges or taxes and the authority to issue revenue bonds and engage in other financing arrangements.

## **Potential Costs**

The NOI Parties will need to negotiate purchase of the facilities from the current owner and licensee, PG&E. At this time, PG&E is actively participating in the relicensing process being undertaken by the NOI Parties and has acknowledged that, if FERC does not issue a new license to the NOI Parties or Regional Entity, PG&E will be responsible for decommissioning the Project.

In a recent California Public Utilities Commission (CPUC) rate case application, PG&E requested the establishment of a decommissioning reserve for its hydroelectric system. This was based on a conceptual estimate of the anticipated costs to decommission a number of small projects, including the Potter Valley Project.<sup>18</sup>

Transfer of the Project to the NOI Parties would relieve PG&E of a substantial financial obligation for decommissioning. NOI Parties anticipate that any asset transfer transaction would also include either (a) performance of in-kind actions by PG&E, which will directly reduce capital costs for the NOI Parties, or (b) a cash payment by PG&E to the NOI Parties for relief of specific current obligations and liabilities of PG&E with regards to decommissioning. Any such transaction will be subject to approval by the California Public Utilities Commission<sup>19</sup> and FERC.<sup>20</sup>

The NOI Parties do not have direct experience with the cost of operations of the Project. Instead, the NOI Parties are relying on historic operations cost data that has been provided by PG&E, and then adjusting costs depending on potential modifications to project facilities and operations. Depending on the final configuration of facilities, operations modes and license terms, an annual cost of \$5,000,000 to \$10,000,000 (in 2020 dollars) is expected for steady-state ongoing operations costs.

As described elsewhere in this document, the NOI Parties are evaluating substantial changes to current Project works. Cost estimates associated with these changes, including anticipated timing and impact mitigation, are preliminary at this time with large uncertainties associated with the costs. As described above, specific implementation may be associated with any new license application or with a parallel cooperative agreement, which could have bearing on the timing and magnitude of costs.

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<sup>18</sup> General Rate Case 2020-2022, CPUC A.18-12-009.

<sup>19</sup> Public Utilities Code § 851.

<sup>20</sup> 16 U.S.C. §§ 807, 808.

Preliminary estimates of direct capital costs in 2020 dollars for the proposed licensed Project facilities range from \$100,000,000 to \$400,000,000.

### **Funding Sources**

At this stage of planning, the NOI Parties are evaluating sources for funding the Project. The first funding need is the cost of completing the relicensing process including studies, estimated to exceed \$10 million.

Since the Project will include major modifications to several current Project works, the capital funding requirements will be substantial and will likely accrue in the early years after licensing. At this juncture, the project components that will be necessary to implement the Project are at the conceptual design level only, with substantial uncertainty around the final design and capital cost. Additionally, depending on cost, sequencing and timing for implementation, Project modifications may be included in the new license application. For that reason, the NOI Parties are identifying multiple capital funding sources that will be further investigated and accessed to support modifications to Project works. Such potential funding sources include but are not limited to:

- A purchase-and-sale agreement with PG&E, including terms that take into consideration the transfer of the outstanding liabilities associated with decommissioning of the Project;
- State and/or federal funding that reflects the value of a cooperative agreement advancing a Two-Basin Solution;
- If necessary, bond funds backstopped by local revenue streams expressly implemented to support capital funding for the Project; and
- Congressional appropriation to implement a settlement of the unadjudicated federal water and fishing rights claims of the Round Valley Indian Tribes. The Round Valley Indian Tribes are considering whether to seek a resolution of such claims as part of the actions the NOI Parties may take to improve fisheries within the Project boundary, and additional actions such parties may take to improve fisheries in the Eel River watershed.

The NOI Parties anticipate that local revenues associated with continued operation of the Project will be utilized for ongoing operational costs for the Project, including O&M, safety and reliability upgrades through time, appropriate reserves and provision for major maintenance through time. The NOI Parties further anticipate that, as may be authorized in the legislation establishing the Regional Entity, potential sources for such revenues include:



- Generation revenue from continued operation of the Project;
- Water sales revenue for inter-basin transferred water; and, if necessary,
- Local assessments, levies and other charges related to Project services.

During the term of the study period prior to the filing of the license application, additional study and design work will refine the facility designs, costs, and funding streams for Project implementation and operations.

**APPENDIX B**

**Amended Planning Agreement**

**FIRST AMENDMENT TO AMENDED PLANNING AGREEMENT TO UNDERTAKE  
FEASIBILITY STUDY OF A POTENTIAL LICENSING PROPOSAL FOR THE  
POTTER VALLEY PROJECT**

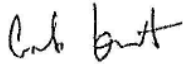
The “Amended Planning Agreement to Undertake Feasibility Study of a Potential Licensing Proposal for the Potter Valley Project” (June 18, 2019) (Amended Planning Agreement) is hereby amended by this First Amendment.

**TERMS OF AGREEMENT**

1. The Amended Planning Agreement is amended to add the Round Valley Indian Tribes as a Party.
2. All other terms remain in effect.

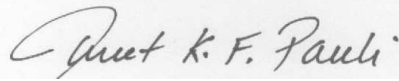
Date: July 16th, 2019

CALIFORNIA TROUT, INC.

By:   
Curtis Knight  
Executive Director

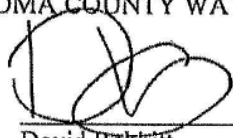
Date: July \_\_\_\_, 2019

MENDOCINO COUNTY INLAND  
WATER & POWER COMMISSION

By:   
Janet K. F. Pauli  
Chair, Board of Commissioners


Date: July 17, 2019

SONOMA COUNTY WATER AGENCY

By:   
David Rabbitt,  
Chair, Board of Directors

Date: July 23, 2019

COUNTY OF HUMBOLDT

By:   
Rex Bohn  
Chairperson, Board of Supervisors

Date: July \_\_\_\_, 2019

ROUND VALLEY INDIAN TRIBES

By: \_\_\_\_\_  
James Russ

Date: July \_\_\_\_, 2019

CALIFORNIA TROUT, INC.

By: \_\_\_\_\_  
Curtis Knight  
Executive Director

Date: July \_\_\_\_, 2019

MENDOCINO COUNTY INLAND  
WATER & POWER COMMISSION

By: \_\_\_\_\_  
Janet K. F. Pauli  
Chair, Board of Commissioners

Date: July \_\_\_\_, 2019

SONOMA COUNTY WATER AGENCY

By: \_\_\_\_\_  
David Rabbitt,  
Chair, Board of Directors

Date: July \_\_\_\_, 2019

COUNTY OF HUMBOLDT

By: \_\_\_\_\_  
Rex Bohn  
Chairperson, Board of Supervisors

Date: <sup>Aug. 6th</sup> July \_\_\_\_, 2019

ROUND VALLEY INDIAN TRIBES

By: James Russ  
James Russ  
President, Round Valley Indian Tribes

## **APPENDIX C**

### **Distribution List**

## DISTRIBUTION LIST

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American Whitewater	Dave Steindorf	4 Baroni Drive	Chico, CA 95928	dave@americanwhitewater.org
Bear River Band of the Rohnerville Rancheria	Josefina Cortez	266 Keisner Road,	Loleta, CA 95551	josefinacortez@brb-nsn.gov
Big Valley Rancheria of Pomo Indians	Philip Gomez	2726 Mission Rancheria Road	Lakeport, CA 95453	
Big Valley Rancheria of Pomo Indians	Michael Gomez	2726 Mission Rancheria Road	Lakeport, CA 95453	
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California Department of Fish and Wildlife-Retired	Scott Downie			sdownie@suddenlink.net
California Department of Fish and Wildlife-Retired	Larry Week			leweek1@aol.com
California Department of Fish and Wildlife-Retired	Alan Grass	17850 Van Arsdale Road	Potter Valley, CA 95469	al_grass@hotmail.com
California Land Stewardship Institute	Laurel Marcus	550 Gateway Drive #108	Napa, CA 94558	laurelm@fishfriendlyfarming.org

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Elem Indian Colony of Pomo Indians	Thomas Brown	P.O. Box 757	Lower Lake, CA 95457	
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Friends of Van Duzen River	Sal Steinberg			steinberg.sal@gmail.com
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GANDA/Local Resident	Rick Todd			ricktodd@wildblue.net
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Garcia and Associates	Elizabeth Harreschou			elizabeth.harreschou@gmail.com
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Humboldt University	Richard Gienger			rgrocks@humboldt.net
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Koi Nation Lower Lake Rancheria	Darin F. Beltran	P.O. Box 3162	Santa Rosa, CA 95402	
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Lake Pillsbury Ranch	Jill Clarkson			clarksonbk@hughes.net
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Lake Pillsbury Resort-Biagi Bros., Inc	Mike and Maryann			info@lakepillsburyresort.com
Laytonville Rancheria	Richard J. Smith	P.O. Box 1239	Laytonville, CA 95454	chairman@cahto.org
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Manchester-Point Arena Rancheria	Florence Silva	P.O. Box 237	Point Arena, CA 95468	

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Mendocino County Farm Bureau	Frost Pauli	303-C Talmage Road	Ukiah, CA 95482	fpauli@pauliranch.com
Mendocino County Inland Water and Power Commission	Candace Horsley	P.O. Box 1247	Ukiah, CA 95482	iwpc@mendoiwpc.com
Mendocino County Inland Water and Power Commission	Janet Pauli	P.O. Box 1247	Ukiah, CA 95482	pauli@mendoiwpc.com; jpauli@pauliranch.com
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Mendocino County Resource Conservation District	Joseph Scriven			joe.scriven@mcrcd.org
Mendocino County Resource Conservation District	Patricia Hickey			Patricia.Hickey@mcrcd.org
Mendocino County Russian River Flood Control and Water Conservation Improvement District	Elizabeth Salomone	151 Laws Avenue, Suite D	Ukiah, CA 95482	DistrictManager@rrfc.net
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