STATE OF CALIFORNIA

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 10/2015) CALIFORNIA ENERGY COMMISSION

New Agreement EPC-16-037 (To be completed by CGL Office)

Division	Agreement Manager:	MS-	Phone
ERDD	Mike Kane	43	916-327-1530

Recipient's Legal Name	Federal ID Number
Amador Water Agency	68-0029577

Title of Project
The Amador Water Agency In-Conduit Hydropower Development Project (AWA Project)

Term and Amount	Start Date	End Date	Amount
	5/15/2017	12/31/2019	$ 750,000

Business Meeting Information

☐ ARFVTP agreements under $75K delegated to Executive Director.

Proposed Business Meeting Date	4/12/2017	☐ Consent	☒ Discussion
Business Meeting Presenter	Silvia Palma-Rojas	Time Needed:	5 minutes

Please select one list serve. EPIC (Electric Program Investment Charge)

Agenda Item Subject and Description

CALIFORNIA ENVIRONMENTAL QUALITY ACT FINDINGS. Proposed resolution finding that based on the lead agency Amador Water Agency's September 22, 2016 Initial Study, Mitigated Negative Declaration (MND), and the lead agency's September 22, 2016 Resolution approving and adopting the MND, the work under the proposed project presents no new significant or substantially more severe environmental impacts beyond those already considered.

AMADOR WATER AGENCY. Proposed resolution approving agreement EPC-16-037 with Amador Water Agency for a $750,000 grant to design, test, develop and demonstrate a high-efficiency Pelton turbine runner at a pressure reducing station in Ione, California. The goal of the agreement is to reduce the cost of energy and improve the economic performance and viability of small hydropower sites to expand the use of in-conduit hydropower in California and improve understanding of its benefits to the grid.

California Environmental Quality Act (CEQA) Compliance

1. Is Agreement considered a "Project" under CEQA?
   ☒ Yes (skip to question 2) ☐ No (complete the following (PRC 21065 and 14 CCR 15378)):
   Explain why Agreement is not considered a "Project":

2. If Agreement is considered a "Project" under CEQA:
   ☐ a) Agreement **IS** exempt. (Attach draft NOE)
   - ☐ Statutory Exemption. List PRC and/or CCR section number:
   - ☐ Categorical Exemption. List CCR section number:
   - ☐ Common Sense Exemption. 14 CCR 15061 (b) (3)

   Explain reason why Agreement is exempt under the above section:

   ☒ b) Agreement **IS NOT** exempt. (Consult with the legal office to determine next steps.)
   Check all that apply
   - ☒ Initial Study
   - ☐ Negative Declaration
   - ☒ Mitigated Negative Declaration
   - ☐ Environmental Impact Report
   - ☐ Statement of Overriding Considerations

List all subcontractors (major and minor) and equipment vendors: (attach additional sheets as necessary)

Legal Company Name:	Budget
NLine Energy, Inc.	$ 75,000
Gilbert Gilkes and Gordon Ltd	$ 25,000
	$
	$
	$
	$
	$
	$
	$

List all key partners: (attach additional sheets as necessary)
Legal Company Name:
Amador Water Agency

Budget Information

Funding Source	Funding Year of Appropriation	Budget List No.	Amount
EPIC	15-16	301.001C	$750,000
			$
			$
			$
			$
			$
R&D Program Area:	EGRO: Renewables	TOTAL:	$750,000
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

Recipient's Administrator/ Officer				**Recipient's Project Manager**			
Name:	Gene Mancebo			Name:	Gene Mancebo		
Address:	12800 Ridge Rd			Address:	12800 Ridge Rd		
City, State, Zip:	Sutter Creek, CA 95685-9630			City, State, Zip:	Sutter Creek, CA 95685-9630		
Phone:	209-257-5245 /	Fax:	- -	Phone:	209-257-5245 /	Fax:	- -
E-Mail:	gmancebo@amadorwater.org			E-Mail:	gmancebo@amadorwater.org		

Selection Process Used

☒ Competitive Solicitation — Solicitation #: GFO-16-301
☐ First Come First Served Solicitation

The following items should be attached to this GRF

1. Exhibit A, Scope of Work		☒ Attached
2. Exhibit B, Budget Detail		☒ Attached
3. CEC 105, Questionnaire for Identifying Conflicts		☒ Attached
4. Recipient Resolution	☒ N/A	☐ Attached
5. CEQA Documentation	☐ N/A	☒ Attached

Agreement Manager	Date	Office Manager	Date	Deputy Director	Date

Exhibit A Scope of Work
Amador Water Agency

I. TASK ACRONYM/TERM LISTS

A. Task List

Task #	CPR[1]	Task Name
1		General Project Tasks
2	X	Design and Manufacture Turbine
3	X	Design and Construct In-Conduit Hydroelectric Project
4		Evaluate Project Benefits
5		Develop Technology/Knowledge Transfer Activities

B. Acronym/Term List

Acronym/Term	Meaning
AWA	Amador Water Agency
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CEQA	California Environmental Quality Act
CFD	Computational Fluid Dynamics
CO2	Carbon dioxide
CPR	Critical Project Review
FEA	Finite Element Analysis
FERC	Federal Energy Regulatory Commission
FSI	Fluid Structure Interactions
ISMND	Initial Study Mitigated Negative Declaration
IOU	Investor-owned Utility
NOI	Notice of Intent
MWh	Megawatt Hour
PG&E	Pacific Gas & Electric
TAC	Technical Advisory Committee

II. PURPOSE OF AGREEMENT, PROBLEM/SOLUTION STATEMENT, AND GOALS AND OBJECTIVES

A. Purpose of Agreement

The purpose of this agreement is to design, test, and demonstrate a pre-commercial innovative and more efficient Pelton turbine runner, specifically designed for small in-conduit hydroelectric applications. The field demonstration at an existing pressure reducing station site located in Ione, California, will validate and demonstrate the ability of the new in-conduit hydropower turbines to capture and maximize wasted energy. The project will provide a viable retrofit solution for degrading sites, expand deployment in new sites and contribute to the integration of in-conduit small hydropower into the existing state energy mix throughout California.

[1] Please see subtask 1.3 in Part III of the Scope of Work (General Project Tasks) for a description of Critical Project Review (CPR) Meetings.

B. PROBLEM/ SOLUTION STATEMENT

One of the oldest hydraulic turbine technologies in California is the Pelton turbine, a design best suited for sites with high hydraulic pressures. There are an estimated 62 MW of installed Pelton turbines in California, many of which are nearing the end of their in-service asset life. In addition, there is an estimated 8.2 MW of undeveloped potential at sites with high-hydraulic pressures where Pelton turbines could be installed, but remain undeveloped due to high costs and efficiencies not optimized for sub-megawatt opportunities. There is an immediate need to design, test, and demonstrate an improved and more efficient Pelton turbine in order to provide a viable retrofit solution for repowering ageing turbines approaching the end of their useful life, and to expand small hydropower deployment at new sites throughout California. A higher-efficiency Pelton turbine will provide water agencies throughout the state an opportunity to generate additional revenue and/or offset ever-increasing electricity costs associated with treating, distributing and collecting water to help reduce costs to Investor Owned Utility (IOU) ratepayers.

Solution

The purpose of the project is to advance the pre-commercial development and demonstration of an innovative, redesigned high-head Pelton turbine runner technology. The demonstrated turbine runner will increase the turbine efficiency by 1 to 1.5 percent over the current design and improve the energy generation of in-conduit hydroelectric stations, thus, expanding the use of hydropower in California and help achieve the state's renewable energy initiatives, including AB 32 and SB 350. Specifically, the project will develop, design, test, and implement an improved 417 kW in-conduit Pelton turbine runner design at an existing Pressure Reducing Station (PRS) located in Ione, California. The project will demonstrate the ability to maximize and capture the wasted energy at the pressure reducing station to generate over 72,000 MWh of renewable power and offset 50,650 metric tons of CO2 equivalent over the 50-year useful asset life of the project.

C. Goals and Objectives of the Agreement

Agreement Goals

The goals of this project are to:

- Develop, design, validate and demonstrate an innovative pilot-scale Pelton turbine technology to recover and maximize the capture of hydrostatic wasted energy present in existing pipelines commonly used by the water agencies.
- Reduce the cost of energy and improve the economic performance and viability of small hydropower sites to expand the use of in-conduit hydropower in California and improve understanding of its benefits to the grid.

Ratepayer Benefits:[2]

This Agreement will result in the ratepayer benefits of:

- The proposed project is scalable in both size and quantity. Therefore, this effort will demonstrate the commercial feasibility to deploy many MWh of dispatchable energy.
- Greater electricity reliability by supporting the generation of 72,000 MWh over a 50-year asset life of distributed, baseload renewable power using rotating equipment.
- Lower costs by increasing the efficiency of the Pelton turbine, thereby recovering wasted energy in pre-existing infrastructure to produce electricity at as low as one third the cost per kilowatt-hour as other intermittent forms of renewable energy.
- Greenhouse gas emission reduction (50,650 metric tons CO2) through the introduction of emission-free energy resource that displaces thermal sources of energy.
- Air emission reduction through the displacement of nitrous-oxide-producing generation sources.

Technological Advancement and Breakthroughs:[3]

This Agreement will lead to technological advancement and breakthroughs to overcome barriers to the achievement of the State of California's statutory energy goals and help achieve the state's renewable energy initiatives, including AB 32 and SB 350 by demonstrating the following technological advancement and innovations to improve the efficiency of the Pelton turbine.

1) Deploy pre-existing modeling tools and techniques such as, Computational Fluid Dynamics (CFD), Finite Element Analysis (FEA) and Fluid Structure Interactions (FSI) to improve the performance of a Pelton turbine runner, spear / needle valves and housing / casing.
2) Demonstrate a highly-efficient Pelton turbine at the Amador Water Agency (AWA) Project site.

These advancements and innovations will develop the needed technology to update the existing Pelton turbine installations that are nearing their end of service life, as well as new and undeveloped Pelton turbine sites throughout California.

[2] California Public Resources Code, Section 25711.5(a) requires projects funded by the Electric Program Investment Charge (EPIC) to result in ratepayer benefits. The California Public Utilities Commission, which established the EPIC in 2011, defines ratepayer benefits as greater reliability, lower costs, and increased safety (See CPUC "Phase 2" Decision 12-05-037 at page 19, May 24, 2012, http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/167664.PDF).

[3] California Public Resources Code, Section 25711.5(a) also requires EPIC-funded projects to lead to technological advancement and breakthroughs to overcome barriers that prevent the achievement of the state's statutory and energy goals.

Exhibit A Scope of Work
Amador Water Agency

Agreement Objectives

The objectives of this Agreement are to:

- **Objective 1:** Develop and test a Pelton turbine with a 1-1.5-percent efficiency increase over standard Pelton turbines.
- **Objective 2**: Implement a 417 kW Pelton turbine into an in-conduit hydroelectric at the Ione site, using the designed Pelton turbine. The Pelton turbon will be installed in parallel to an existing pressure reducing valve.
- **Objective 3:** Generate approximately 72,000 MWh of renewable energy over a 50-year asset life.
- **Objective 4**: Reduce greenhouse gas emissions by 50,650 MT CO2e over a 50-year asset life.
- **Objective 5:** Provide long-term monitoring, measurement and verification of the Pelton turbine and in-conduit hydroelectric station performance.
- **Objective 6**: Provide education and outreach to local and regional California water agencies, hydropower asset owners and state policy members.

III. TASK 1 GENERAL PROJECT TASKS

PRODUCTS

Subtask 1.1 Products

The goal of this subtask is to establish the requirements for submitting project products (e.g., reports, summaries, plans, and presentation materials). Unless otherwise specified by the Commission Agreement Manager (CAM), the Recipient must deliver products as required below by the dates listed in the **Project Schedule (Part V).** Products that require a draft version are indicated by marking **"(draft and final)"** after the product name in the "Products" section of the task/subtask. If "(draft and final)" does not appear after the product name, only a final version of the product is required. With respect to due dates within this Scope of Work, **"days"** means working days.

The Recipient shall:

For products that require a draft version, including the Final Report Outline and Final Report

- Submit all draft products to the CAM for review and comment in accordance with the Project Schedule (Part V). The CAM will provide written comments to the Recipient on the draft product within 15 days of receipt, unless otherwise specified in the task/subtask for which the product is required.
- Consider incorporating all CAM comments into the final product. If the Recipient disagrees with any comment, provide a written response explaining why the comment was not incorporated into the final product.
- Submit the revised product and responses to comments within 10 days of notice by the CAM, unless the CAM specifies a longer time period, or approves a request for additional time.

For products that require a final version only

- Submit the product to the CAM for acceptance. The CAM may request minor revisions or explanations prior to acceptance.

For all products

- Submit all data and documents required as products in accordance with the following:

Instructions for Submitting Electronic Files and Developing Software:

- **Electronic File Format**
  - Submit all data and documents required as products under this Agreement in an electronic file format that is fully editable and compatible with the Energy Commission's software and Microsoft (MS)-operating computing platforms, or with any other format approved by the CAM. Deliver an electronic copy of the full text of any Agreement data and documents in a format specified by the CAM, such as memory stick or CD-ROM.

  The following describes the accepted formats for electronic data and documents provided to the Energy Commission as products under this Agreement, and establishes the software versions that will be required to review and approve all software products:
  - Data sets will be in MS Access or MS Excel file format (version 2007 or later), or any other format approved by the CAM.
  - Text documents will be in MS Word file format, version 2007 or later.
  - Documents intended for public distribution will be in PDF file format.
  - The Recipient must also provide the native Microsoft file format.
  - Project management documents will be in Microsoft Project file format, version 2007 or later.

- **Software Application Development**

  Use the following standard Application Architecture components in compatible versions for any software application development required by this Agreement (e.g., databases, models, modeling tools), unless the CAM approves other software applications such as open source programs:
  - Microsoft ASP.NET framework (version 3.5 and up). Recommend 4.0.
  - Microsoft Internet Information Services (IIS), (version 6 and up) Recommend 7.5.
  - Visual Studio.NET (version 2008 and up). Recommend 2010.
  - C# Programming Language with Presentation (UI), Business Object and Data Layers.
  - SQL (Structured Query Language).
  - Microsoft SQL Server 2008, Stored Procedures. Recommend 2008 R2.
  - Microsoft SQL Reporting Services. Recommend 2008 R2.
  - XML (external interfaces).

  Any exceptions to the Electronic File Format requirements above must be approved in writing by the CAM. The CAM will consult with the Energy Commission's

Information Technology Services Branch to determine whether the exceptions are allowable.

MEETINGS

Subtask 1.2 Kick-off Meeting
The goal of this subtask is to establish the lines of communication and procedures for implementing this Agreement.

The Recipient shall:

- Attend a "Kick-off" meeting with the CAM, the Commission Agreement Officer (CAO), and any other Energy Commission staff relevant to the Agreement. The Recipient will bring its Project Manager and any other individuals designated by the CAM to this meeting. The administrative and technical aspects of the Agreement will be discussed at the meeting. Prior to the meeting, the CAM will provide an agenda to all potential meeting participants. The meeting may take place in person or by electronic conferencing (e.g., WebEx), with approval of the CAM.

  The administrative portion of the meeting will include discussion of the following:
  - Terms and conditions of the Agreement;
  - Administrative products (subtask 1.1);
  - CPR meetings (subtask 1.3);
  - Match fund documentation (subtask 1.7);
  - Permit documentation (subtask 1.8);
  - Subcontracts (subtask 1.9); and
  - Any other relevant topics.

  The technical portion of the meeting will include discussion of the following:
  - The CAM's expectations for accomplishing tasks described in the Scope of Work;
  - An updated Project Schedule;
  - Technical products (subtask 1.1);
  - Progress reports and invoices (subtask 1.5);
  - Final Report (subtask 1.6);
  - Technical Advisory Committee meetings (subtasks 1.10 and 1.11); and
  - Any other relevant topics.

- Provide an *Updated Project Schedule, List of Match Funds,* and *List of Permits*, as needed to reflect any changes in the documents.

The CAM shall:

- Designate the date and location of the meeting.
- Send the Recipient a *Kick-off Meeting Agenda*.

Recipient Products:

- Updated Project Schedule *(if applicable)*
- Updated List of Match Funds *(if applicable)*
- Updated List of Permits *(if applicable)*

CAM Product:

- Kick-off Meeting Agenda

Subtask 1.3 Critical Project Review (CPR) Meetings

The goal of this subtask is to determine if the project should continue to receive Energy Commission funding, and if so whether any modifications must be made to the tasks, products, schedule, or budget. CPR meetings provide the opportunity for frank discussions between the Energy Commission and the Recipient. As determined by the CAM, discussions may include project status, challenges, successes, advisory group findings and recommendations, final report preparation, and progress on technical transfer and production readiness activities (if applicable). Participants will include the CAM and the Recipient, and may include the CAO and any other individuals selected by the CAM to provide support to the Energy Commission.

CPR meetings generally take place at key, predetermined points in the Agreement, as determined by the CAM and as shown in the Task List on page 1 of this Exhibit. However, the CAM may schedule additional CPR meetings as necessary. The budget will be reallocated to cover the additional costs borne by the Recipient, but the overall Agreement amount will not increase. CPR meetings generally take place at the Energy Commission, but they may take place at another location, or may be conducted via electronic conferencing (e.g., WebEx) as determined by the CAM.

The Recipient shall:

- Prepare a *CPR Report* for each CPR meeting that: (1) discusses the progress of the Agreement toward achieving its goals and objectives; and (2) includes recommendations and conclusions regarding continued work on the project.
- Submit the CPR Report along with any other *Task Products* that correspond to the technical task for which the CPR meeting is required (i.e., if a CPR meeting is required for Task 2, submit the Task 2 products along with the CPR Report).
- Attend the CPR meeting.
- Present the CPR Report and any other required information at each CPR meeting.

The CAM shall:

- Determine the location, date, and time of each CPR meeting with the Recipient's input.
- Send the Recipient a *CPR Agenda* and a *List of Expected CPR Participants* in advance of the CPR meeting. If applicable, the agenda will include a discussion of match funding and permits.
- Conduct and make a record of each CPR meeting. Provide the Recipient with a *Schedule for Providing a Progress Determination* on continuation of the project.
- Determine whether to continue the project, and if so whether modifications are needed to the tasks, schedule, products, or budget for the remainder of the Agreement. If the CAM concludes that satisfactory progress is not being made, this conclusion will be referred to the Deputy Director of the Energy Research and Development Division.
- Provide the Recipient with a *Progress Determination* on continuation of the project, in accordance with the schedule. The Progress Determination may include a requirement that the Recipient revise one or more products.

Recipient Products:

- CPR Report(s)
- Task Products (draft and/or final as specified in the task)

CAM Products:

- CPR Agenda
- List of Expected CPR Participants
- Schedule for Providing a Progress Determination
- Progress Determination

Subtask 1.4 Final Meeting

The goal of this subtask is to complete the closeout of this Agreement.

The Recipient shall:

- Meet with Energy Commission staff to present project findings, conclusions, and recommendations. The final meeting must be completed during the closeout of this Agreement. This meeting will be attended by the Recipient and CAM, at a minimum. The meeting may occur in person or by electronic conferencing (e.g., WebEx), with approval of the CAM.

  The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be divided into two separate meetings at the CAM's discretion.
  - The technical portion of the meeting will involve the presentation of findings, conclusions, and recommended next steps (if any) for the Agreement. The CAM will determine the appropriate meeting participants.
  - The administrative portion of the meeting will involve a discussion with the CAM and the CAO of the following Agreement closeout items:
    - Disposition of any state-owned equipment.
    - Need to file a Uniform Commercial Code Financing Statement (Form UCC-1) regarding the Energy Commission's interest in patented technology.
    - The Energy Commission's request for specific "generated" data (not already provided in Agreement products).
    - Need to document the Recipient's disclosure of "subject inventions" developed under the Agreement.
    - "Surviving" Agreement provisions such as repayment provisions and confidential products.
    - Final invoicing and release of retention.

- Prepare a *Final Meeting Agreement Summary* that documents any agreement made between the Recipient and Commission staff during the meeting.
- Prepare a *Schedule for Completing Agreement Closeout Activities*.
- Provide *All Draft and Final Written Products* on a CD-ROM or USB memory stick, organized by the tasks in the Agreement.

Products:

- Final Meeting Agreement Summary *(if applicable)*
- Schedule for Completing Agreement Closeout Activities
- All Draft and Final Written Products

REPORTS AND INVOICES

Subtask 1.5 Progress Reports and Invoices
The goals of this subtask are to: (1) periodically verify that satisfactory and continued progress is made towards achieving the project objectives of this Agreement; and (2) ensure that invoices contain all required information and are submitted in the appropriate format.

The Recipient shall:

- Submit a monthly *Progress Report* to the CAM. Each progress report must:
    - Summarize progress made on all Agreement activities as specified in the scope of work for the preceding month, including accomplishments, problems, milestones, products, schedule, fiscal status, and an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. See the Progress Report Format Attachment for the recommended specifications.
- Submit a monthly or quarterly *Invoice* that follows the instructions in the "Payment of Funds" section of the terms and conditions, including a financial report on Match Fund and in-state expenditures.

Products:

- Progress Reports
- Invoices

Subtask 1.6 Final Report
The goal of this subtask is to prepare a comprehensive Final Report that describes the original purpose, approach, results, and conclusions of the work performed under this Agreement. The CAM will review the Final Report, which will be due at least **two months** before the Agreement end date. When creating the Final Report Outline and the Final Report, the Recipient must use the Style Manual provided by the CAM.

Subtask 1.6.1 Final Report Outline

The Recipient shall:

- Prepare a *Final Report Outline* in accordance with the *Style Manual* provided by the CAM. *(See Task 1.1 for requirements for draft and final products.)*

Recipient Products:

- Final Report Outline (draft and final)

CAM Product:

- Style Manual
- Comments on Draft Final Report Outline
- Acceptance of Final Report Outline

Subtask 1.6.2 Final Report

The Recipient shall:

- Prepare a *Final Report* for this Agreement in accordance with the approved Final Report Outline, Style Manual, and Final Report Template provided by the CAM with the following considerations:

- Ensure that the report includes the following items, in the following order:
  - Cover page (**required**)
  - Credits page on the reverse side of cover with legal disclaimer (**required**)
  - Acknowledgements page (optional)
  - Preface (**required**)
  - Abstract, keywords, and citation page (**required**)
  - Table of Contents (**required**, followed by List of Figures and List of Tables, if needed)
  - Executive summary (**required**)
  - Body of the report (**required**)
  - References (if applicable)
  - Glossary/Acronyms (If more than 10 acronyms or abbreviations are used, it is required.)
  - Bibliography (if applicable)
  - Appendices (if applicable) (Create a separate volume if very large.)
  - Attachments (if applicable)
- Ensure that the document is written in the third person.
- Ensure that the Executive Summary is understandable to the lay public.
  - Briefly summarize the completed work. Succinctly describe the project results and whether or not the project goals were accomplished.
  - Identify which specific ratepayers can benefit from the project results and how they can achieve the benefits.
  - If it's necessary to use a technical term in the Executive Summary, provide a brief definition or explanation when the technical term is first used.
- Follow the Style Guide format requirements for headings, figures/tables, citations, and acronyms/abbreviations.
- Ensure that the document omits subjective comments and opinions. However, recommendations in the conclusion of the report are allowed.
- Include a brief description of the project results in the Abstract.

- Submit a draft of the report to the CAM for review and comment. The CAM will provide written comments to the Recipient on the draft product within 15 days of receipt
- Consider incorporating all CAM comments into the Final Report. If the Recipient disagrees with any comment, provide a written response explaining why the comment was not incorporated into the final product
- Submit the revised Final Report and responses to comments within 10 days of notice by the CAM, unless the CAM specifies a longer time period or approves a request for additional time.
- Submit one bound copy of the *Final Report* to the CAM along with *Written Responses to Comments on the Draft Final Report*.

Products:
- Final Report (draft and final)
- Written Responses to Comments on the Draft Final Report

CAM Product:
- Written Comments on the Draft Final Report

MATCH FUNDS, PERMITS, AND SUBCONTRACTS

Subtask 1.7 Match Funds

The goal of this subtask is to ensure that the Recipient obtains any match funds planned for this Agreement and applies them to the Agreement during the Agreement term.

While the costs to obtain and document match funds are not reimbursable under this Agreement, the Recipient may spend match funds for this task. The Recipient may only spend match funds during the Agreement term, either concurrently or prior to the use of Energy Commission funds. Match funds must be identified in writing, and the Recipient must obtain any associated commitments before incurring any costs for which the Recipient will request reimbursement.

The Recipient shall:
- Prepare a *Match Funds Status Letter* that documents the match funds committed to this Agreement. If <u>no match funds</u> were part of the proposal that led to the Energy Commission awarding this Agreement and none have been identified at the time this Agreement starts, and then state this in the letter.

  If match funds were a part of the proposal that led to the Energy Commission awarding this Agreement, then provide in the letter:
  - A list of the match funds that identifies:
    - The amount of cash match funds, their source(s) (including a contact name, address, and telephone number), and the task(s) to which the match funds will be applied.
    - The amount of each in-kind contribution, a description of the contribution type (e.g., property, services), the documented market or book value, the source (including a contact name, address, and telephone number), and the task(s) to which the match funds will be applied. If the in-kind contribution is equipment or other tangible or real property, the Recipient must identify its owner and provide a contact name, address, telephone number, and the address where the property is located.
    - A copy of a letter of commitment from an authorized representative of each source of match funding that the funds or contributions have been secured.
- At the Kick-off meeting, discuss match funds and the impact on the project if they are significantly reduced or not obtained as committed. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.
- Provide a *Supplemental Match Funds Notification Letter* to the CAM of receipt of additional match funds.
- Provide a *Match Funds Reduction Notification Letter* to the CAM if existing match funds are reduced during the course of the Agreement. Reduction of match funds may trigger a CPR meeting.

Products:

- Match Funds Status Letter
- Supplemental Match Funds Notification Letter *(if applicable)*
- Match Funds Reduction Notification Letter *(if applicable)*

Subtask 1.8 Permits

The goal of this subtask is to obtain all permits required for work completed under this Agreement in advance of the date they are needed to keep the Agreement schedule on track. Permit costs and the expenses associated with obtaining permits are not reimbursable under this Agreement, with the exception of costs incurred by University of California recipients. Permits must be identified and obtained before the Recipient may incur any costs related to the use of the permit(s) for which the Recipient will request reimbursement.

The Recipient shall:

- Prepare a *Permit Status Letter* that documents the permits required to conduct this Agreement. If <u>no permits</u> are required at the start of this Agreement, then state this in the letter. If permits will be required during the course of the Agreement, provide in the letter:
    - A list of the permits that identifies: (1) the type of permit; and (2) the name, address, and telephone number of the permitting jurisdictions or lead agencies.
    - The schedule the Recipient will follow in applying for and obtaining the permits.

  The list of permits and the schedule for obtaining them will be discussed at the Kick-off meeting (subtask 1.2), and a timetable for submitting the updated list, schedule, and copies of the permits will be developed. The impact on the project if the permits are not obtained in a timely fashion or are denied will also be discussed. If applicable, permits will be included as a line item in progress reports and will be a topic at CPR meetings.
- If during the course of the Agreement additional permits become necessary, then provide the CAM with an *Updated List of Permits* (including the appropriate information on each permit) and an *Updated Schedule for Acquiring Permits*.
- Send the CAM a *Copy of Each Approved Permit*.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the CAM within 5 days. Either of these events may trigger a CPR meeting.

Products:

- Permit Status Letter
- Updated List of Permits *(if applicable)*
- Updated Schedule for Acquiring Permits *(if applicable)*
- Copy of Each Approved Permit *(if applicable)*

Subtask 1.9 Subcontracts

The goals of this subtask are to: (1) procure subcontracts required to carry out the tasks under this Agreement; and (2) ensure that the subcontracts are consistent with the terms and conditions of this Agreement.

The Recipient shall:

- Manage and coordinate subcontractor activities in accordance with the requirements of this Agreement.
- Incorporate this Agreement by reference into each subcontract.

- Include any required Energy Commission flow-down provisions in each subcontract, in addition to a statement that the terms of this Agreement will prevail if they conflict with the subcontract terms.
- If required by the CAM, submit a draft of each *Subcontract* required to conduct the work under this Agreement.
- Submit a final copy of the executed subcontract.
- Notify and receive written approval from the CAM prior to adding any new subcontractors (see the discussion of subcontractor additions in the terms and conditions).

Products:

- Subcontracts *(draft if required by the CAM)*

TECHNICAL ADVISORY COMMITTEE

Subtask 1.10 Technical Advisory Committee (TAC)

The goal of this subtask is to create an advisory committee for this Agreement. The TAC should be composed of diverse professionals. The composition will vary depending on interest, availability, and need. TAC members will serve at the CAM's discretion. The purpose of the TAC is to:

- Provide guidance in project direction. The guidance may include scope and methodologies, timing, and coordination with other projects. The guidance may be based on:
  - Technical area expertise;
  - Knowledge of market applications; or
  - Linkages between the agreement work and other past, present, or future projects (both public and private sectors) that TAC members are aware of in a particular area.
- Review products and provide recommendations for needed product adjustments, refinements, or enhancements.
- Evaluate the tangible benefits of the project to the state of California, and provide recommendations as needed to enhance the benefits.
- Provide recommendations regarding information dissemination, market pathways, or commercialization strategies relevant to the project products.

The TAC may be composed of qualified professionals spanning the following types of disciplines:

- Researchers knowledgeable about the project subject matter;
- Members of trades that will apply the results of the project (e.g., designers, engineers, architects, contractors, and trade representatives);
- Public interest market transformation implementers;
- Product developers relevant to the project;
- U.S. Department of Energy research managers, or experts from other federal or state agencies relevant to the project;
- Public interest environmental groups;
- Utility representatives;
- Air district staff; and
- Members of relevant technical society committees.

The Recipient shall:

- Prepare a *List of Potential TAC Members* that includes the names, companies, physical and electronic addresses, and phone numbers of potential members. The list will be discussed at the Kick-off meeting, and a schedule for recruiting members and holding the first TAC meeting will be developed.
- Recruit TAC members. Ensure that each individual understands member obligations and the TAC meeting schedule developed in subtask 1.11.
- Prepare a *List of TAC Members* once all TAC members have committed to serving on the TAC.
- Submit *Documentation of TAC Member Commitment* (such as Letters of Acceptance) from each TAC member.

Products:

- List of Potential TAC Members
- List of TAC Members
- Documentation of TAC Member Commitment

Subtask 1.11 TAC Meetings

The goal of this subtask is for the TAC to provide strategic guidance for the project by participating in regular meetings, which may be held via teleconference.

The Recipient shall:

- Discuss the TAC meeting schedule with the CAM at the Kick-off meeting. Determine the number and location of meetings (in-person and via teleconference) in consultation with the CAM.
- Prepare a *TAC Meeting Schedule* that will be presented to the TAC members during recruiting. Revise the schedule after the first TAC meeting to incorporate meeting comments.
- Prepare a *TAC Meeting Agenda* and *TAC Meeting Back-up Materials* for each TAC meeting.
- Organize and lead TAC meetings in accordance with the TAC Meeting Schedule. Changes to the schedule must be pre-approved in writing by the CAM.
- Prepare *TAC Meeting Summaries* that include any recommended resolutions of major TAC issues.

Products:

- TAC Meeting Schedule (draft and final)
- TAC Meeting Agendas (draft and final)
- TAC Meeting Back-up Materials
- TAC Meeting Summaries

IV. TECHNICAL TASKS

*Products that require a draft version are indicated by marking **"(draft and final)"** after the product name in the "Products" section of the task/subtask. If "(draft and final)" does not appear after the product name, only a final version of the product is required. **Subtask 1.1 (Products)** describes the procedure for submitting products to the CAM.*

TASK 2 Design and Manufacture Turbine

The purpose of this task is to model, design, manufacture and test the Pelton turbine based on the previously-developed design concept to be installed at the AWA Project, including the final CFD modeling and design work to produce the runner, valve, and casing designs that both increase efficiency. Finally, this task covers the manufacturing and testing of the runner designed specifically for the AWA project prior to delivery and installation.

The Recipient shall:

- Conduct modeling and design in support of the Pelton turbine innovation, combining current commercial CFD models with engineering assumptions to produce runner, valve, and casing designs that both minimize lost energy and also reduce material costs.
- Present findings in a *Pelton Turbine Design Report*
- Manufacture Pelton turbine incorporating improvements from the Pelton
- Turbine Design Report
- Test Pelton turbine unit prior to delivery and installation at the AWA Ione site.
- Conduct Critical Project Review (CPR)
- Present the findings and results of testing in a *Pelton Turbine Test Report*

Products:

- Pelton Turbine Design Report
- Pelton Turbine Test Report
- Critical Project Review Report

TASK 3 Design and Construct In-Conduit Hydroelectric Project

Initial Civil, Mechanical, and Electrical Design

Subtask 3.1 – Initial Civil, Mechanical, and Electrical Design

The goal of this subtask is to state and validate assumptions related to the initial design of the project that will set the basis for subsequent design and development steps.

The Recipient shall:

- Conduct initial topographic and boundary survey of hydroelectric facility site.
- Conduct geotechnical investigation of the site.
- Refine the preliminary layout to include any modifications or additions based on the demonstrated Pelton turbine design.
- Outline a common understanding of the basis of operations for the hydroelectric facility in concert with existing pressure and flow regulating infrastructure Ione Reservoir.
- Present the results of the initial design in an *Initial Technical Memorandum.*

Products:

- Initial Technical Memorandum

Final Design

Subtask 3.2 – Final Design
The goal of this subtask is to complete the final designs, plans, and specifications for the in-conduit hydroelectric facility.

The Recipient shall:

- Complete *Final Design Plans* for civil, mechanical, and electrical design.
- Complete *Equipment Specifications document* for equipment procurement.
- Complete *General Contractor Specifications document* for general contractor.

Products:

- Final Design Plans
- Equipment Specifications document
- General Contractor Specifications document

Equipment Procurement, Construction and Project Management

Subtask 3.3 – Equipment Procurement, Construction and Project Management
The goals of this subtask are 1) to procure a single pump-as-turbine "water-to-wire" equipment package and 2) to construct the in-conduit hydroelectric station.

The Recipient shall:

- Specify technical requirements, hydraulic and power generation conditions, efficiency requirements, guarantee and warranty requirements, delivery schedule, spare parts, testing, startup and acceptance, commissioning and training requirements. All equipment, system modules, and electrical components shall be listed or recognized by the appropriate United States Safety Laboratory or National Equipment Testing Laboratory (UL, ETL, etc.), as applicable. Incorporate these requirements into *Equipment Manufacturer Bid Package.*

- Solicit Bids for the "water-to-wire" system generally consisting of the turbine, generator, switchgear, PLC, piping and major valves.
- Provide engineering services during construction, supervise construction and safety meetings, manage submittals, and provide on-site inspection.
- Complete a *Critical Project Review* at the completion of construction.

Products:

- Equipment Manufacturer Bid Package
- Critical Project Review Report

Commissioning and Start-Up

Subtask 3.4 – Commissioning and Start-Up

The goal of this task is to bring the hydroelectric facility online and into operation.

The Recipient shall:

- Develop and execute a *Commissioning and Start-Up Plan*. Plan should include pre-start testing, closing devices, first run operation and controls, bearing temperature, vibration, emergency shutdown, electrical protection, over speed test, runaway test, overpressure, emergency trip and load rejection.
- Test the integrated operation of the in-conduit turbine-generator in accoradance with *Commissioning and Start-Up Plan*.
- Summarize the Commissioning process and results in a *Commissioning Report*

Products:

- Commissioning and Start-Up Plan
- Commissioning Report

TASK 4 Evaluate of Project Benefits

The goal of this task is to report the benefits resulting from this project.

Task Description:

Task 4 will be managed and coordinated by the Project Team. The team will estimate projected benefits of the project periodically throughout the agreement as required by the Energy Commission. Benefits analysis will address targeted market sectors (e.g., population and geographic location), market penetration, baseline and projected energy use and cost, operating conditions, and emission reduction calculations. The evaluation process will integrate the findings and results from Tasks 2 and 3; identify key evaluation criteria and assumptions based on credible and industry recognized references (such as the US Energy Information Administration); compare expected and actual project performance using measurement and verification data; identify and discuss any performance variances; identify and evaluate relevant non-energy benefits; and project the impact of such projects on potential job creation, market potential, economic development, and increased state revenue through appropriate analytical and statistical models or techniques.

The Recipient shall:

- Complete three Project Benefits Questionnaires that correspond to three main intervals in the Agreement: (1) *Kick-off Meeting Benefits Questionnaire*; (2) *Mid-term Benefits Questionnaire*; and (3) *Final Meeting Benefits Questionnaire*.
- Provide all key assumptions used to estimate projected benefits, including targeted market sector (e.g., population and geographic location), projected market penetration, baseline and projected energy use and cost, operating conditions, and emission reduction calculations. Examples of information that may be requested in the questionnaires include:

    - <u>For Product Development Projects and Project Demonstrations:</u>
        - Published documents, including date, title, and periodical name.

- Estimated or actual energy and cost savings, and estimated statewide energy savings once market potential has been realized. Identify all assumptions used in the estimates.
- Greenhouse gas and criteria emissions reductions.
- Other non-energy benefits such as reliability, public safety, lower operational cost, environmental improvement, indoor environmental quality, and societal benefits.
- Data on potential job creation, market potential, economic development, and increased state revenue as a result of the project.
- A discussion of project product downloads from websites, and publications in technical journals.
- A comparison of project expectations and performance. Discuss whether the goals and objectives of the Agreement have been met and what improvements are needed, if any.
- Additional Information for Product Development Projects:
    - Outcome of product development efforts, such copyrights and license agreements.
    - Units sold or projected to be sold in California and outside of California.
    - Total annual sales or projected annual sales (in dollars) of products developed under the Agreement.
    - Investment dollars/follow-on private funding as a result of Energy Commission funding.
    - Patent numbers and applications, along with dates and brief descriptions.
- Additional Information for Product Demonstrations:
    - Outcome of demonstrations and status of technology.
    - Number of similar installations.
    - Jobs created/retained as a result of the Agreement.

o For Information/Tools and Other Research Studies:
    - Outcome of project.
    - Published documents, including date, title, and periodical name.
    - A discussion of policy development. State if the project has been cited in government policy publications or technical journals, or has been used to inform regulatory bodies.
    - The number of website downloads.
    - An estimate of how the project information has affected energy use and cost, or has resulted in other non-energy benefits.
    - An estimate of energy and non-energy benefits.
    - Data on potential job creation, market potential, economic development, and increased state revenue as a result of project.

    - A discussion of project product downloads from websites, and publications in technical journals.
    - A comparison of project expectations and performance. Discuss whether the goals and objectives of the Agreement have been met and what improvements are needed, if any.
- Respond to CAM questions regarding responses to the questionnaires.

The Energy Commission may send the Recipient similar questionnaires after the Agreement term ends. Responses to these questionnaires will be voluntary.

Products:

- Kick-off Meeting Benefits Questionnaire
- Mid-term Benefits Questionnaire
- Final Meeting Benefits Questionnaire

TASK 5 Develop Technology/Knowledge Transfer Activities

The goal of this task is to develop a plan to make the knowledge gained, experimental results, and lessons learned available to the public and key decision makers.

Task Description:
Task 5 will be managed and coordinated by the Project Team. The team will develop and execute a plan to share the knowledge, lessons and experimental results gained from this project with the public and key decision makers. Our approach will include outreach to both local and regional water agencies and state policymakers. The team will develop and disseminate outreach materials and education that inform water agencies, irrigation districts, hydropower asset owners and other key stakeholders of the benefits of installing or upgrading existing Pelton turbines with the efficiency improvements demonstrated through this Project, in an effort to expand the use of in-conduit hydropower systems throughout California.

The Recipient shall:

- Prepare an *Initial Fact Sheet* at start of the project that describes the project. Use the format provided by the CAM.
- Prepare a *Final Project Fact Sheet* at the project's conclusion that discusses results. Use the format provided by the CAM.
- Prepare a *Technology/Knowledge Transfer Plan* that includes:
    - An explanation of how the knowledge gained from the project will be made available to the public, including the targeted market sector and potential outreach to end users, utilities, regulatory agencies, and others.
    - A description of the intended use(s) for and users of the project results.
    - Published documents, including date, title, and periodical name.
    - Copies of documents, fact sheets, journal articles, press releases, and other documents prepared for public dissemination. These documents must include the Legal Notice required in the terms and conditions. Indicate where and when the documents were disseminated.

  - A discussion of policy development. State if project has been or will be cited in government policy publications, or used to inform regulatory bodies.
  - The number of website downloads or public requests for project results.
  - Additional areas as determined by the CAM.
- Conduct technology transfer activities in accordance with the Technology/Knowledge Transfer Plan. These activities will be reported in the Progress Reports.
- When directed by the CAM, develop *Presentation Materials* for an Energy Commission-sponsored conference/workshop(s) on the project.
- When directed by the CAM, participate in annual EPIC symposium(s) sponsored by the California Energy Commission.
- Provide at least (6) six *High Quality Digital Photographs* (minimum resolution of 1300x500 pixels in landscape ratio) of pre and post technology installation at the project sites or related project photographs.
- Prepare a *Technology/Knowledge Transfer Report* on technology transfer activities conducted during the project.

Products:

- Initial Fact Sheet (draft and final)
- Final Project Fact Sheet (draft and final)
- Presentation Materials (draft and final)
- High Quality Digital Photographs
- Technology/Knowledge Transfer Plan (draft and final)
- Technology/Knowledge Transfer Report (draft and final)

V. PROJECT SCHEDULE

Please see the attached Excel spreadsheet.

State of California California Natural Resources Agency

M e m o r a n d u m

To: EPC-16-037, Amador Water Agency, AWA-Project CEQA Analysis Date: March 28, 2017

Telephone: 916-327-1530 From: Mike Kane

Subject: California Environmental Quality Act Analysis for EPC-16-037

I am a Mechanical Engineer in the Research and Development Division, California Energy Commission, and am the Commission's Agreement Manager for proposed Agreement EPC-16-037 ("Agreement").

Pursuant to my work in developing the Agreement, including the Scope of Work for the Agreement, I have reviewed the Amador Water Agency's (AWA's) California Environmental Quality Act (CEQA) documents for *The Amador Water Agency In-conduit Hydropower Development Project* (AWA Project) to install and demonstrate a small in-conduit hydro-turbine generator at its facility at Ione Reservoir. The AWA's CEQA documents for the project include the Final Initial Study/Proposed Mitigated Negative Declaration dated September 22, 2016 (MND), and the AWA's Notice of Determination dated September 22, 2017 adopting the MND.

In the MND, AWA identified and analyzed 18 environmental factors for potential impacts, identifying 4 with no feasible impacts, the remaining 14 having at least one potential impact at the level of "Less-than-Significant" or "Less-than-Significant with Mitigation." These areas are: Aesthetics, Agriculture and Forestry, Air Quality, Biological Resources, Cultural Resources, Geology/Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology/Water Quality, Noise, Public Services, Transportation/Traffic, Utilities/Service Systems, and Mandatory Findings of Significance. (MND Pg16-63)

Based on my review and consideration of the above documents, it is my independent and professional opinion that, since the above CEQA documents have been finalized, there have been no new project changes, and no new, additional, or increased significant environmental impacts have occurred. Furthermore, I have not identified any new information which would change the conclusions of the AWA's CEQA documents, or render those conclusions inadequate.

It is also my independent and professional opinion that the work to be performed under the proposed Agreement falls within the scope of the AWA's CEQA documents, and that the Agreement will not result in any new significant environmental impacts. Finally, I have not identified any new mitigation measures, within the Commission's authority, that would lessen or further mitigate the impacts of the AWA Project.

The reasons for my conclusions are as follows:

The proposed Agreement contains two main components with potential environmental impacts: construction of the Pelton turbine power plant and associated powerhouse and equipment at an existing pressure reducing station at Ione Reservoir, and the commissioning of the Power plant at that site. Construction activities are to be generally short-term, occurring over a period of 6-7 months with a construction area footprint of approximately .3 acres. Mitigation measures to control dust, erosion and to protect water quality impacts during construction and for site restoration and monitoring afterward have been adopted and are adequate for the project. The site was surveyed for biological resources in 2014 and found no endangered or threatened species on site, and mitigation measures for other species of concern that might be encountered are incorporated. Due to the small site footprint and the topography being unfavorable, the risk of finding undiscovered cultural resources is very low, and mitigation measures for dealing thereto in the event of discovery are incorporated. Commissioning will not require heavy equipment and will entail access by only a handful of personnel during the commissioning process. For long-term, the Pelton turbine will be operated remotely, with only infrequent visits by maintenance personnel required. Minor changes to diurnal water level fluctuations in Ione Reservoir will occur, but will not adversely affect the operation or provision of public services or utilities. The hydroelectric equipment would operate in conjunction with the flow demands of the water system; water allocations and deliveries will not be affected. All of the construction and commissioning for the proposed Agreement will be within the activities evaluated by AWA Project CEQA documents identified above.

Aesthetics:
The proposed Agreement will result in either no impacts, or impacts that are less than significant. Mitigation measures are neither warranted nor called for.

Agriculture and Forestry:
The proposed Agreement will not result in the rezoning or conversion of farmland or forestland to other uses, and will not create conflicts with existing zoning for agricultural or forest lands. The Agreement will not result in changing the character of forest cover at the project site hence will not result in the loss of forest lands.

Air Quality:
The Agreement will result in short-term construction-related emissions. Long term, the project will result in greenhouse gas reductions of about 28,000 metric tons over the 50-year life of the Pelton turbine. During construction, mitigation measures for controlling fugitive dust will be employed. Vehicle and equipment emissions fall below established thresholds for establishing significant emissions. Overall, the Agreement will result in less-than-significant air quality impacts with mitigation incorporated.

Biological Resources:
The proposed Agreement will not create any significant impacts on biological resources above and beyond those impacts identified in the AWA's CEQA documents. The MND incorporates mitigation measures for biological resources that might be encountered during construction.

Cultural Resources:
The proposed Agreement will not have any impacts on known cultural resources, and will not change the impacts identified in the AWA's CEQA documents. The MND incorporates mitigation measures for cultural resources that might be discovered during construction.

Geology/Soils:
The proposed Agreement will not have any significant impact on geology and soils, and will not change the impacts identified in the AWA's CEQA documents.

Greenhouse Gas Emissions:
The proposed Agreement will not lead to significant impact on greenhouse gas emissions, and will not change the impacts identified in AWA's CEQA documents. Greenhouse gas emissions are limited to vehicle and equipment operation during the 6-7 month construction period and are more than offset by 560 tons CO2e/year avoided emissions. Impacts are less than significant.

Hazards and Hazardous Materials:
The proposed Agreement will not lead to any significant impact on hazards, and will not change the impacts identified in the AWA's CEQA documents.

Hydrology/Water Quality:
The proposed Agreement will not create any significant impact on hydrology and water quality, and will not change the impacts identified in the AWA's CEQA documents. Mitigation measures incorporated in the MND will minimize any risks to water quality during the construction period.

Land Use and Planning:
No impacts are identified.

Mineral Resources:
No impacts are identified.

Noise:

The proposed Agreement will not have any significant impact on noise, and will not change the impacts identified in the AWA's CEQA documents.

Population and Housing:
No impacts are identified.

Public Services:
The Agreement will not result in any significant impact to public services, and will not change the impacts identified in AWA's CEQA documents. Minor changes to diurnal water level fluctuations in Ione Reservoir will occur, but will not adversely affect the operation or provision of public services or utilities.

Recreation:
No impacts identified.

Transportation & Traffic:
The proposed Agreement will not have any significant impact on transportation and traffic, and will not change the impacts identified in the AWA's CEQA documents. Less than significant impacts to highway traffic will occur on State Highways 49, 88 and 104 during construction equipment move-in and move-out, and to accommodate travel to the jobsite of construction workers.

Utilities and Service Systems:
The proposed Agreement will not significantly impact utilities and service systems, and will not change the impacts identified in the AWA's CEQA documents.

Mandatory Findings of Significance:
The proposed Agreement will not significantly impact Mandatory Findings of Significance as identified in the MND. The project has the potential to adversely affect Air Quality, Biological Resources, Cultural Resoruces, Geology/Soils, and Hydrology/Water Quality; however, the MND incorporates mitigation measures that will reduce the impacts to less-than-significant. With respect to cumulative impacts in connection with past, current or probable future projects, there are no known past, current or foreseen future projects that would result in significant cumulative impacts. The project is rural with only short-term less than significant impacts when mitigation is deployed when warranted. The Pelton turbine does not give off any emissions, will not adversely affect long-term water quality, will generate up to 1.566 GWH/year of electricity for the grid, and displace approximately 560 tons of CO2e/year. The project will not adversely affect human beings, directly or indirectly, hence the level of impacts is less than significant.

Amador Water Agency
Ione Small Hydroelectric Project

- ~~Administrative Draft~~ -

Final

Initial Study/Proposed Mitigated Negative Declaration

~~August 11, 2016~~ September 22, 2016

SCH# ___2016608037___

Amador Water Agency
12800 Ridge Road
Sutter Creek, CA 95685

Amador Water Agency
Ione Small Hydroelectric Project

~~- Administrative Draft –~~

Final

Initial Study/Proposed Mitigated Negative Declaration

Prepared for:

Amador Water Agency

Prepared by:

EN2 Resources, Inc.

NOTICE OF PUBLIC REVIEW AND NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

The Amador Water Agency (AWA) is proposing the Ione Small Hydroelectric Project at its Ione Reservoir. The project consists of construction and operation of a new 448 kW hydroelectric facility that is intended to supplement power to serve the water system. Water from the Ione Reservoir is used to serve the area around and within the City of Ione, California.

The Project involves adding an in-conduit turbine generator and powerhouse to existing water facilities at AWA's Ione Reservoir. The Ione Reservoir, located approximately 7.3 miles from its water source at the Tanner Reservoir, is fed through the 16-inch Ione Pipeline. The Project area, including power lines to connect the new hydroelectric equipment with an existing PG&E power line, is anticipated to be less than 0.3 acre in size.

An approximately 18' x 24' (432 sf) metal powerhouse building, to protect the generating equipment from moisture and dust, would be constructed near the existing pressure reducing station at the AWA Ione WTP, located about 50 feet above the Ione Reservoir shoreline. A short, distribution-level voltage power line would be installed below grade following the existing unpaved road from the hydroelectric facility to interconnect with existing 3-phase PG&E power lines that are located approximately 1/3 mile away.

The hydroelectric equipment would operate in conjunction with the flow demands of the water system; existing pipes would be modified and rerouted to serve the hydroelectric system. The Ione Powerhouse operation would optimize power generation by operating at maximum flow for longer periods of time when power prices are highest and then reduce operation during low flow demand periods. This minor change in operations would affect the diurnal water levels of the Ione Reservoir such that the levels would vary more than historically. However, no changes in total water use would result from the Project.

The Project is located in Amador County, approximately 1.5 miles southeast of the City of Ione and 11 miles west of the Amador County seat in Jackson, California. The site, owned by the AWA, is located on the U.S. Geological Survey (USGS) 7.5-minute Ione Quadrangle in Section 32, Township 6N, Range 10E, MDBM. The approximately 26-acre reservoir, built in 1963 by PG&E, is accessed via an unpaved, gated access road off California State Highway 104.

Project construction, anticipated to begin in late 2016 or early 2017, would be performed over an approximately six to seven -month construction period. Water Agency operation of the Ione facilities would be improved through lowering of long-term energy costs and reduced greenhouse gas emissions.

The 30-day period for public review and comment on the proposed Mitigated Negative Declaration begins August 12, 2016. All comments must be submitted by September 11, 2016. Please address comments on the proposed Mitigated Negative Declaration as follows:

Proposed Mitigated Negative Declaration - Ione Small Hydroelectric Project
Amador Water Agency
12800 Ridge Road, Sutter Creek, CA 95685
Attn: Damon Wyckoff; Operations Manager

Email: dwyckoff@amadorwater.org

A copy of the proposed Mitigated Negative Declaration and supporting documents can be reviewed at AWA's office at the above address or online at www.amadorwater.org Documentation filed at the Amador County Clerk's office can be returned to the above address. For further information regarding the proposed Mitigated Negative Declaration and AWA's schedule to consider adoption of the document, please contact Mr. Damon Wyckoff at (209) 257-5284 or via email at dwyckoff@amadorwater.org.

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1.0 Introduction

The Amador Water Agency (AWA) is proposing the Ione Small Hydroelectric Project. The Project encompasses less than one acre of land and consists of three primary activities: adding a small in-conduit turbine generator turbine and metal powerhouse building to existing water system facilities at the Ione Reservoir; connecting the new hydropower system to existing PG&E lines; and, post-construction restoration and revegetation of disturbed soils, wetland areas and an unpaved access road. Total disturbed area, including a staging area, would be approximately 0.3 acre.

Based on the results of a January 2013 hydropower analysis, AWA decided to pursue development of small in-conduit turbine generator hydropower projects at two of its water facilities – Tanner Water Treatment Plant (WTP) and Ione Reservoir (NLine 2013). This Draft Initial Study (IS)/proposed Mitigated Negative Declaration (MND) has been prepared in conjunction with the proposed design of the Ione Small Hydroelectric Project.

1.1 Background

The AWA was formed in 1959 to provide water and wastewater services to residents of Amador County. The Agency's main source of fresh water supply is the North Fork of the Mokelumne River, which originates in California's Sierra Nevada mountain range. Water supplied from rainfall and snowmelt is diverted from the river into the Tiger Creek Afterbay or Lake Tabeaud Forebay (Lake Tabeaud).

From Lake Tabeaud, AWA water gravity flows to two of the Agency's treatment plants. These treatment plants provide water to the cities of Jackson, Ione, Sutter Creek, Amador City and Drytown as well as communities along Highway 88. Only the two treatment plants within the Amador Water System (AWS) would be affected by the proposed Ione hydroelectric facility.

The AWS consists of two WTPs at Sutter Hill (Tanner WTP) and Ione (Ione WTP). Mokelumne River water is first diverted to the Electra Tunnel, a PG&E facility, to Lake Tabeaud which serves as a forebay to the PG&E Electra Powerhouse. From here, the water is diverted into the Amador transmission pipeline where it is gravity fed to the Tanner Reservoir and WTP (approximately elevation 1,700 feet above mean sea level (MSL). The Ione Reservoir (approximately 500 feet MSL), is fed through the 16-inch Ione Pipeline, about 7.3 miles from the Tanner WTP. Raw water from the Ione Reservoir is then piped to the AWA WTP located in the City of Ione, California. Once treated, the water supplies the area in and around Ione.

1.2 CEQA Review

To comply with AWA's requirements under the California Environmental Quality Act (CEQA), this IS and Proposed MND (per CEQA Guidelines §15070-15075) identifies and addresses potential environmental effects and mitigation measures to be implemented during construction, operation, and maintenance of the proposed Project.

This IS/Proposed MND includes AWA's understanding of applicable environmental regulatory review processes and identified mitigation measures for implementing the proposed Project. Permitting of the proposed Project would occur after AWA's completion of CEQA review.

The AWA Tanner Small Hydroelectric Project, a separate project to be constructed prior to the Ione Project, is not analyzed as a part of this CEQA document. It is located over seven miles away, within the fenced grounds of the AWA Headquarters and WTP in Sutter Creek, California.

2.0 Project Location

The Project is located in Amador County, approximately 1.5 miles southeast of the City of Ione and 11 miles west of the Amador County seat in Jackson, California. The site is located on the U.S. Geological Survey (USGS) 7.5-minute Ione Quadrangle in Section 32, Township 6N, Range 10E, MDBM. The approximately 26-acre Ione Reservoir, built in 1963 by PG&E, is accessed via an unpaved, gated access road off California State Highway 104. The Project vicinity is shown in Figure 1. Project Location.

3.0 Project Objectives

Objectives of the proposed Project include:

1. Generate hydroelectric power using existing water system infrastructure to produce renewable energy for AWA facilities.
2. Increase AWA water system resiliency and sustainability while reducing reliance on fossil fuels and associated greenhouse gas emissions.
3. Minimize environmental impacts to natural and cultural resources to the extent feasible.
4. Minimize the overall costs to AWA's ratepayers for the proposed hydropower improvements, and create a long-term (renewable energy) revenue stream to reduce costs for operation of the water system.

4.0 Proposed Project Components and Construction Schedule

This section describes the various activities that are being proposed as part of the Project (see Figure 2 - Project Area). The Project encompasses less than one acre of area and consists of three primary activities:

1. Adding a 448 kW capacity, in-conduit turbine generator, metal powerhouse building and discharge pipes to existing water facilities at the Ione Reservoir;
2. Connecting the new hydroelectric system to existing PG&E electrical lines; and,
3. Restoration and revegetation of disturbed soils, wetland areas and the unpaved access road.

<u>Construction Schedule</u>

The Project construction has not been scheduled, however it could commence with staging in summer and then construction during late summer, once bird-nesting season (February 15 – September 15) is over. Weather permitting, project construction could begin at the beginning of the year, before bird-nesting season begins.

Construction of the proposed Project, including all three components, is expected to require seven to eight months. Trenching and installation of the 12-kilovolt below grade power line would occur over a four-week period, most probably after pipeline work is complete and the powerhouse construction is well underway. Restoration of the roads and other areas would follow the construction, while

revegetation and installation of native plants would be set for the beginning of the rainy season (November to January).

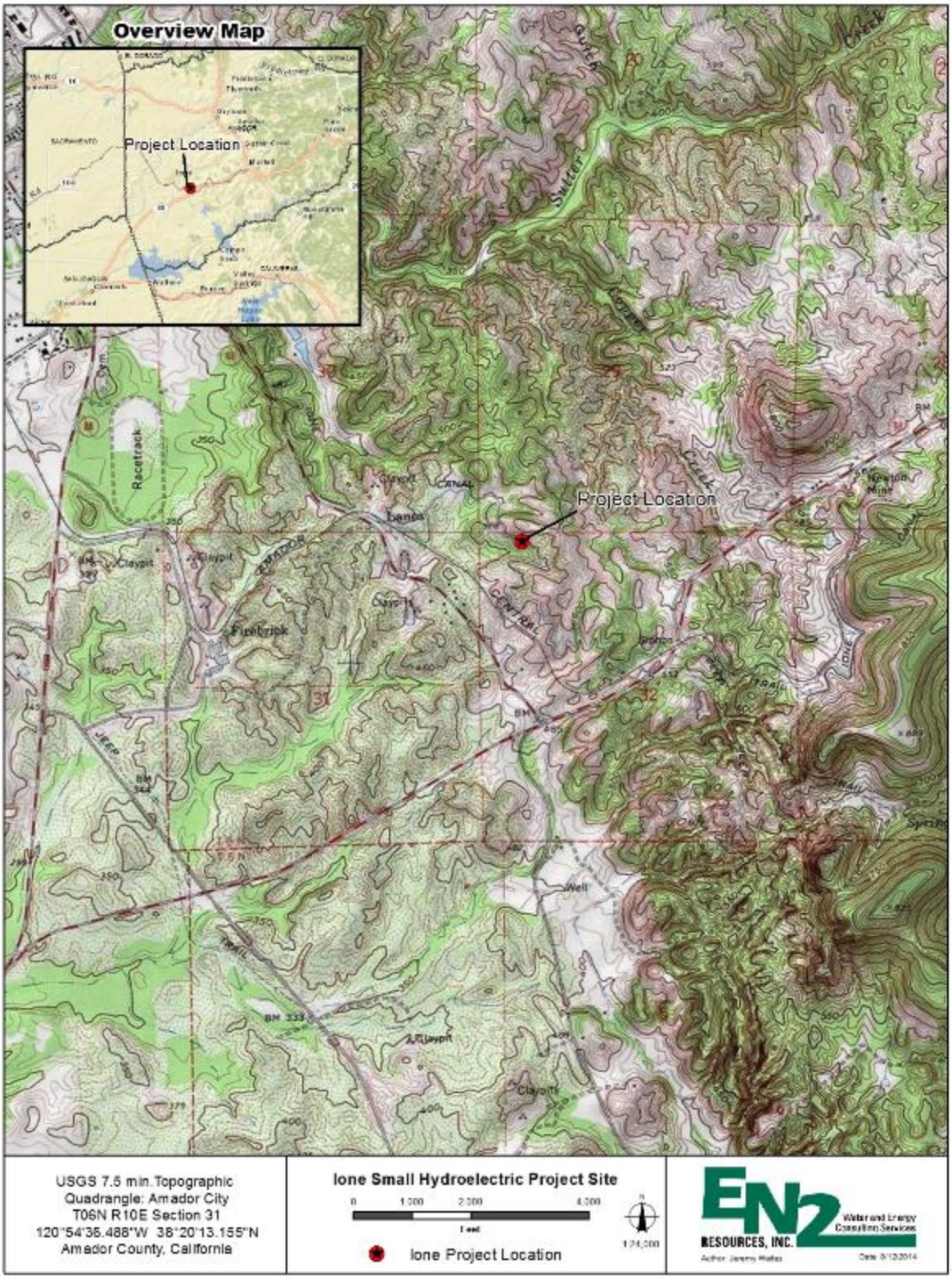

Figure 1. Project Location

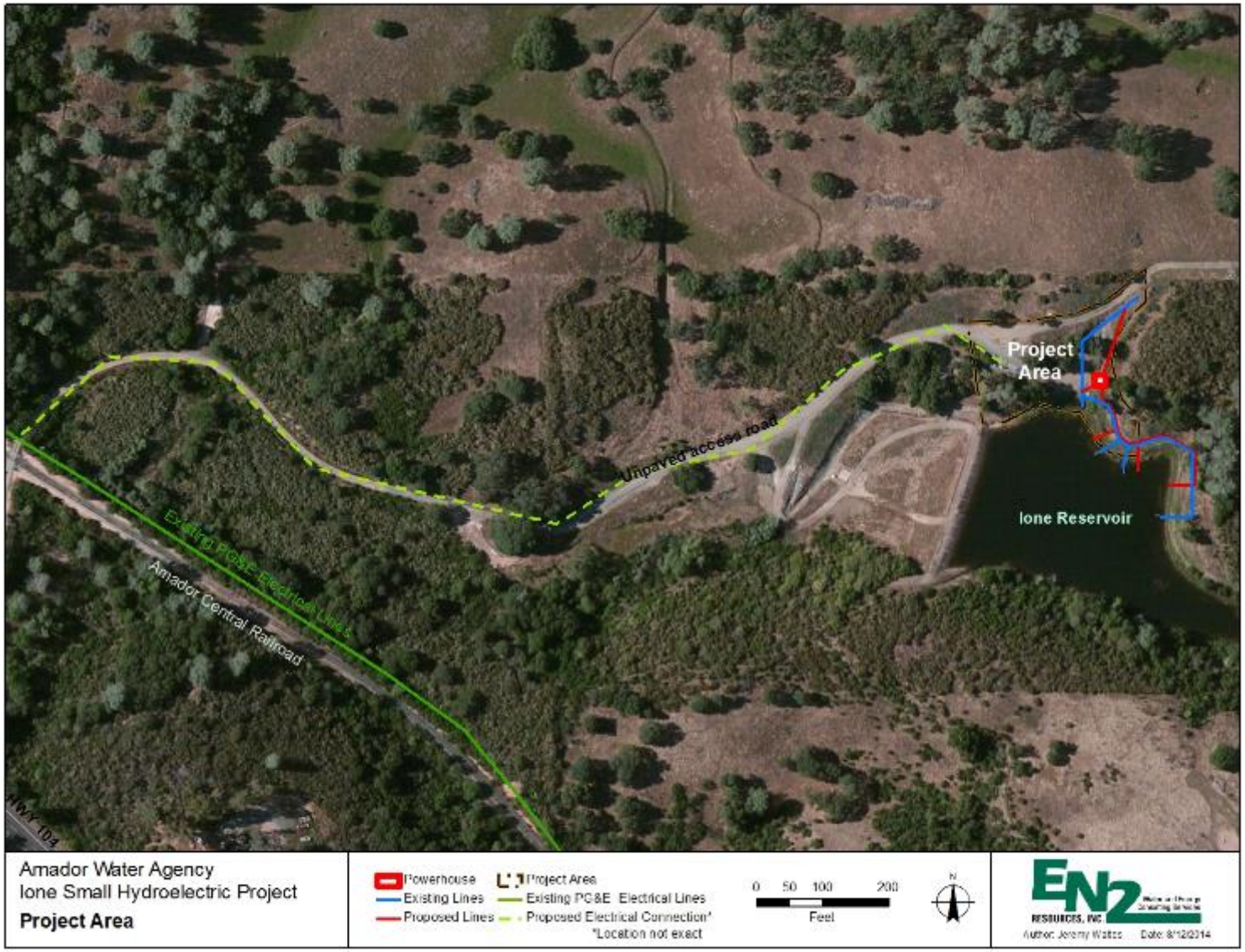

Figure 2. Project Area

4.1 Hydropower Infrastructure

The Ione small hydroelectric Project involves adding a new 448 kW capacity in-conduit turbine generator, powerhouse and pipelines to existing water facilities at AWA's Ione Reservoir. The Ione Reservoir, approximately 7.3 miles from its water source the Tanner Reservoir, is fed through the 16-inch Ione Pipeline. The AWA-owned reservoir is accessed from California Highway 104 via an unpaved road that crosses private rural property, railroad tracks and PG&E power lines before reaching the Project site.

An approximately 18 feet x 24 feet (432 sf) metal powerhouse structure would be built near the existing pressure reducing station at the Ione Reservoir. The Ione facility is a high head, low flow application that would be fitted with a Pelton turbine. Flow into the Ione Reservoir varies between approximately 1 cfs and 5 cfs and the differential head is approximately 1,000 feet. The Pelton turbine technology can process a range of flows at this differential head and discharge to atmosphere. This turbine would be designed in parallel with the existing pressure reducing station but would not operate in parallel mode. The existing pressure reducing station would operate if the hydropower station were taken out of service. The Ione Powerhouse operation can optimize power by operating at a maximum flow level for longer periods of time when power prices are highest and then reduce operation during low flow demand periods. This minor change in operations would affect the diurnal water levels of the Ione Reservoir such that the levels would vary more than historically (NLine Energy 2013). However, no changes in total water use would result from the Project.

One new 12-inch diameter water discharge pipeline would be built within the existing access road, which would avoid disturbance of vegetation. Three new 10-inch discharge pipelines, each approximately 24 feet in length, would cross the wetland perimeter zone of, and extend into, the reservoir. These discharge lines would be in addition to existing water lines that help reservoir circulation and aeration. The Project construction area, including power lines to connect the new hydroelectric equipment with existing PG&E power, is less than one acre in size.

4.2 Power Connection

The Ione small hydroelectric project would connect to existing PG&E electrical lines. A short, distribution-level voltage power line would be constructed in the existing unpaved access road from the hydroelectric facility to interconnect with an existing 3-phase PG&E power line. The existing power line is located approximately 1/3 mile away near a single set of railroad tracks. The portion of the unpaved road from the Project location to the existing 3-phase power line is within AWA property.

The 12-kilovolt power line would follow the access road and will be constructed below ground. The underground construction would require excavation for in-ground concrete box installation and trenching for conduit installation. There would be four to five pull boxes, each measuring 4 feet x 6 feet x 4 feet. 6).

4.3 Restoration and Revegetation

The Project would disturb up to 0.3 acre of land as a result of construction of the proposed hydropower infrastructure, pipelines and power lines. These include:

- Temporary impacts upon the existing unpaved roadway and other unvegetated areas.

- Temporary reservoir perimeter wetland disturbance during installation of pipelines.
- Temporary disturbance of grasslands, vegetated with primarily native grasses, forbs and shrubs.
- Permanent removal of one 6-inch diameter oak tree.

All other trees and large shrubs would be avoided and, if near construction activity, would be protected from impacts with fencing.

Four types of restoration and revegetation activities would follow Project construction, as described below. To restore the disturbed habitat, a detailed replanting plan would be developed. AWA would keep all records of restoration, maintenance and monitoring activities in the permanent record for the Project, to be available upon request of CDFW or other interested parties.

4.3.1 Rehabilitation of Unpaved Roadway and Infrastructure Areas

Much of the proposed construction area is composed of an unpaved access road and unvegetated areas that have previously been developed with underground and above ground water supply pipelines and other water system infrastructure. As part of the Project, AWA would prepare a Grading Plan as part of the Project Bid and Construction documents. This plan would contain best management practices (BMPs) to prevent and minimize erosion. A monitoring plan would be prepared as part of this plan to ensure BMPs are in place and are working. Roadway and infrastructure areas that are impacted by construction work would be reshaped to meet requirements of the Project grading plan, including erosion protection BMPs. All road and site rehabilitation would be completed as final site construction.

4.3.2 Wetlands Restoration

Three pipelines would cross through the perimeter wetland zone around the reservoir, necessitating temporary wetland impacts, mitigation, permitting and subsequent restoration. Section 8.4.4 discusses the biological impacts and mitigation related to wetlands in the Project area, as well as required permits to comply with Sections 404 and 401 of the Clean Water Act. The text below describes restoration activities in the wetland zone during and after Project construction.

The perimeter wetland zone work would be done in conjunction with trenching for the pipelines, and subsequent refilling of the trenches. First, the wetland area to be impacted (approximately 4 feet wide and 25 feet long for each of 3 pipes) would be identified and its vegetation mowed. Second, using a backhoe or similar equipment, the top layer of the wetland, to a depth of approximately 12 to 15 inches, would be scooped up and carefully set aside. The wetland vegetation, exposed roots and soil would be set in proximity to the trench, and kept moist by periodic spraying and/or covering with wet burlap. The trench should be kept open for the minimum practical time period, and filled as soon as the pipeline is laid and inspected. Upon replacement of the wetland vegetation as the top layer of the refilled trench, the impacted area shall be watered and kept moist until re-established. Depending upon the time of year, this could require occasional watering of up to 2 to 4 months.

4.3.3 Grassland Reseeding

Non-wetland areas that would be temporarily disturbed by Project construction are primarily vegetated with native grasses, forbs and shrubs. As part of the Project, and as described above, AWA would prepare a Grading Plan to be approved by Amador County.

In addition to the erosion control measures in the Grading Plan, all areas of exposed soil would be re-seeded with a mixture of grasses and forbs typical of the species composition currently growing at the site. The species mixture would be determined by a qualified professional and should be based on the species found at the site and commercial availability. All areas of exposed soil would be seeded within 30 days of completing construction.

AWA shall provide documentation of grassland revegetation efforts and monitoring to determine whether the revegetation is successful. A qualified professional would be used to determine the success of revegetation efforts and provide recommendations for remediating the reclamation should the revegetation be determined unsuccessful.

4.3.4 Oak Tree Replacement

To compensate for the permanent removal of a 6-inch diameter Interior Live Oak (*Quercus wislizenii)* replacement planting of 12 or more acorns of the same oak species would occur within 12 months of project completion. Replacement acorns would be native to California's western slope Sierra foothills. It would be the AWA responsibility to ensure a 25% survival rate for a period of 3 years with annual monitoring described below.

Irrigation, mulching and weeding would be conducted for the first 2 or 3 years. Infrequent, deep watering of acorn shall occur every two to three weeks of dry periods during the first year and every three to four weeks during the second and third years (if necessary) with the intent of preventing desiccation, and dependent on soils, mulch, and site conditions. The use of appropriate mulch is recommended to help with water retention and reduce weed density and competition. Controlling weeds around the acorns and resultant saplings would aid survival and improve tree growth. It would be necessary to protect the seedlings from grazing cattle and deer by using tree shelters.

<u>Monitoring and Reporting</u>

Monitoring of the revegetated areas and oak acorns is the responsibility of AWA, and would adhere to the following guidelines:

- For a period of 4 years, AWA would annually monitor and record the progress of the acorns planted to replace the oak tree. The annual report shall include:
    - Photo documentation and a description (i.e., location and size) of the lands included in the mitigation program;
    - A count of live and dead acorns and saplings;
    - A brief summary of site conditions and any recommendations
- At year 3, AWA would prepare a written report documenting the condition of all the acorns that were planted, the subsequent saplings, and the number of failures and to provide a summary of management activities.
- If the failure rate of the replacement plantings exceeds 75% at year 3, then replanting new acorns for those that have not survived is required to meet the 25% survivability goal. Monitoring reports and evidence of replanting shall be kept in the permanent record for the Project by AWA.

<u>Vegetation Preservation</u>

The following procedures have been included to ensure the safety and health of shrubs and trees adjacent to the proposed areas of ground disturbance. All vegetation not designated for removal and near the construction area would be protected using the following guidelines:

Tree Protection Fencing

- Prior to any construction disturbance activities, install temporary tree protection fence beyond the outermost edge of the tree root zone (minimum distance is length of the longest branch); a qualified professional would indicate where fencing is required on a map to be used by AWA and the construction contractor.
- High visibility orange fencing or fencing otherwise approved by a qualified biologist or arborist shall be used.
- Fences must remain in place throughout the entire construction period and may not be removed.

Materials/Equipment

- No person shall store materials or park vehicles or equipment within the tree root zone of any protected vegetation during Project development, unless specifically authorized by a Certified Arborist or other qualified professional.
- Oil, gasoline, chemicals and other construction materials or equipment that might be harmful to trees shall not be stored within the tree root zone.
- No paint thinner, paint, plaster or other liquid or solid excess or waste construction materials or wastewater shall be dumped on the ground or into any grate between the tree root zone and the base of the protected trees, or uphill from any protected tree where such substance might reach the roots through a leaching process.
- Wires, signs and other similar items shall not be attached to the protected trees.
- No person shall drive metal stakes into tree trunks or stems or the tree root zone for any purpose other than to support a protected tree.
- No person shall have an open flame within fifteen feet of the foliar canopy or trunk of a protected tree.

Damage to Protected Trees

- Damage to any protected tree during construction shall be immediately reported to AWA and recorded in the first annual monitoring.
- AWA shall be responsible for correcting any damage to protected trees on the property in a manner specified by a professional arborist or biologist.
- All trees adjacent to construction activities where changes in grade have occurred within the protected root zone shall also be monitored during the annual monitoring for a period of 3 years. If any of these trees dies within this period, they too shall be replaced at a 3:1 ratio.

<u>Noxious Weeds</u>

In conjunction with the replanting and monitoring activities, the site would be annually monitored for invasive, noxious weeds for a period of 3 years following construction. Any significant occurrence of noxious weeds rated by the California Invasive Plant Council (Cal-IPC) as "High" shall be recorded and treated. In addition, the following mitigation measures would be implemented:

- The construction contractor would be briefed on the noxious weed species present and the need to minimize the potential for spread, which would include implementing the mitigation and minimization measures below.
- The construction contractor would thoroughly clean all tools and equipment used in the field prior to entering and beginning construction at this site.
- Ground disturbance would be minimized to the extent possible.
- If straw or mulch is used for erosion control purposes, the construction contractor would use certified weed-free straw or mulch and obtain a certificate from the county of origin stating that any such straw or mulch was inspected. AWA would keep evidence of weed-free straw certification in the permanent Project record.

5.0 Proposed Project Construction Methods

Construction activity would occur primarily on AWA property, and mostly by the existing unpaved access road leading to the reservoir from California State Highway 104. Construction staging, including materials storage, for the proposed Project would be located on the AWA property in a flat, open area that is northwest of the proposed powerhouse.

AWA is exempt from County permits for grading, clearing, excavation, and spoils disposal activities, however would coordinate with the Fire Warden regarding fire protection. Construction equipment for Project activities would be expected to include the following during various periods of the 6- to 7-month construction period, although it is unlikely that more than 5 pieces of equipment would be in use at any one time.

<u>Equipment Needs</u>

- Backhoe (1)
- Bulldozer (1)
- Motor Grader (1)
- Soil Compactor (Sheep-Foot) (1)
- Water Truck (1)
- General use pickups (2)
- Truck-mounted crane (1)
- Concrete Truck or Concrete Pumping Truck (1, possibly 2 at once)

It is anticipated that the construction activity would be localized, and that concrete would be trucked to the site from off-site batch plants in the region. One or possibly two concrete pumping trucks would be used for pouring a concrete base for the proposed turbine-generator powerhouse, and any footings needed for power line connections.

AWA personnel anticipate that work on the Project would generally be performed between the hours of 7:00 a.m. and 5:50 p.m., five days a week (Monday-Friday) except for holidays. There may be infrequent days when work extends as late as 7:00 p.m. Up to four construction personnel would be expected at any one time during proposed Project activities.

Construction Safety

The site is located on AWA land and can only be accessed via a private road and through a locked gate, and therefore, non-construction personnel (i.e., the public) would not have access to the site. AWA would have an inspector assigned to the proposed Project during the duration of the Project to monitor implementation and document compliance with agency regulations and requirements by the construction personnel. AWA representatives would have the authority to stop work in the event of noncompliance.

6.0 Proposed Project Operations and Maintenance

The proposed Ione small hydroelectric Project would operate in conjunction with the flow demands of the existing water system. The Ione Reservoir is operated remotely, and this would not change with the addition of new hydroelectric equipment and a powerhouse structure. At this time, AWA personnel visit the Ione Reservoir daily, Monday through Friday to monitor conditions. Once operation of the new hydroelectric system is fully underway, the system's regular monitoring would resume.

As described in section 4.1 Infrastructure, the proposed Project would optimize power generation by operating at a maximum flow level for longer periods of time when power prices are highest and then reduce operation during low flow demand periods. This minor change in operations would affect the diurnal water levels of the Ione Reservoir such that the levels would vary more than historically (NLine 2013). However, no new changes would result to total water use by AWA.

Estimated generation from the Project would be 1,566,206 kWh/year, operating year-round except for 1-2 weeks when it would be shut down for inspection and maintenance. Annual generation would reduce GHG emissions by about 560 tons of CO_2/year.

Once installed, the custom designed Pelton turbine would require relatively minor maintenance for its first 15 years of operation. After about 15 years, the hydropower equipment would require bearing replacements and similar equipment maintenance for continued future operation. Overall, only minor maintenance and repairs would be needed for the proposed small hydroelectric facility as the equipment is designed to last 70 to 100 years.

7.0 Environmental Review and Potential Permitting Requirements

CEQA review would be completed and applicable permits would be obtained before AWA commencement of the proposed Project construction activities. Table 1 (below) lists the agency reviews and permits that are anticipated for AWA to implement the Project.

Table 1. Agency Review and Potential Permit Requirements for the Project

Agency	Applicable Laws/Regulations
Amador Water Agency (CEQA Lead Agency)	Section 21000 et seq. of Public Resources Code, Section 15000 et seq. of California Code of Regulations, CEQA
U.S. Army Corps of Engineers (USACE)	Section 404 of Clean Water Act Nationwide Wetland Permit Program
State Office of Historic Preservation	Section 106 of National Historic Preservation Act
U.S. Fish and Wildlife Service (USFWS)	Federal Endangered Species Act, Fish and Wildlife Coordination Act, Migratory Bird Protection Act, as applicable
California Department of Fish and Wildlife (CDFW)	California Endangered Species Act, Fish and Game Code Section 1600, 1802, 2080.1 and/or 2081, as applicable
California Water Quality Control Board, Central Valley Region (RWQCB)	Clean Water Act, Section 401, Water Quality Certification
Amador County Air Pollution Control District	Fugitive Dust Control Plan
Amador County Office of the Fire Warden/Fire Prevention	Fire Warden Review

8.0 Environmental Checklist

8.1 Background

Project title:	Ione Small Hydroelectric Project
Lead agency name and address:	Amador Water Agency 1200 Ridge Road Sutter Creek, CA 95685
Contact person and phone number:	Damon Wyckoff, Operations Manager (209) 257-5284
Project Location:	The Ione Reservoir is located about 1.5 miles southeast of the City of Ione, in an unincorporated area of Amador County, CA. The Project is accessed from State Highway 104.
Project sponsor's name and address:	Amador Water Agency 1200 Ridge Road Sutter Creek, CA 95685
General Plan description:	The Ione Reservoir, a water supply reservoir, is owned and operated by AWA. The adjacent lands are privately owned agricultural properties. The General Plan Land Use designation is PS-Public Services
Zoning:	Single Family Residential Agriculture

8.2 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this proposed Project, involving at least one impact that is "Less-than-Significant" or "Less Than Significant with Mitigation" as indicated by the accompanying environmental checklist.

☒	Aesthetics	☒	Agriculture and Forestry	☒	Air Quality
☒	Biological Resources	☒	Cultural Resources	☒	Geology/Soils
☒	Greenhouse Gas Emissions	☒	Hazards and Hazardous Materials	☒	Hydrology/Water Quality
☐	Land Use/Planning	☐	Mineral Resources	☒	Noise
☐	Population/Housing	☒	Public Services	☐	Recreation
☒	Transportation/Traffic	☒	Utilities/Service Systems	☒	Mandatory Findings of Significance

8.3 Determination

(To be completed by the Lead Agency)

Based on this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	8/11/16 Date
Gene Mancebo, General Manager Printed	Date

8.4 Evaluation of Environmental Impacts

The degree of change from existing conditions caused by the Project is compared to the impact evaluation criteria to determine if the change is significant. Where it is determined that one or more significant impacts could result from implementation of the Project, mitigation measures are developed to reduce or eliminate the significant impacts. Existing conditions serve as a baseline for evaluating the impacts of the Project.

The following terminology is used in this document to describe the various levels of environmental impacts associated with the Project:

- A finding of *no impact* is identified if the analysis concludes that the proposed Project would not affect a particular environmental topical area in any way.

- An impact is considered *less than significant* if the analysis concludes that the proposed Project would not cause a substantial adverse change in the environment, or would result in a positive change to the environment.
- An impact is considered *less than significant with mitigation* if the analysis concludes that the proposed Project has the potential to cause a substantial adverse change in the environment, but the proposed Project includes measures to mitigate the potential impact to a less than significant level.
- An impact would be considered a *potentially significant impact* if the analysis concludes that the proposed Project could cause a significant environmental effect, even with mitigation. Proposed Projects that potentially produce a significant impact(s) warrant the greater level of analysis and consideration provided by an Environmental Impact Report (EIR).

8.4.1 Aesthetics

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Discussion of Impact on Aesthetics

a) Less than Significant Impact. The site and proposed powerhouse are not visible from publicly accessible areas, and only one residential property overlooks the reservoir from a distance of over 500 feet. The house on the residential property is located in an area that does not look down upon the proposed hydroelectric project site.

b) No Impact. The Project is not located near an existing or planned State Scenic Highway (Caltrans 2014).

c) Less than Significant Impact. The visual character of the site and its surroundings, described as rural grazing land with rolling foothill topography, would not be significantly altered. A 25-foot x 25-foot metal powerhouse structure would enclose a new in-conduit turbine generator and existing pressure-reducing valve. The proposed infrastructure would be an integral part of AWA's water supply system. The new metal structure's roof and siding would be selected to blend with the surroundings, and would not substantially degrade the rural area.

   Short-term impacts associated with clearing, grubbing and vegetation removal would occur during and immediately after construction activities. As described in Section 4.3, disturbed areas that are not roadways or developed for infrastructure would be reseeded, and any trees and other vegetation removed would be replaced through the development and implementation of a revegetation plan. The Project would have less-than-significant impacts on the visual character and quality of the site and its surroundings.

d) Less than Significant Impact. A metal powerhouse building, approximately 625 square feet in size, would be constructed to protect the new hydropower equipment from dust and rain. No exterior lighting would illuminate the powerhouse; therefore, the new structure would not result in the creation of significant levels of light and glare that would adversely affect day or nighttime views in the area. The Project would have less-than-significant impacts because there are no residents or visitors in proximity of the new infrastructure that could be affected by the new structure.

Mitigation Measures for Aesthetics

No mitigation is required or warranted.

8.4.2 Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board (CARB). Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forestland or conversion of forestland to non-forest use?	☐	☐	☒	☐
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use?	☐	☐	☐	☒

Existing Setting for Agriculture and Forest Resources

The site is located at about 500 feet above sea level along the eastern edge of the San Joaquin Valley, in the transition zone between the grasslands of the Central Valley and Sierra Nevada foothills. The small hydroelectric Project site is located on property owned by AWA, with access from State Highway 104 via privately owned property (Amador County GIS 2014). The land immediately surrounding the Project is primarily used for grazing and is actively grazed.

Discussion of Impacts of Agriculture and Forest Resources

a) No Impact. The Project is located on land mapped as Grazing Land by the Farmland Mapping and Monitoring Program of the California Resources Agency (CRA, 2014). The AWA property and surrounding property are not considered Farmland.

b) No Impact. The proposed Project would not conflict with existing zoning for agricultural use or a Williamson Act contract.

c) No Impact. The land use of the AWA property, with Ione reservoir and associated public water system infrastructure, would not change because of the Project, and the public water supply system use is consistent with the existing PS-Public Service zoning.

d) Less than Significant Impact. In accordance with the definition provided in California Public Resources Code Section 12220(g):

> *Forest land is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.*

The oak woodland habitat where the Ione small hydroelectric Project is proposed could potentially support at least 10% canopy cover by native oaks (primarily *Quercus douglasii and Quercus wislizenii*). However, the AWA property is currently used as a water supply reservoir with associated water system infrastructure, and this use would not change as a result of the Project. Therefore, the Project would not involve the loss of forestland or conversion of forestland to non-forest use.

e) No Impact. The Project would not cause other changes that could result in the conversion of farmland or forestland to other uses.

Mitigation Measures for Agriculture and Forest Resources

No mitigation is required or warranted.

8.4.3 Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

Environmental Setting for Air Quality

Air quality in the Project area is regulated by the U.S. Environmental Protection Agency (EPA), California Air Resources Board (CARB), and the Amador County Air Pollution Control District (ACAPCD). Amador County is located in the central portion of the Mountain Counties Air Basin (MCAB). The MCAB, an area of approximately 11,000 square miles, consists of Plumas, Sierra, Nevada, Amador, Calaveras, Tuolumne, and Mariposa counties, in addition to the west slope of El Dorado County and the central portion of Placer County. The majority of the MCAB is located in the northern Sierra Nevada area, with the western boundary of the basin extending into the Sacramento Valley. The eastern boundary of the MCAB is the crest of the Sierra. The topography in the MCAB is quite variable because of valleys and mountain peaks that differ substantially in elevation from approximately 100 to 10,000 feet.

Under State regulation, Amador County, where the Project is located, is designated non-attainment for the following standards: 1-hour ozone, 8-hour ozone (CARB 2013). The County is either designated as attainment or unclassified for the remaining Federal and State standards, that include: particulate matter 10 (PM10) and 2.5 (PM2.5) microns in diameter, nitrogen dioxide (NO2), sulfur dioxide (SO2), carbon monoxide (CO), sulfates, hydrogen sulfide (H2S), lead, and visibility reducing particles.

The ACAPCD has developed a List of Rules for protecting air quality. The List of Rules has been used in our analysis to determine Project impact significance to air quality. Given the nature of this Project and

the fact that operational changes related to air resources would not occur, only short-term, construction related activities would be addressed (CARB 2010).

Discussion of Impact of Air Quality

- No Impact. The Project would only generate short-term construction-related emissions and therefore would not conflict with or obstruct implementation of Amador County Air Pollution-Control District plans or other relevant air resources rules (CARB 2010).

- Less than Significant with Mitigation Incorporated. Short-term, air quality impacts would result from earthmoving and construction equipment activities at the Project site.

  Project construction activities, including grading, excavation, vehicular and construction equipment traffic on paved and unpaved surfaces, and vehicle exhaust would result in fugitive dust emissions (i.e., PM10). To reduce fugitive dust emissions, the ACAPCD has developed Rule 218 Fugitive Dust Emissions, which provides directions for reducing fugitive dust emissions on construction sites. Adhering to the recommendations in that rule by instituting the control measures as described below (see MM-AQ-1) would constitute sufficient mitigation to reduce PM10 to a less-significant level. Also, the Project will disturb only about 0.3 acre of ground, a relatively small project footprint.

  In addition to fugitive dust, NOx (an ozone precursor emission associated with construction equipment use, construction worker vehicles, and equipment/material transport to site) would be generated. However, no more than seven pieces of equipment would be used on-site, and about six worker vehicles, creating a maximum of 24 trips per day, each workday, for the Project construction duration of seven to eight months. The threshold of 1,506 vehicle trips per day has been established as the level necessary to produce 10 tons of NOx per year, a significant amount (ACAPCD, 2002). This Project does not reach, nor come close to this temporary threshold. Based on the above and the implementation of MM-AQ-1 (described below), the Project would cause less-than-significant impacts to air quality standards in the region.

- Less than Significant with Mitigation Incorporated. Short-term, air quality impacts would result from earthmoving and construction equipment activities at the Project site. With the implementation of MM-AQ-1, the Project would not contribute a cumulatively considerable net increase of any criteria pollutant that would affect the ambient air quality status for the federal and state ozone standards.

- Less than Significant Impact. There is one sensitive receptor (i.e., residence) located approximately 1,500 feet away from the Project area. The Project associated emissions are temporary and slight. The potential impacts to sensitive receptors because of concentrations of air quality pollutants would be less than significant due to distance.

- No Impact. The proposed Project would not create or frequently expose the public to objectionable, offensive odors.

Mitigation Measures for Air Quality

MM-AQ-1) To reduce fugitive dust emissions from construction activities, AWA will prepare a Dust Control Plan in compliance with ACAPCD, Rule 218 (CARB 2010) that will include required control measures for fugitive dust. The control measures that are applicable to this Project are:

1. Application of water and/or approved chemicals to control emissions in the demolition of existing buildings or structures, construction operations, solid waste disposal operations, the grading of roads and/or the clearing of land.
2. Application of asphalt, water and/or approved chemicals to road surfaces.
3. Application of water and/or suitable chemicals to material stockpiles and other surfaces that may generate fugitive dust emissions.
4. Covering or wetting material stockpiles and open-bodied trucks, trailers, or other vehicles transporting materials that may generate fugitive dust emissions when in motion.
5. Installation and use of paved entry aprons or other effective cleaning techniques to remove dirt accumulating on a vehicle's wheels on haul or access roads to prevent tracking onto paved roadways.
6. Ceasing operations until fugitive emissions can be reduced and controlled.
7. Using vegetation and other barriers to contain and to reduce fugitive emissions.
8. Instituting good housekeeping practices by regularly removing piles of material that have accumulated in work areas and/or are generated from equipment overflow.
9. Maintaining reasonable vehicle speeds while driving on unpaved roads in order to minimize fugitive dust emissions.
10. Regardless of windspeed, an owner/operator must comply with Rule 218's 20 percent opacity limitation.

8.4.4 Biological Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Environmental Setting of Biological Resources

The site was surveyed for biological resources on April 9, 2014.

The AWA small hydropower Project site is located about 1.5 miles southeast of the City of Ione and along the eastern edge of the San Joaquin Valley, in the transition zone between the Central Valley and Sierra Nevada Foothills. The land immediately surrounding the Project is actively used for grazing.

The site is primarily oak woodland habitat with a small riparian border around the Ione Reservoir. The California Wildlife Habitat Relationship (CWHR) system, developed by the CDFW for predicting the habitat value for vertebrate animal species in California, is used to describe habitats. The classification system adopted by the California Native Plant Society (CNPS) (Manual of California Vegetation 2nd edition) (MCV), which relies on a floristic approach, and dominant plant species to name vegetation communities by alliances and associations, is also used below to describe habitat types (Sawyer et al. 2009).

Quercus douglasii Woodland Alliance (MCV), Blue Oak Woodland (CWHR)
Blue oak woodland occurs in upland locations throughout the lower foothills down to the edge of the Central Valley. It is often found in shallow, rocky, low fertility soils with good drainage. It can occur as open savannah to continuous canopy woodland. This is a highly drought adapted woodland community. This habitat supports a wide variety of wildlife as well due to acorn production and structure provided by the trees. There are a variety of associated tree species that co-occur with blue oak; however, at this site most of the blue oak woodland occurs by itself except where it transitions to valley oak woodland or riparian communities. There are little to no shrubs at this site; the primary understory vegetation is a mix of grasses and native herbaceous species. This is the primary habitat type within the Project area.

Bromus (diandrus, hordeaceus)-Brachypodium distachyon semi-natural stand (MCV), Annual Grassland (CWHR)
This is a semi-natural stand, meaning that there is a significant component of non-native species comprising the dominant vegetation species. Annual grasslands cover large areas of California and many of the native species have been displaced by invasive, introduced annual grasses from Eurasia. At first glance, these grasslands all appear the same but there are differences in native and introduced species' composition and abundance. Recognizing this, the MCV has attempted to make distinctions based on the types and abundance of the native and non-native species present. At this site, the dominant species for the most part is ripgut brome (*Bromus diandrus*) and soft chess (*Bromus hordeaceus*). Native species were scattered throughout these grasslands but not in sufficient quantities to provide indicators of historic dominance. Grasslands provide habitat for a large number of native wildlife species. This habitat type would also be impacted by Project activities.

The proposed small hydroelectric Project, described in Section 4 of this report, has been designed and would be scheduled to minimize impacts to biological resources. Power poles and other electrical facilities would be designed using recognized bird safe practices developed by the Avian Power Line Interaction Committee (APLIC 2006).

Discussion of Impacts on Biological Resources

a) Less than Significant with Mitigation Incorporated. A summary of special-status species with habitat near the project or with the potential to occur at the project site is included as Table 2. There are reported occurrences in the California Natural Diversity Database (CNDDB) of several special status species within a 5-mile radius of the Project area, as indicated on Figure 3. Below is a discussion of the special-status animals and plants with the potential to occur in and near the proposed Project site.

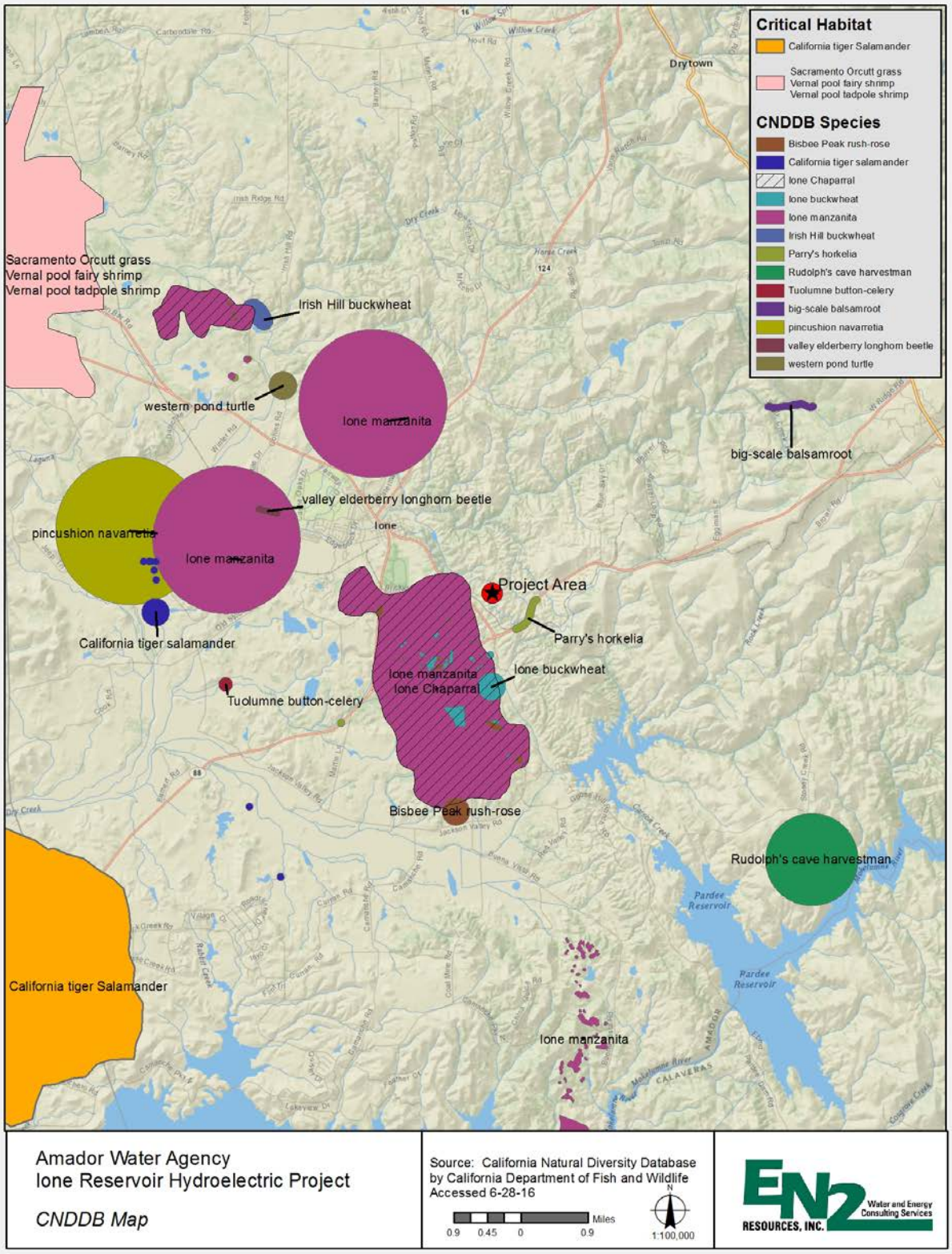

Figure 3. Map of Known Occurrences of Special Status Species (CNDDB)

Animals

California Tiger Salamander (CTS) *Ambystoma californiense* - Federally Threatened - CTS breeding habitat includes seasonal wetlands and ponds that dry-up but have a hydro-period sufficient to allow metamorphosis of juveniles to adults (USFWS 2009). The USFWS guidelines state that suitable breeding sites within 1.24 miles (2 kilometers) should be evaluated to determine suitability for CTS (USFWS 2003). The Project is 6 miles from USFWS Critical Habitat for the species. CNDDB records show no occurrences within 7 miles of the Project (CNDDB 2016).

Habitat within the area of potential Project disturbance (1,000-foot radius of Project site) was field surveyed for suitable CTS upland and breeding sites, and no seasonal wetlands were found within the survey area. To meet USFWS guidelines, aerial photographs were also examined for the presence of seasonal wetlands within 1.24 miles of the Project location, and no suitable breeding habitat was found. On the Project site, there were several fossorial mammal (ground squirrels and others) burrows in the likely disturbance area that may have some potential to provide necessary upland refugia sites required by this species. However because the Project site is steep (over 10 percent slopes), and no breeding habitat is indicated within 1.24 miles of the site, these burrows are not considered to be CTS habitat. Although no significant impacts to CTS are anticipated, implementing MM-BIO-1 would ensure impacts are less than significant.

California Red Legged Frog (CRLF) – CRLF is most commonly found in lowlands or foothills, and is frequently found in woods adjacent to streams. Breeding habitat is in permanent or ephemeral water sources: lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. They cannot tolerate excessive heat and when not breeding, they might be found in wet meadows or damp grasses. The area of disturbance near CRLF potential habitat has very little cover and is hot and dry. Although no significant impacts to CRLF are anticipated, implementing MM-BIO-1 would ensure impacts are less than significant.

Yellow-Legged Frog - Frequents rocky streams and rivers with rocky substrate and open, sunny banks, in forests, chaparral, and woodlands. Sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools. From sea level to 6,700 ft. (2,040 m.).

Raptors (at least 5 species, see Table 2) - Federally Threatened, State Endangered, Fully Protected, Federal Bald and Golden Eagle Protection Act - Federal Migratory Bird Treaty Act - There are at least 3 state-listed, species of special concern, or fully protected raptors that may be found in the Project area. These include the bald eagle, Swainson's hawk, burrowing owl, golden eagle, and Peregrine falcon. Preferred nesting habitat is not present for any of these in the proposed disturbance area; however, potential foraging habitat is present for these species. Eagles forage near water primarily. Swainson's hawk forages over open grassland or agricultural areas. Peregrine Falcons may pass through the area but also prefer open terrain with few trees (Peeters 2005). Burrowing owl habitat in the disturbance area is poor due to the lack of suitable burrows for nesting.

Because construction would be scheduled to start before or after the nesting season, there would be no impacts to nesting raptors; however, if construction occurred during some other time period within the nesting season (February 15 - September 15), a survey for nesting

raptors, and potentially, additional mitigation, would be required (MM-BIO-2). There would be minor, temporary impacts to a small area of potential foraging habitat, but this would not be significant because of the extent of additional foraging habitat surrounding the Project.

Migratory birds **-** (multiple species) Federal Migratory Bird Treaty Act and Section 3503, 3503.5 and 3513 of the California Fish and Game Code. All migratory birds are protected by the Federal Migratory Bird Treaty Act. It is illegal for any person to take, possess, transport, sell, or purchase them or their parts, such as feathers, nests, or eggs, without a permit from the USFWS. As with raptors, impacts would not be anticipated because construction would start before or after the nesting season and MM-BIO-2 would be implemented if construction occurs during the nesting season.

Valley elderberry longhorn beetle - *Desmocerus californicus dimorphus* - Federally Threatened - Habitat consists of blue elderberry (*Sambucus mexicana*) in the Central Valley and Sierra Nevada foothills from approximately 0 to 3,000 feet elevation. Blue elderberry shrubs are often located in riparian corridors in the Sacramento Valley. During the site survey, no elderberry shrubs were observed in the Project area; therefore, no impacts are expected to VELB.

Plants

Ione buckwheat - *Eriogonum apricum var. apricum* - The Ione buckwheat is a perennial herb that grows on a geological region called the Ione formation. It is listed by the State of California as endangered and by the federal government as endangered. The Project area is not within the Ione formation and there were no Ione buckwheat found on site, therefore, Project activities would have no impact.

Ione manzanita - *Arctostaphylos myrtifolia* - The Ione manzanita is a shrub that grows on a geological region called the Ione formation. It is listed as Federally Threatened. The Project Area is not within the Ione formation and there were no Ione manzanita found on site, therefore, Project activities would have no impact.

Yellow bur Navaretia - This plant occurs in vernal pools, at the edges of vernal swales, low areas, and other depressions that occur within a matrix of annual grassland on clay loam soil. No vernal pools or other seasonal depressions are present within the Project area. Project activities would have no impact.

Parry's Horkelia - This species is found in open chaparral and foothill woodland, 260 - 3,000 feet in elevation from El Dorado County south to Mariposa County. In Amador County, it is often found on the acidic soils of the Ione formation. Farther south, it is often associated with shallow infertile soils and chaparral openings.

Bisbee Peak rush-rose - A low growing shrub that grows on gabbro soils in Amador County. No gabbro soils are located within the Project area. Project activities would have no impact.

Other plants **-** Several plants are usually found in vernal pools but can sometimes be found in other wetland habitats (Table 2). These were given no potential for occurrence because there are no vernal pool seasonal wetlands on-site that could provide habitat. These plants, if they

occur on the site, would be identified during surveys for wetlands (MM-BIO-3). With the implementation of MM-BIO-3, impacts to special-status plants would be less than significant.

b) Less than Significant. USFWS Critical Habitat has been designated for several species near the Project, including one plant species and four animal species. The nearest is over six miles away to the west of the Project and includes the CTS and several vernal pool-associated species. CTS Critical Habitat is approximately 6 miles away from the Project, and no suitable CTS habitat is within or adjacent to the Project area. No Critical Habitat for vernal pool invertebrates would be impacted by this Project because there are no vernal pools within or in close proximity to the Project area.

c) Less than Significant with Mitigation Incorporated. During the site assessment, potentially jurisdictional wetlands and waters were mapped based on visible hydrology and vegetation indicators. See Figure 4 for approximate locations of the potential wetlands and waters within the study area.

None of the mapped wetlands are vernal pools due to topography and/or soil types. The soil within the area of potential disturbance is not conducive to the formation of vernal pools, nor is the topography suitable (too much slope and no sinks). The soils are composed of Exchequer very rocky silt loam, 31 to 51 percent slopes. See Figure 5 for Project area and adjacent area soil types.

The wetlands within the study area are narrowly located within a few feet of the edge of the reservoir. As shown on Figure 2, three pipelines would cross through the perimeter wetland zone around the reservoir, necessitating temporary impacts to wetlands that would require subsequent restoration. A U.S. Army Corps of Engineers (USACE) Nationwide Permit (NWP) for small hydroelectric projects would be applied for, in order to permit the proposed work. The wetland work would be done in conjunction with trenching for the pipelines, and subsequent refilling of the trenches, as described in IS/MND Section 4.3.2. With implementation of Mitigation Measure MM-BIO-3, impacts to wetlands would be less than significant.

d) Less than Significant with Mitigation Incorporated. The reservoir has no inlet or outlet capable of movement of any native resident or migratory fish. Project construction activities would temporarily require reservoir water levels to be reduced and would disturb wetlands around the reservoir's edge and, therefore, could temporarily interfere with resident fish populations, or impede the use of native wildlife nursery sites. Project activities would be localized with easy wildlife access to the portion of the reservoir that would not be disturbed by construction, and Mitigation Measures MM-BIO-1, MM-BIO-2, MM-Bio-3 and MM-BIO-4 would be implemented. Therefore, any impact to wildlife movement would be less than significant.

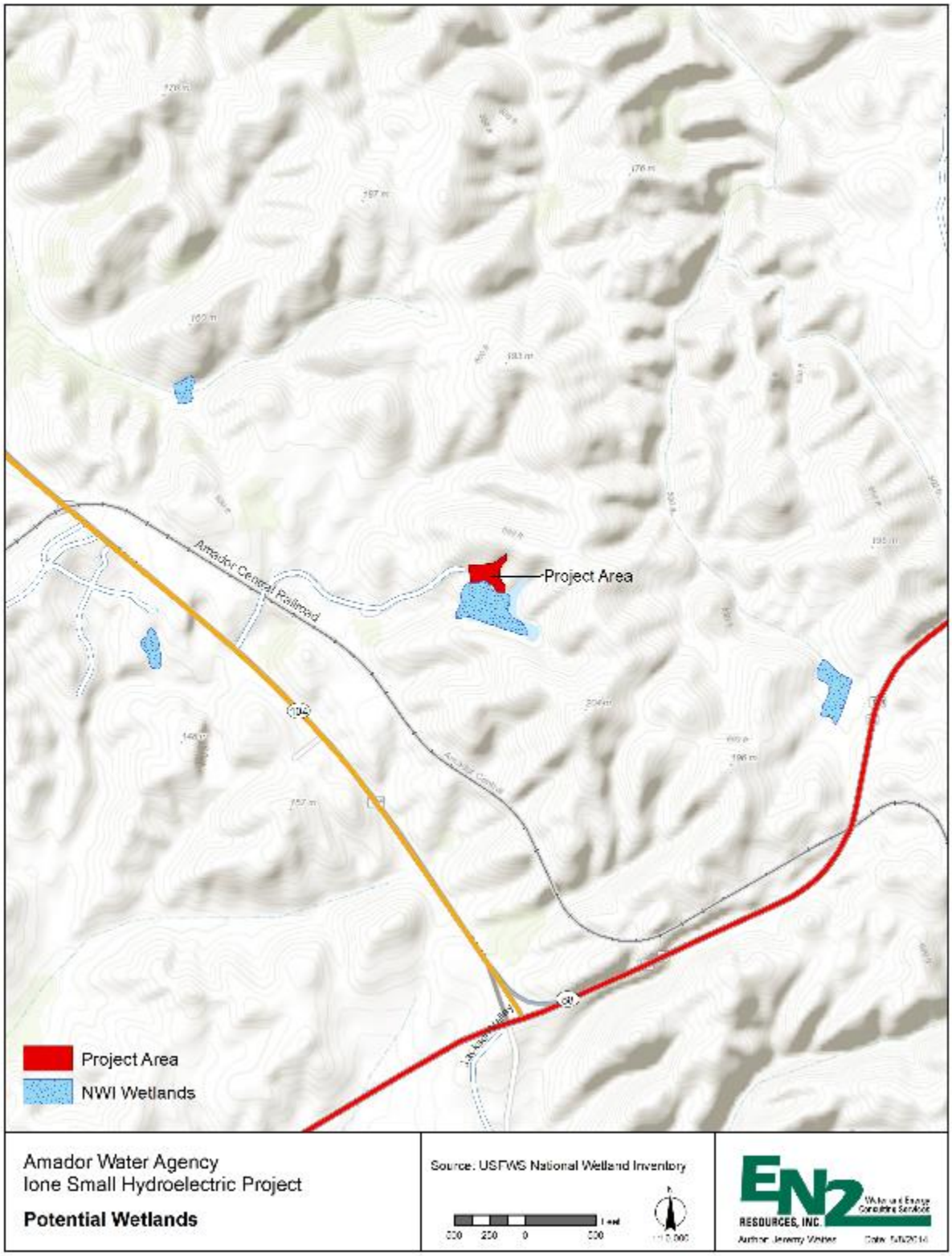

Figure 4. Wetland Map

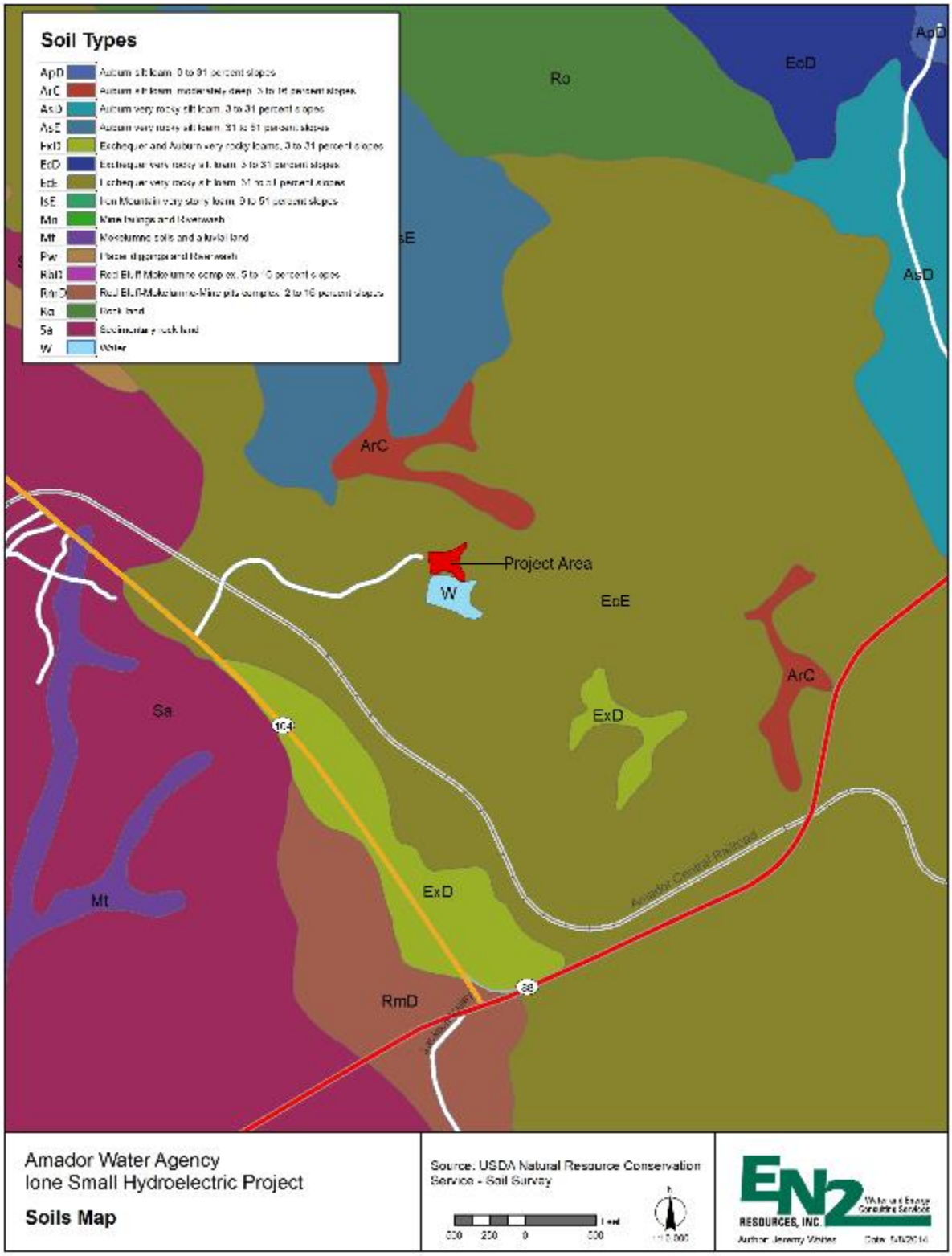

Figure 5. Soils Map

e) Less Than Significant Impact. The site is located in an unincorporated area of Amador County. Project activities would require removal of one 6-inch diameter oak tree in the construction area; all other trees would be avoided. The Project construction area is composed of unpaved roadway or is vegetated with primarily native grasses, forbs and shrubs. Revegetation would occur upon completion of construction.

The Amador County General Plan and County policies and ordinances were reviewed to determine whether the Project would conflict with any local policies and ordinances (UC 2003).

- Open Space Element, 1973: Encourages protection of natural scenic resources and environmental assets.
- Scenic Highway Element 1973: Requires development within scenic corridors to submit landscaping plan

The Project is not located in a scenic corridor or scenic area. The Project area is accessed via a gated private road and is not visible from the neighboring Highway 104 and State Route 88.

- Trees and Shrubbery 12.36: An ordinance that makes it unlawful to cut trees growing on public land or without permission from owner on private land.

The AWA Project is not on land open to the public and vegetation removal would have the permission of the landowner. Therefore, the proposed Project would not conflict with any local policies or ordinances protecting biological resources.

f) No Impact. There are no approved adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans that cover the Project area (Amador County GIS, 2014).

Mitigation Measures for Biological Resources

MM-BIO-1) Prior to commencing construction, AWA will hold an environmental resources briefing onsite using a qualified biologist to explain where sensitive resources are onsite and discuss the regulations associated with sensitive biological resources.

- The briefing will be attended by the AWA Project manager, and any supervisors. At least one person who has been briefed shall be onsite during all construction. Managers and supervisors can brief all other construction personnel.
- The briefing will include information related to state and federal ESA regulations and the potential species and habitats onsite. In addition, the location of wetlands, riparian areas and oak trees designated for avoidance onsite or adjacent will be clearly communicated.
- The briefing will be completed prior to any ground-disturbing work onsite.

MM-BIO-2) If construction occurs during the bird nesting season, February 15 - September 15, preconstruction surveys for nesting raptors will be conducted no more than 10 days prior to the start of vegetation/tree removal. If the schedule changes, and to mitigate for potential impacts to Swainson's hawk and other raptors, including the fully protected, State Endangered bald eagle as a result of construction activity during the nesting season, the site will be surveyed by a qualified biologist for active nests according to CDFW protocols for multiple species prior to the start of construction. This

includes surveying all potential Swainson's hawk nesting sites within 0.5 mile of the proposed area of disturbance for active nests and surveying potential nesting areas within ¼ mile of the Project for other raptors (Cooper's hawk, White-tailed kite, Merlin, etc.). If no active nests are located, then no further mitigation will be required. Per CDFW recommendations, AWA will establish a 500-foot no disturbance buffer for non-listed raptor species and a 1/2 mile no disturbance buffer from listed or fully protected species. If an active nest exists, the location will be recorded and reported to the CDFW to determine appropriate buffers and any additional mitigation requirements.

MM-BIO-3) To mitigate potential impacts to wetlands and riparian habitat, AWA will obtain a CWA Section 404 permit from the USACE, a 401 Water Quality Certification from the RWQCB, and if CDFW jurisdictional, a Streambed Alteration Agreement per Fish and Game Code Section 1600. AWA will implement specific regulatory requirements associated with the permits. This includes completing a USACE-approved wetland delineation to determine the specific location of potential impact to jurisdictional waters. Wetland mitigation typically includes a combination of restoration, preservation and conservation at some ratio greater than 1:1; on-site wetland mitigation is proposed, however mitigation could include purchasing mitigation credits from an approved bank or paying an in-lieu fee.

MM-BIO-4) A biologist will monitor the site during construction activity to ensure all appropriate BMPs are in place and to make sure biological mitigation measures are being followed. This will include monitoring protected wetlands, riparian areas and other resources. The biological monitor will have the authority to contact the AWA Project Manager and stop work if any mitigation measures are not in place or are otherwise not being followed. The monitor should act in advisory capacity first, working with the construction supervisor to ensure mitigation is in place.

Table 2. Special Status Species

Common	Scientific	Federal Listing	California Listing	CNPS Listing	Potential Habitat
Birds					
Swainson's hawk	*Buteo swainsoni*	None	Threatened	-	Yes
Peregrine falcon	*Falco peregrinus anatum*	Delisted	Delisted	-	No
Bald eagle	*Haliaeetus leucocephalus*	Delisted	Endangered	-	No
Golden eagle	*Aquila chrysaetos*	None	None	-	No
Burrowing owl	*Athene cunicularia*	None	None	-	No
Invertebrates				-	
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	Threatened	None	-	No
Vernal pool fairy shrimp	Branchinecta lynchi	Threatened	None	-	No
Vernal pool tadpole shrimp	*Lepidurus packardi*	Endangered	None	-	No
Rudolph's cave harvestman	Banksula rudolphi	None	None	-	No
Fish				-	
Delta smelt	*Hypomesus transpacificus*	Threatened	Endangered	-	No
Central Valley steelhead	Oncorhynchus mykiss	Threatened	None		No
Amphibians, Reptiles				-	
Western pond turtle	*Actinemys marmorata marmorata*	None	None	-	Yes
California tiger salamander	*Ambystoma californiense*	Threatened	Threatened	-	No
California red-legged frog	*Rana draytonii*	Threatened	None	-	No
Plants					
Bisbee Peak rush-rose	Helianthemum suffrutescens	None	None	3.2	No
Ione buckwheat	Eriogonum apricum var. apricum	Endangered	Endangered	1B.1	No
Ione manzanita	Arctostaphylos myrtifolia	Threatened	None	1B.2	No
Irish Hill buckwheat	Eriogonum apricum var. prostratum	Endangered	Endangered	1B.1	No
Parry's horkelia	Horkelia parryi	None	None	1B.2	No
pincushion navarretia	Navarretia myersii ssp. myersii	None	None	1B.1	No
Sacramento Orcutt grass	Orcuttia viscida	Endangered	Endangered	1B.1	No
Tuolumne button celery	Eryngium pinnatisectum	None	None	1B.2	No
California Native Plant Society: 1B.1 Rare, Threatened or Endangered in California and Elsewhere, Seriously threatened in California 1B.2 Rare, Threatened or Endangered in California and Elsewhere, Moderately threatened in California					

8.4.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly, destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Environmental Setting of Cultural Resources

On July 7, 2016, a Project-specific cultural resources literature and records search was conducted by the staff of the California Historical Resources Information System's (CHRIS) North Central Information Center (NCIC). The NCIC indicates that the proposed Project area contains no recorded prehistoric-period cultural resources and no historic-period cultural resources listed within the CHRIS. Additionally, two (2) cultural resources study reports on file with the NCIC cover a portion the proposed Project area.

The NCIC indicates that in this part of Amador County, prehistoric-period habitation sites are primarily found adjacent to streams or on ridges or knolls, especially those with southern exposure (Moratto 1984:290). This region is known as the ethnographic-period territory of the Nisenan, also called the Southern Maidu. The Nisenan had permanent settlements along major rivers in the Sacramento Valley and foothills, and would travel yearly into higher elevations to hunt or gather seasonal plant resources (Wilson and Towne 1978:387-389). The proposed Project area is situated in the lower Sierra Nevada foothills about one mile southeast of Ione and one-half mile southwest of Copper Creek. Given the extent of known cultural resources and the environmental setting, indicates that there is moderate potential for locating prehistoric-period cultural resources in the proposed Project area (NCIC 2014).

The 1870 GLO plat map of T6N, R10E show no identifiable evidence of historic-era cultural resources within the proposed Project area. The 1962 Ione 7.5' USGS topographical map depicts a railroad alignment located about one-fifth of a mile southwest of the proposed Project area. Given the extent of known cultural resources and the patterns of local historic-period land use, there is low potential for identifying historic-period cultural resources in the proposed Project area and the NCIC report stated that no further archival or field study was recommended (NCIC 2016).

In addition to the cultural records search performed by the NCIC, a Sacred Lands File Search for the Project was conducted by the Native American Heritage Commission (NAHC) on July 25, 2016. The NAHC

states that its record search of the sacred land file failed to indicate the presence of Native American cultural resources in the immediate Project area. The NAHC provided a list of Native American contacts that may have knowledge of cultural resources in the area. The individuals and organizations listed were contacted by letter on July 20, 2016. Responses are still pending.

Consultation per AB 52

Two Native American groups have filed requests with AWA for formal notification of proposed projects per Public Resources Code §21080.3 (b), also referred to as AB52 consultation. The two groups are the United Auburn Indian Community of the Auburn Rancheria (UAIC) and the Torres Martinez Desert Cahuilla Indians. These two groups were sent notification of the proposed Project by certified letters, which were received on July 11, 2016. Neither group chose to initiate consultation with AWA on the proposed project.

Copies of the certified letters and the return receipts and a summary of the communications with Native American groups are in Appendix B.

Discussion of Impact on Cultural Resources

a) Less than Significant with Mitigation Incorporated. As noted above, the NCIC indicates that the 1870 GLO plat maps of T6N, R10E show no identifiable evidence of historic-era cultural resources within the proposed Project area, and that given the extent of known cultural resources and the patterns of local historic-period land use, there is low potential for identifying historic-period cultural resources in the proposed Project area. Additionally, the Project consists of adding to existing infrastructure on a site that has been previously disturbed. However, because Project activities could potentially unearth previously unidentified cultural resources, MM-CR-1 and MM-CR-2 would be implemented to reduce potential impacts to less than significant levels.

b) Less than Significant with Mitigation Incorporated. Although no prehistoric archaeological sites were noted within the Project area, archival research for the Project NCIC indicates moderate potential for prehistoric archaeological resources within the Project area. It is possible that Project activities could unearth, expose, or disturb subsurface archaeological resources; however, implementation of MM-CR-1, MM-CR-2, and MM-CR-3 would reduce potential impacts to less-than-significant.

c) No Impact. The Project would not directly or indirectly affect a unique paleontological resource or site or unique geologic feature. As indicated in the Geology and Soils section, the underlying bedrock at the project site consists of the Salt Spring Slate formation, formed during the Jurassic age. This is not a geologic formation that contains paleontological resources.

d) Less than Significant with Mitigation Incorporated. During Project activities, there is a potential to unearth previously unidentified human remains. To reduce the potential of significantly disturbing or damaging human remains, MM-CR-1 and MM-CR-3 would be implemented.

Mitigation Measures for Cultural Resources

MM-CR-1) AWA will conduct a preconstruction meeting to inform construction personnel of the cultural resources mitigation requirements.

MM-CR-2) In the event that previously unidentified historic-period resources, archaeological resources, or Native American resources are uncovered during Project implementation, AWA will direct the construction contractor to cease work in the vicinity of the find until it can be evaluated by a qualified archaeologist.

MM-CR-3) In the event that human remains are encountered during construction, AWA will direct the construction contractor to comply with Health and Safety Code Section 7050.5. Excavation will halt in the immediate area of the find and the Amador County Coroner would be notified. Within 48 hours of notification, the Coroner will determine whether the remains are of Native American descent. If so, the Native American Heritage Commission will be notified within 24 hours, and as required under Public Resources Code, Section 5097.98, the Most Likely Descendants would be notified. Based on the above notifications, measures will be implemented that address the removal and relocation of the human remains.

8.4.6 Geology and Soils

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☒	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the proposed Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Environmental Setting of Geology and Soils

Based on the geologic map of the Sacramento quadrangle (1981), the bedrock at the project site consists of the Salt Spring Slate formation, a dark gray slate with some mica schist. It is also possible that the Copper Hills Volcanics formation is also present. This formation consists of metamorphosed mafic pyroclastic rocks, pillow lava with minor felsic porphyrite. Both of these formations are Jurassic in age

(PG&E 1987). The soil type found on site, according to the Natural Resource Conservation Service (NRCS) data, is Exchequer very rocky silt loam, 31 to 51 percent slopes. Information on soil types is found in soil maps and surveys prepared by the NRCS (NRCS 1965). A field review of the site indicated that much of the proposed Project area is composed of slopes less than 30 percent. Review of the adopted 1974 Amador County General Plan Safety and Seismic Safety Element indicated the County's concern to protect the public from earthquake and other hazards (Central Sierra Planning Council 1974).

Discussion of Impact on Geology and Soils

a) Less than Significant with Mitigation Incorporated. The proposed Project could expose people or structures to potential substantial or adverse effects.

   i) Less than Significant Impact. An "active" fault, as defined by the 1994 Alquist-Priolo Earthquake Fault Zoning Act, is one that shows displacement within the last 11,000 years and therefore is considered more likely to generate a future earthquake and surface rupture than a fault that shows no sign of recent rupture. The Alquist-Priolo Earthquake Fault Zoning Act requires the California State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults and to issue appropriate maps in order to mitigate the hazard of surface faulting to structures for human occupancy. No Alquist-Priolo Earthquake Fault Zones exist within Amador County (CDC 2013).

   ii) Less than Significant Impact with Mitigation Incorporated. Amador County is traversed by the Foothills fault system that runs from about Oroville in the north to east of Fresno in the south. The Foothills fault system is a complex series of northwest trending faults that are related to the Sierra Nevada uplift and whose activity is little understood. The nearest fault to the Planning Area is the Bear Mountain Fault Zone, which is included in the Foothills fault system and is located within 1.5 miles of the Project area. The State Geological Survey has not designated the Bear Mountain fault as an active fault (Ione 2009); however, there remains some potential for seismic activity that could affect Project infrastructure. With the implementation of MM-GEO-1, impacts would be less than significant.

   iii) Less than Significant Impact. The Project is located on Exchequer very rocky silt loam soil, which does not have the characteristics that lead to liquefaction (NRCS 1965). The Project would not expose people or structures to seismic-related ground failure.

   iv) Less than Significant Impact with Mitigation Incorporated. Landslides occur on steep slopes with gradients of 10% or greater and can occur as cut-and-fill failures during roadway and building excavations. The proposed Project would involve trenching and excavating to a depth less than 10-15 feet which would require the incorporation of the California Building Code and California Department of Industrial Relations, Division of Occupational Safety and Health Administration (see Cal/OSHA www.dir.ca.gov/title8/341.html) standards for trenching and excavation activities. These standard requirements, to be included in construction plans, reduce the potential for slope instability and landslides during Project construction to less than significant levels. With the implementation of MM-GEO-1, impacts would be less than significant.

b) Less than Significant Impact with Mitigation Incorporated. The Project would disturb up to 0.3 acre of land because of excavation for the proposed infrastructure and associated power lines and require the use of heavy machinery in the Project area. Construction plans shall include best management practices (BMPs) and other accepted drainage and grading measures to minimize potential soil erosion to less than significant levels. With the implementation of MM-GEO-2 plus restoration and revegetation as described in Section 4.3, impacts would be less than significant.

   In the event that the Project disturbs more than one-acre of land, a National Pollutant Discharge Elimination System (NPDES) permit would also be required. The NPDES permit would include the preparation of a Storm Water Pollution Prevention Plan (SWPPP) and a Rain Event Action Plan (REAP) that would include BMPs as described in MM-GEO-2. No NPDES permit is anticipated at this time, however a NPDES permit with SWPPP and REAP would be prepared in conjunction with the Project construction plans, if required.

c) No Impact. The Project site is not located in an area prone to: on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse; Project activities would not increase the likelihood of these events. The Project is located on the soil type of Exchequer very rocky silt loam which does not have the characteristics that lead to liquefaction.

d) No Impact. As shown in the Environmental settings above, the Project is not located on any expansive soils (i.e., clays) as defined in Table 18-B of the Uniform Building Code and therefore does not create a substantial risk to life or property. Furthermore, the Project does not include the construction of any structures that would be exposed to such risk.

e) No Impact. The Project would not involve the disposal of wastewater to a septic or sewer system.

Mitigation Measures for Geology and Soils

MM-GEO-1) Project construction plans shall incorporate the California Building Code and California Department of Industrial Relations, Division of Occupational Safety and Health Administration (see Cal/OSHA www.dir.ca.gov/title8/341.html) standards for trenching and excavation activities. Project construction plans shall also incorporate measures to minimize damage in the event of a seismic event, including water and power infrastructure equipment with flexible cables, cut-off valves and other safety measures to accommodate potential earthquake activity.

MM-GEO-2) Project construction plans shall include measures to minimize erosion and sedimentation, and will include the following, where applicable:

- All stockpiled material will be covered.
- Temporary erosion control measures (i.e., fiber rolls, geotextile fabric, straw bales) will be installed and remain in place until perennial vegetation is re-established.
- Restoration of any temporary access roads will be conducted following completion of construction activities, to stabilize the soil and prevent sedimentation and erosion.
- Revegetation where grasses, one oak tree and wetlands have been impacted will be conducted as described in Section 4.3 of the project description.

- A concrete washout station will be located at the site.
- Equipment will be properly maintained and stored in designated areas with runoff and erosion control measures to minimize accidental release of pollutants.
- Hazardous materials on the construction site will be properly stored in containers and protected from rainfall, runoff, vandalism, and accidental release into the environment.
- All access points to and from the site will be stabilized to prevent tracking of solids onto roadways.

8.4.7 Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

Environmental Setting of Greenhouse Gas Emissions

Assembly Bill 32 (AB 32), known as the California Global Warming Solutions Act of 2006, established legislation in September 2006 for the State of California to reduce greenhouse gas emissions to 1990 levels by 2020. The California Air Resources Board (CARB) has been charged with establishing a comprehensive program to ensure the AB 32 reduction goals for reduction of greenhouse gases (GHGs) are achieved. Subsequently, in 2014 CARB adopted the first revision of the Climate Change Scoping Plan (CCSP) that identifies specific measures to help achieve those goals. The measures are a mix of market-based mechanisms, regulatory measures, voluntary actions, and economic incentives (CARB 2014).

GHG emissions reduction measures identified in the CCSP focus on development projects and projects with stationary sources. By creating a renewable source of clean energy, this Project would reduce GHG emissions from stationary electricity generating sources by displacing fossil fuel generated electricity with non-carbon hydropower generation. This small hydroelectric Project would generate approximately 1,400,000 kWh of electricity per year, which would reduce GHG emissions by about 560 tons of CO2e/year.

Discussion of Impact on Greenhouse Gas Emissions

a) Positive Long-Term Impact (Less than Significant). Short-term, limited greenhouse gas emissions would be generated from the operations of construction equipment and worker vehicles. As described in the Project Description, approximately seven (7) pieces of equipment would be utilized at the Project site within a span of 6 to 7 months. Worker vehicles would also be limited to approximately 2 to 4 vehicles, causing a less-than-significant impact to the generation of greenhouse gas emissions in the region.

b) No Impact. This small hydroelectric Project would reduce GHG emissions by reducing the need to produce electricity by combustion of fossil fuels, thereby not conflicting with existing GHG reduction plans.

Mitigation Measures for Greenhouse Gas Emissions

No mitigation is required or warranted.

8.4.8 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

Environmental Setting for Hazards and Hazardous Materials

The proposed project involves the construction and operation of a small hydroelectric facility and powerhouse, electrical lines to connect the new facility to existing PG&E power lines, and post-

construction replanting of disturbed vegetated areas and rehabilitation of dirt roads affected by the construction. After construction, operation and maintenance of the Ione Reservoir by Amador Water Agency personnel would largely continue as presently conducted. Review of the adopted 1974 Amador County General Plan Safety and Seismic Safety Element indicated the County's concern to protect the public from earthquake and other hazards (Central Sierra Planning Council 1974).

Discussion of Impact on Hazards and Hazardous Materials

a) Less than Significant. The proposed Project would entail construction and operation of a small hydroelectric project which would not result in significant impacts involving hazardous waste release. Construction of the proposed project would involve vehicles that would use small amounts of hazardous products, such as diesel, gasoline, oil, hydraulic fluid and grease in construction equipment and vehicles. The use, handling and storage of hazardous materials are regulated by the California Occupational Safety and Health Administration (Cal OSHA). Project construction activities would be required to adhere to all health and safety regulations and to use Best Management Practices (BMPs) that would serve to minimize the potential for releases that could pose a threat to public health or the environment. With the implementation of BMPs and adherence to current laws regulating operations that employ hazardous materials, it is anticipated that impacts would be less than significant.

b) Less than Significant. As indicated above, the proposed Project would entail construction and operation of a small hydroelectric project which would not result in significant impacts involving hazardous waste release. With the implementation of BMPs and adherence to current laws regulating operations that employ hazardous materials, impacts would be less than significant.

c) No Impact. There are no public or private schools located within one-quarter mile of the project site. Review of the Amador County School District website (ACSD 2014) indicates that the public schools in closest proximity to the Project site are located in the City of Ione, over a mile in distance from the proposed Project. No private schools were found to be located near Ione Reservoir.

d) No Impact. The proposed Project site and area properties are not listed on the Hazardous Waste and Substances Sites (Cortese) List developed by the California Department of Toxic Substances Control (Government Code Section 65962.5 (a) (DTSC 2014).

e) No Impact. The Project is located on rural land that is not within an airport land use plan. The nearest public use airport, the Amador County Airport at Westover Field in Sutter Creek, California, is over five miles away (Amador County Airport Department 2014).

f) No Impact. The nearest private airport, the Camanche Skypark, is located over four miles from the proposed Project site.

g) No Impact. The proposed Project is located within a rural area of Amador County on land accessed by a private road and would, therefore, not interfere with an emergency response or evacuation plan; no impact would occur.

h) Less than Significant. The Project is located on gated, AWA-owned rural land currently used for a water reservoir. After Project development, the property would contain a metal structure

about 625 square feet in size that would cover the new hydropower infrastructure. New electrical power lines would connect the hydroelectric facility to existing PG&E power lines located about 1/3 mile from the powerhouse.

The facility is not open to the public and is primarily operated remotely, and therefore would not expose members of the public to the risk of injury or death as a result of a wildland fire. Additionally, City of Ione Fire Department stations, approximately three miles from the Project area, would have access to all areas of the Project property.

The Project is not subject to Amador County building or grading permits, however construction plans will incorporate Cal-OSHA and other California safety provisions. Project construction plans would be reviewed and the site inspected by the County Fire Warden for fire protection requirements and BMPs. With adherence to current fire protection laws regulating construction and operations, impacts related to wildfire would be less than significant.

Mitigation Measures for Hazards and Hazardous Materials

No mitigation is required or warranted.

8.4.9 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☒	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☒	☐	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
f) Otherwise substantially degrade water quality?	☐	☒	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Environmental Setting for Hydrology and Water Quality

The proposed Project site is by the AWA Ione Reservoir and its adjacent hillslope. A majority of AWA water comes from the Mokelumne River watershed, which supplies the Ione Reservoir through via the Ione Pipeline from the Tanner Reservoir. In 1985, AWA acquired the Ione Reservoir and associated water system from PG&E, with the rights to 15,000 acre-feet (af), or a maximum diversion rate of 30 cubic feet per second (cfs), of water stored at Lake Tabeaud from the Mokelumne River (PCA 2014).

The Mokelumne River generally has a high water quality through most of the year, as identified by the AWA. During storm events, the water quality can become turbid. Groundwater accounts for approximately three percent of AWA's water supply (PCA 2014).

As discussed in Section 8.4.4 Biological Resources, during the April 9, 2014 site assessment, potentially jurisdictional wetlands and waters of the U.S. were mapped based on visible hydrology and vegetation indicators. See Figure 4 for approximate locations of the wetlands and waters within the Project area.

Discussion of Impact on Hydrology and Water Quality

a) Less than Significant with Mitigation Incorporated. Construction of the Project could result in an increased level of water pollution. Construction activities, including grading, would displace soils increasing the susceptibility for transport into the AWA Ione Reservoir during a storm event. Additionally, equipment and material use could release chemicals, including fuels, oils, solvents, and concrete by-products that could be transported into the nearby surface waters or infiltrate into the groundwater.

   To reduce any potential impacts from erosion and sediment transport and because the Project would grade, fill, excavate, store or dispose of 50 cubic yards or more of soil, mitigation measure MM-GEO-2 would be implemented. With the implementation of MM-GEO-2, the Project would not violate any water quality standard or waste discharge requirements resulting in less than significant impacts.

b) No Impact. Project activities would not draw on groundwater. Groundwater accounts for approximately three percent of AWAs total supply and is only used in the communities of La Mel Heights and Lake Comanche Village.

c) Less than Significant Impact with Mitigation Incorporated. The drainage patterns of the area would not be substantially modified. Project design includes measures to minimize soil disturbance and impacts to biological resources, including wetlands. After construction, Project area soils, slopes and vegetation would be restored. Although wetland impacts would be minimized, installation of pipelines would require a wetland delineation and wetland permit to address impacts to jurisdictional wetlands, as described in MM-BIO-3.

d) Less than Significant Impact with Mitigation Incorporated. The drainage patterns of the area would not be significantly modified. The Project would disturb approximately 0.3 acre, including the restoration and revegetation of dislocated soils associated with excavation for the proposed infrastructure and associated power lines. This disturbance, specifically the removal of vegetation, could result in a temporary increase in the rate of runoff from the Project site. With the implementation of restoration and revegetation activities as discussed in Section 4.3, the

Project would not substantially increase the rate or amount of surface run-off. Although wetland impacts would be minimized, installation of pipelines would require a wetland delineation and wetland permit to address impacts to jurisdictional wetlands, as described in MM-BIO-3.

e) No Impact. The Project is located within a rural area of the County. Run-off from the Project area would not enter any storm water drainage systems or provide substantial additional sources of polluted run-off.

f) Less Than Significant Impact with Mitigation Incorporated. The Project would have the potential to discharge to the AWA Ione Reservoir. All waste materials or potential pollutants would be removed, and full site remediation would be completed. Given the amount of soil disturbance on site, there is some potential to degrade water quality from runoff from the Project site during and following the end of construction. With the implementation of MM-GEO-2, the Project would not substantially degrade water quality, resulting in less than significant impacts.

g) No Impact. As defined by FEMA's Flood Insurance Rate Maps, the Project site is not located within a 100-year floodplain (FEMA 2014). No housing would be constructed as part of this Project and the Project would not increase the potential for housing development within a floodplain.

h) No Impact. As described above, the Project is located outside of the FEMA 100-year floodplain. A small (625 sf) powerhouse would be constructed away from the reservoir and would not impede or redirect flows. No impacts would occur.

i) No Impact. The proposed Project would be located uphill and construction would not disturb the existing Ione Reservoir dam. The Project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

j) No Impact. The Project is not adjacent to features that could cause inundation by seiche, tsunami, or mudflow.

Mitigation Measures for Hydrology and Water Quality

The mitigation measure presented in the Biological Resources, Geology and Soils sections and repeated below would reduce Project impacts to less than significant levels.

MM-BIO-3) To mitigate potential impacts to wetlands and riparian habitat, AWA would obtain a CWA Section 404 permit from the USACE, a 401 Water Quality Certification from the RWQCB, and if CDFW jurisdictional, a Streambed Alteration Agreement per Fish and Game Code Section 1600. AWA would implement specific mitigation associated with those permits. This includes completing a USACE-approved wetland delineation to determine the locations and potential impacts to jurisdictional waters. Additional mitigation typically includes a combination of restoration, preservation and conservation at some ratio greater than 1:1; this could include onsite preservation, purchasing mitigation credits from an approved bank or paying an in-lieu fee.

MM-GEO-2) According to the Chapter 33 of the 2001 California State Building Code, Project construction plans shall include measures to control erosion and sedimentation, including the following, where applicable:

- All stockpiled material will be covered.
- Temporary erosion control measures (i.e., fiber rolls, geotextile fabric, straw bales) will be installed and remain in place until perennial vegetation is re-established.
- Restoration of any temporary access roads following completion of construction activities, to stabilize the soil and prevent sedimentation and erosion.
- Revegetation where grasses, one oak tree and wetlands have been impacted, as described in Section 4.3 of the project description.
- A concrete washout station will be located at the site.
- Equipment will be properly maintained and stored in designated areas with runoff and erosion control measures to minimize accidental release of pollutants.
- Hazardous materials on the construction site shall be properly stored in containers and protected from rainfall, runoff, vandalism, and accidental release into the environment.
- All access points to and from the site will be stabilized to prevent tracking of solids onto roadways.

8.4.10 Land Use and Planning

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Discussion of Impact on Land Use and Planning

The approximately 16-acre AWA property is located in an area of Amador County that is zoned Single Family Residential Agricultural. However, the property has a General Plan Land Use designation of PS-Public Services (Amador County 2014), and therefore the existing and proposed water and hydroelectric facilities are allowed.

a) No Impact. The Project is not located in an established community and the Project would not include activity that would physically divide a community.

b) No Impact. The proposed Project is located on AWA property that is accessed from State Highway 104 via an easement. Per the Amador County General Plan, the adjacent lands are designated Agricultural. Project activities on adjacent lands would be limited to utility and access easement use. As a result, the proposed Project would not conflict with any of the policies and provisions contained within the General Plan (Amador County 1973).

c) No Impact. There are no approved conservation plans that cover the Project area.

Mitigation Measures for Land Use and Planning

No mitigation is required or warranted.

8.4.11 Mineral Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Discussion of Impact on Mineral Resources

a) No Impact. The Project activities would not result in substantial subsurface excavation and therefore would not result in the loss of an available known mineral resource.

b) No Impact. Per the Amador County General Plan, the Project area is designated for Public Service; it is not delineated as a locally-important mineral resource (Amador County 2014).

Mitigation Measures for Mineral Resources

No mitigation is required or warranted.

8.4.12 Noise

Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion of Impact on Noise

Land use and noise compatibility criteria have not been developed by Amador County and the County does not have a Noise Ordinance. The current Amador County General Plan has an adopted Noise Element (Amador County 1988, pages 28-30) that includes the following policies:

- Policy: It is the policy of the County that the following noise sensitive land uses shall not be exposed to an exterior noise level at their property lines which exceeds an Ldn 65 dB(A) and will have an interior noise level not to exceed an Ldn 45 dB(A):
    - Residential Classifications in the land Use Element
    - Residential Projects Including Rezones, Use Permits and Residential Divisions of Land
    - Schools, Churches
    - Hospitals, Care Facilities, Libraries, Auditoriums

- Policy: It is the policy of the County to prevent the encroachment of noise sources into areas designated for existing or future noise sensitive land uses.

a) Less Than Significant Impact. Noise would be temporarily generated during Project construction activities associated with equipment operation. However, there are no noise sensitive land uses, as listed in the Amador County Noise Policy listed above, near the proposed Project. The nearest dwelling, located on agricultural land, is located approximately 0.7 mile to the south and east of the Project site. Given that sound falls off rapidly with distance, noise generated from Project activities may be noticeable, but would be less than significant at this distance. As described in Section 8.0 of this report, construction would occur over an approximately seven-month period, and generally be limited to 7:00am to 5:00pm work hours.

b) Less Than Significant Impact. Groundborne vibration and noise would be temporarily generated during Project construction activities associated with equipment operation. However, no noise sensitive land uses, as listed in the Amador County Noise Policy provided above, are located near the proposed Project.

c) No Impact. The proposed Project construction is temporary. Once construction ceases, noise from typical reservoir operations and maintenance would return to pre-Project conditions.

d) No Impact. The Project site does not currently contain noise-generating activities. Operation of the Project powerhouse would result in some noise generation however would not cause substantial increases in sound levels above pre-project conditions.

e) No Impact. The Project location is greater than 5 miles from any public use airport. The nearest public use airport, Amador County Airport at Westover Field in Sutter Creek, California, would not be affected by the proposed Project (Amador County Airport Department 2014).

f) No Impact. The Project location is four or more miles from any private airstrip. The nearest private airport, the Camanche Skypark, would not be affected by the proposed Project (Toll Free Airlines Website 2014).

Mitigation Measures for Noise

No mitigation is required or warranted.

8.4.13 Population and Housing

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion of Impact on Population and Housing

The proposed Project is located on rural land owned by AWA and used for water utility purposes. Privately owned grazing land and a single residence are located on land adjacent to the Project area. The Project consists of adding a small in-conduit turbine generator to existing facilities. The Project would not increase current reservoir capacity.

a) No Impact. The Project would not directly or indirectly induce substantial population growth.

b) No Impact. The Project would not displace existing housing.

c) No Impact. The Project would not displace people or necessitate the construction of replacement housing elsewhere.

Mitigation Measures for Population and Housing

No mitigation is required or warranted.

8.4.14 Public Services

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?	☐	☐	☐	☒
b) Police protection?	☐	☐	☐	☒
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☒	☐

Environmental Setting for Public Services

The Ione Reservoir is located in an unincorporated area of Amador County with a General Plan Land Use designation of PS-Public Services. Under this designation, the existing and proposed water and hydroelectric facilities are allowed.

Discussion of Impact on Public Services

a) No Impact. The Proposed Project would not impact water supply availability in Ione Reservoir for fire protection, nor would it increase the need for fire protection at the proposed small hydroelectric facility.

b) No Impact. The Proposed Project is not anticipated to have an impact on police protection or result in the need for new services. Additionally, the proposed Project is not associated with immigration (population increase) that would increase the use or demand for existing public services.

c) No Impact. The Project would not impact existing school facilities, nor would it contribute to any change in population, traffic circulation, or other land use modifications that would impact the local school district.

d) No Impact. The Project would have no effect on existing parks or cause any population change that would result in the need for new parks.

e) Less than Significant Impact. There would be a minor change in operations that would affect the water levels of the Ione Reservoir such that the levels would vary more than historically. This is a less than significant impact upon public services because it would not adversely affect operation or provision of any public services or utilities.

Mitigation Measures for Public Services

No mitigation is required or warranted.

8.4.15 Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion of Impact on Recreation

The proposed Project is located on lands that are owned by AWA, there are no recreational facilities, and the area is not open to the public. No parks or other recreational facilities are located within the Project vicinity. The Project would not include or require the construction or expansion of any recreational facilities. No area recreational facilities or activities would be affected by the proposed Project construction and operation.

a) No Impact. The Project does not include any development projects that would increase the use of any neighborhood or regional parks or other recreational facilities.

b) No Impact. The Project would not result in new recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

Mitigation Measures for Recreation

No mitigation is required or warranted.

8.4.16 Transportation and Traffic

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

Environmental Setting for Transportation and Traffic

State Law (Government Code Section 65382) requires that all California cities and counties adopt and maintain a General Plan including a circulation element. The Circulation Plan consists of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, any military airports and ports, and local public utilities and facilities, all correlated with the land use element of the plan. The Circulation Element of the Amador County General Plan and the 2004 Amador County Regional Transportation Plan Update were adopted by the Amador County Board of Supervisors on April 18, 2006. The Circulation Element addresses Amador County's systems for moving people and goods (ACTC 2006).

Discussion of Impact on Transportation and Traffic

a) Less than Significant. The Project would not conflict with the Circulation Element of the Amador County General Plan. The Project is in a rural portion of the County and would primarily affect local traffic when heavy equipment is delivered to and removed from the site. Approximately six pieces of heavy equipment would be transported through the County, most likely via California State Highways 49, 88 and 104. State Highway 104, a two lane minor arterial highway, accesses the unpaved, gated road that leads to the Project site. The effect of six to eight construction personnel reporting for work during the six to seven months of construction would be negligible. Project construction activities would occur on AWA property that is accessed via a private road.

b) Less than Significant. California State Highway 104 has a level of service "D", meaning the average travel speed is 45-49 mph, the percent of time delayed is between 60-75%, an average of 5-10 cars travel together, and passing becomes very difficult and left turns across traffic can be delayed (ACTC 2006). This Highway does not experience significant levels of peak hour congestion and Project-related vehicular traffic would not result in changes to its level of service. The proposed Project would have less than significant effects upon area traffic congestion.

   The Project would affect local traffic when heavy equipment is delivered and when passenger vehicles transport construction/inspection workers to and from the site. AWA personnel anticipate that work on the Project would generally be performed between the hours of 7:00 a.m. and 3:30pm, five days a week (Monday-Friday) except for holidays. Construction activities would be completed within 6-7 months and would be located in a rural area of the County along a private road. As a result, there would be less-than-significant impacts to the LOS standards and the Project would not substantially contribute to congestion on California State Highway I04.

c) No Impact. The nearest public use airport, Amador County Airport at Westover Field in Sutter Creek, California, would not be affected by the proposed Project (Amador County Airport Department 2014). No air traffic is part of this Project and therefore the Project would not change air traffic patterns, including either an increase in traffic levels or a change in location.

d) No Impact. The Project would not increase hazards as a result of a design feature or create incompatible uses.

e) No Impact. The Project would not affect emergency vehicle access.

f) No Impact. The Project would not conflict with adopted policies, plans, or programs supporting alternative transportation.

Mitigation Measures for Transportation and Traffic

No mitigation is required or warranted.

8.4.17 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Environmental Setting for Utilities and Service Systems

AWA was formed by the State legislature on July 20, 1959 through the Amador Water Agency Act for the purpose of providing water and wastewater services to the residents of Amador County. AWA was formed as an independent district for the conservation, development, control and use of water for the public good in Amador County (PCA 2014). The Agency currently serves a population of approximately 25,640 people through more than 13,000 retail and wholesale water service connections (AWA 2011).

Surface water constitutes approximately 98 percent of AWAs water supply. In 1985, AWA acquired the AWS from PG&E and the rights to 15,000 af, or a maximum diversion rate of 30 cfs, of water stored at Lake Tabeaud from the Mokelumne River (PCA 2014). AWS is the largest service area served by AWA and includes the City of Ione, Amador City, Drytown, Jackson, Sutter Creek, and Martell. The AWS, which includes the Ione Reservoir facility, would be modified by the addition of the proposed Ione small hydroelectric facility.

Discussion of Impact on Utilities and Service Systems

a) No Impact. The Project would not discharge wastewater, and therefore would not exceed wastewater treatment requirements; therefore, no impacts would occur.

b) No Impact. The proposed small hydroelectric Project that is the subject of this IS/MND does not involve water, would not produce wastewater, and no increase in water consumption would be expected due to construction of the Project.

c) No Impact. The proposed Project would not require or result in the construction of new storm water drainage facilities or expansion of existing facilities; therefore, no impacts would occur.

d) No Impact. Water needs for the District are met primarily by existing surface water supplies. The proposed project would not affect water supplies.

e) No Impact. The Project would not produce any wastewater and would not require wastewater treatment; therefore, a determination by a wastewater treatment provider is not necessary.

f) Less than Significant Impact. Project construction and operations would not generate substantial amount of solid waste. The nearest facility that accepts construction material is the ACES Waste Services Inc. Buena Vista Transfer Station. This landfill has the capacity to accommodate the solid waste generated from this Project. Given the temporary and limited amount of waste generated, and that the Buena Vista Transfer Station has sufficient capacity to accommodate the Project's solid waste disposal needs, there would be less than significant impacts.

g) No impact. The Project would comply and would not conflict with any statutes and regulations related to solid waste; therefore, no impacts would occur.

Mitigation Measures for Utilities and Service Systems

No mitigation is required or warranted.

8.4.18 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

The AWA is proposing the Ione Small Hydroelectric Project. The Project encompasses less than 0.3 acre of land and consists of three primary activities: adding a small in-conduit turbine generator covered by a powerhouse to existing facilities at the Ione Reservoir; connecting the new hydropower system to existing PG&E lines; and, post-construction restoration and revegetation of dislocated soils, any disturbed wetland areas and an unpaved access road.

Discussion of Impact

a) Less than Significant with Mitigation Incorporated. The proposed Project has the potential to adversely affect: 1) Air Quality, 2) Biological Resources, 3) Cultural Resources, 4) Geology and Soils, and 5) Hydrology and Water Quality. With the implementation of mitigation measures, including specific Best Management Practices, the proposed Project would not substantially degrade the quality of the environment, reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. A summary of potentially significant impacts and related mitigation measures is provided, below.

1) Air Quality impacts: Short-term, air quality impacts would result from earthmoving and construction equipment activities at the Project site. MM-AQ-1 states: To reduce fugitive dust emissions from construction activities, AWA will prepare a Dust Control Plan in compliance with ACAPCD, Rule 218 (CARB 2010) that will include required control measures for fugitive dust such as covering or wetting material stockpiles.

2) Biological Resources: Potential impacts to amphibian species, nesting birds, and wetlands could result from Project implementation. Mitigation measures include conducting a preconstruction briefing, pre-construction bird surveys, wetland delineation and permit, and use of a biological monitor to reduce potential impacts to less than significant.

3) Cultural Resources: During Project activities, there is a potential to unearth previously unidentified historic and archaeological resources, or human remains. Mitigation measures include conducting a preconstruction briefing and procedures to protect cultural resources if any are uncovered during project construction, would reduce potential impacts to less than significant.

4) Geology and Soils: The State Geological Survey has not designated the Bear Mountain fault as active; however, there remains some potential for seismic activity that could impact Project infrastructure. With the implementation of Cal-OSHA requirements for excavation and seismic safety, impacts would be less than significant. In addition, the Project would disturb up to 0.3 acre of land because of excavation for the proposed infrastructure and associated power lines and will require the use of heavy machinery in the Project area. Project construction plans would include best management practices (BMPs) and other accepted drainage and grading measures to minimize potential soil erosion to less than significant levels. With the implementation of mitigation plus restoration and revegetation as described in the Project Description, construction impacts would be less than significant.

5) Hydrology and Water Quality: Potential impacts from erosion and sediment transport could result in water quality impacts. Mitigation measures to protect wetlands (see the Biological Resources section), and to provide seismic safety as well as minimize erosion and sedimentation (see the Geology and Soils section) would reduce Project hydrology and water quality impacts to less than significant levels.

b) Less than Significant. There are no known past projects, nor are there current or foreseen future projects at or near Ione Reservoir, which would result in cumulatively considerable environmental impacts.

c) Less than Significant. The proposed Project is anticipated to result in short-term construction effects to the local environment, which is in a low density, rural area of the County. The Project site, owned and operated by AWA, is not inhabited. Overall, the Project would generate renewable hydroelectric power using the existing water system infrastructure to provide energy-efficient power for AWA facilities, thereby increasing water system resiliency and sustainability while reducing greenhouse gas emissions by an estimated 560 tons of CO2e/year. The proposed Project would not adversely affect human beings, either directly or indirectly.

9.0 Acronyms

AB 32	Assembly Bill 32
ACAPCD	Amador County Air Pollution Control District
ACSD	Amador County School District
AWA	Amador Water Agency
ACTC	Amador County Transportation Commission
AWS	Amador Water System
BMPs	Best Management Practices
CALIPC	California Invasive Plant Council
CAMP	Central Amador Water Project
CARB	California Air Resources Board
CESA	California Fish and Game Code
CCAP	Climate Change Action Plan
CCIC	Central California Information Center
CCSP	Climate Change Scoping Plan
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CRA	California Resources Agency
CRHR	California Register of Historical Resources
CWHR	California Wildlife Habitat Relationship
DTSC	California Department of Toxic Substances Control
EIR	Environmental Impact Report
ESA	Endangered Species Act
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
H2S	hydrogen sulfide
IS	Initial Study
MCAB	Mountain Counties Air Basin
MCV	Manual of California Vegetation
MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NRCS	Natural Resources Conservation Service
PCA	Policy Consulting Associates
PM	particulate matter
REAP	Rain Event Action Plan
RWQCB	Regional Water Quality Control Board
SO2	sulfur dioxide
USACE	U.S. Army Corps of Engineers

USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WTP	Water Treatment Plant

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Appendix A

Mitigation Monitoring and Reporting Program

~~(MMRP to be prepared after review of Admin Draft)~~

Mitigation Monitoring and Reporting Program

Mitigation Measure and Description of Compliance	Responsible Party	Implementation Phase
MM-AQ-1: To reduce fugitive dust emissions from construction activities, AWA will prepare a Dust Control Plan in compliance with ACAPCD, Rule 218 (CARB 2010) that will include required control measures for fugitive dust. The control measures that are applicable to this Project are: 1. Application of water and/or approved chemicals to control emissions in the demolition of existing buildings or structures, construction operations, solid waste disposal operations, the grading of roads and/or the clearing of land. 2. Application of asphalt, water and/or approved chemicals to road surfaces. 3. Application of water and/or suitable chemicals to material stockpiles and other surfaces that may generate fugitive dust emissions. 4. Covering or wetting material stockpiles and open-bodied trucks, trailers, or other vehicles transporting materials that may generate fugitive dust emissions when in motion. 5. Installation and use of paved entry aprons or other effective cleaning techniques to remove dirt accumulating on a vehicle's wheels on haul or access roads to prevent tracking onto paved roadways. 6. Ceasing operations until fugitive emissions can be reduced and controlled. 7. Using vegetation and other barriers to contain and to reduce fugitive emissions. 8. Instituting good housekeeping practices by regularly removing piles of material that have accumulated in work areas and/or are generated from equipment overflow. 9. Maintaining reasonable vehicle speeds while driving on unpaved roads in order to minimize fugitive dust emissions. 10. Regardless of windspeed, an owner/operator must comply with Rule 218's 20 percent opacity limitation. *Compliance Verification* *Initials:_____ Date: _____ Comments:*	Contractor/District	During Construction

Mitigation Measure and Description of Compliance	Responsible Party	Implementation Phase
MM-BIO-1: Prior to commencing construction, AWA will hold an environmental resources briefing onsite using a qualified biologist to explain where sensitive resources are onsite and discuss the regulations associated with sensitive biological resources. • The briefing will be attended by the AWA Project manager, and any supervisors. At least one person who has been briefed shall be onsite during all construction. Managers and supervisors can brief all other construction personnel. • The briefing will include information related to state and federal ESA regulations and the potential species and habitats onsite. In addition, the location of wetlands, riparian areas and oak trees designated for avoidance onsite or adjacent will be clearly communicated. • The briefing will be completed prior to any ground-disturbing work onsite. *Compliance Verification* *Initials:_____ Date: _____ Comments:*	District	Prior to Construction
MM-BIO-2: If construction occurs during the bird nesting season, February 15 - September 15, preconstruction surveys for nesting raptors will be conducted no more than 10 days prior to the start of vegetation/tree removal. If the schedule changes, and to mitigate for potential impacts to Swainson's hawk and other raptors, including the fully protected, State Endangered bald eagle as a result of construction activity during the nesting season, the site will be surveyed by a qualified biologist for active nests according to CDFW protocols for multiple species prior to the start of construction. This includes surveying all potential Swainson's hawk nesting sites within 0.5 mile of the proposed area of disturbance for active nests and surveying potential nesting areas within ¼ mile of the Project for other raptors (Cooper's hawk, White-tailed kite, Merlin, etc.). If no active nests are located, then no further mitigation will be required. Per CDFW recommendations, AWA will establish a 500-foot no disturbance buffer for non-listed raptor species and a 1/2 mile no disturbance buffer from listed or fully protected species. If an active nest exists, the location will be recorded and reported to the CDFW to determine appropriate buffers and any additional mitigation requirements. *Compliance Verification* *Initials:_____ Date: _____ Comments:*	District	Prior to Construction

Mitigation Measure and Description of Compliance	Responsible Party	Implementation Phase
MM-BIO-3: To mitigate potential impacts to wetlands and riparian habitat, AWA will obtain a CWA Section 404 permit from the USACE, a 401 Water Quality Certification from the RWQCB, and if CDFW jurisdictional, a Streambed Alteration Agreement per Fish and Game Code Section 1600. AWA will implement specific regulatory requirements associated with the permits. This includes completing a USACE-approved wetland delineation to determine the specific location of potential impact to jurisdictional waters. Wetland mitigation typically includes a combination of restoration, preservation and conservation at some ratio greater than 1:1; on-site wetland mitigation is proposed, however mitigation could include purchasing mitigation credits from an approved bank or paying an in-lieu fee. *Compliance Verification* *Initials:*_____ *Date:* _____ *Comments:*	District	Prior to Construction
MM-BIO-4: A biologist will monitor the site during construction activity to ensure all appropriate BMPs are in place and to make sure biological mitigation measures are being followed. This will include monitoring protected wetlands, riparian areas and other resources. The biological monitor will have the authority to contact the AWA Project Manager and stop work if any mitigation measures are not in place or are otherwise not being followed. The monitor should act in advisory capacity first, working with the construction supervisor to ensure mitigation is in place. *Compliance Verification* *Initials:*_____ *Date:* _____ *Comments:*	District	During Construction
MM-CR-1: AWA will conduct a preconstruction meeting to inform construction personnel of the cultural resources mitigation requirements. *Compliance Verification* *Initials:*_____ *Date:* _____ *Comments:*	District/Contractor	Prior to Construction

Mitigation Measure and Description of Compliance	Responsible Party	Implementation Phase
MM-CR-2: In the event that previously unidentified historic-period resources, archaeological resources, or Native American resources are uncovered during Project implementation, AWA will direct the construction contractor to cease work in the vicinity of the find until it can be evaluated by a qualified archaeologist. *Compliance Verification* *Initials:*_____ *Date:* _____ *Comments:*	District/Contractor	During Construction
MM-CR-3: In the event that human remains are encountered during construction, AWA will direct the construction contractor to comply with Health and Safety Code Section 7050.5. Excavation will halt in the immediate area of the find and the Amador County Coroner would be notified. Within 48 hours of notification, the Coroner will determine whether the remains are of Native American descent. If so, the Native American Heritage Commission will be notified within 24 hours, and as required under Public Resources Code, Section 5097.98, the Most Likely Descendants would be notified. Based on the above notifications, measures will be implemented that address the removal and relocation of the human remains. *Compliance Verification* *Initials:*_____ *Date:* _____ *Comments:*	District/Contractor	During Construction
MM-GEO-1: Project construction plans shall incorporate the California Building Code and California Department of Industrial Relations, Division of Occupational Safety and Health Administration (see Cal/OSHA www.dir.ca.gov/title8/341.html) standards for trenching and excavation activities. Project construction plans shall also incorporate measures to minimize damage in the event of a seismic event, including water and power infrastructure equipment with flexible cables, cut-off valves and other safety measures to accommodate potential earthquake activity. *Compliance Verification* *Initials:*_____ *Date:* _____ *Comments:*	District	Prior to Construction

Mitigation Measure and Description of Compliance	Responsible Party	Implementation Phase
MM-GEO-2: Project construction plans shall include measures to minimize erosion and sedimentation, and will include the following, where applicable: • All stockpiled material will be covered. • Temporary erosion control measures (i.e., fiber rolls, geotextile fabric, straw bales) will be installed and remain in place until perennial vegetation is re-established. • Restoration of any temporary access roads will be conducted following completion of construction activities, to stabilize the soil and prevent sedimentation and erosion. • Revegetation where grasses, one oak tree and wetlands have been impacted will be conducted as described in Section 4.3 of the project description. • A concrete washout station will be located at the site. • Equipment will be properly maintained and stored in designated areas with runoff and erosion control measures to minimize accidental release of pollutants. • Hazardous materials on the construction site will be properly stored in containers and protected from rainfall, runoff, vandalism, and accidental release into the environment. • All access points to and from the site will be stabilized to prevent tracking of solids onto roadways. *Compliance Verification* *Initials:*_____ *Date:* _____ *Comments:*	District	Prior to Construction

Appendix B

Cultural Resources Research and Demonstration of Compliance with AB 52

1. **<u>Copies of letters sent via Certified Mail to Native American Tribes that had requested notification from Amador Water Agency and delivery receipts</u>**
2. Records Search Results provided by North Central Information Center
3. Records Search Results from the Native American Heritage Commission (NAHC)
4. Copies of letters sent to tribal groups listed by the NAHC

A Public Agency 12800 RIDGE ROAD, SUTTER CREEK, CA 95685 • (209) 223-3018 Fax: (209) 257-5267

July 7, 2016

Gene Whitehouse, Chairman
United Auburn Indian Community of the Auburn Rancheria
10720 Indian Hill Road
Auburn, CA 95603

CERTIFIED MAIL –Return Receipt Requested

Subject: Notification of a Proposed Project by Amador Water Agency

Dear Mr. Whitehouse:

This letter serves as formal notification of a proposed project by the Amador Water Agency (AWA). The AWA is the lead agency under the California Environmental Quality Act (CEQA), per Public Resources Code § 21000, et seq.

AB52 Consultation
The location of the proposed project is within the geographical area that is traditionally and culturally affiliated with the United Auburn Indian Community of the Auburn Rancheria. If you determine that consultation with AWA is necessary for this proposed Project, you have 30 days after receipt of this letter to respond in writing to AWA with your determination, per the requirements of Public Resource Code Section 21080.3.1 (b). In your reply letter to AWA, please indicate the nature of your concern so that we are able to prepare for our consultation meetings. The consultation may include discussing the level of environmental review necessary, the significance of tribal resources in the project area, the significance of the potential project impacts on tribal resources, or mitigation measures necessary to preserve tribal resources in the project area.

The AWA will begin the consultation process within 30 days of receipt of your notification and prior to the posting the CEQA documentation prepared for the project.

Description of the Proposed Project
The proposed Project would be located at the AWA Ione Reservoir. The project consists of construction and operation of a new 448 kW hydroelectric facility that would supplement power required by the water system. The Project would add an in-conduit turbine generator and 625 square foot powerhouse to existing water facilities at the Reservoir. The Project area, including below grade (buried) power lines to connect the new hydroelectric equipment with an existing PG&E power line, would be less than 0.3 acre in size. Access to the site would be on existing roads.

The hydroelectric equipment would operate in conjunction with the flow demands of the existing water system; existing pipes would be modified and rerouted to serve the hydroelectric system. Minor changes in water transmission operations would result from reducing flows to the hydroelectric station during low power demand periods which would affect the diurnal water levels of the Ione Reservoir such that the levels would vary more than historically. However, no changes in total water use would result from the Project.

Location of the Proposed Project

The Project is located in Amador County, approximately 1.5 miles southeast of the City of Ione and 11 miles west of the Amador County seat in Jackson, California. The site, owned by the AWA, is located on the U.S. Geological Survey (USGS) 7.5-minute Ione Quadrangle in Section 32, Township 6N, Range 10E, MDBM. The project area can be accessed via an unpaved, gated access road off California State Highway 104. Figure 1 is a location map of the project and Figure 2 is an aerial view of the project site with the project boundary shown.

Results of the NCIC Database Search

The results of the database search completed in 2014 by the North Central Information Center are attached. This search was completed when the proposed project was in the initial planning phase.

Amador Water Agency Contact Information

I have been designated as the lead contact person for this proposed project. If you have questions about the project, or if you determine that consultation is required, please contact me at 209-257-5284 or email dwyckoff@amadorwater.org.

Sincerely,

Damon Wyckoff
Operations Manager

CC:

Jason Camp
Tribal Historic Preservation Officer
10720 Indian Hill Rd.
Auburn, CA 95603

Marcos Guerrero
Cultural Resources Manager
10720 Indian Hill Rd.
Auburn, CA 95603

Attachment

UNITED STATES POSTAL SERVICE

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• Sender: Please print your name, address, and ZIP+4® in this box•

Amador Water Agency
Damon Wyckoff
12800 Ridge Road
Sutter Creek, CA 95685

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Gene Whitehouse, Chairman
United, Auburn Indian Community of
the Auburn Rancheria
10720 Indian Hill Road
August, CA 95603

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X
☐ Agent
☐ Address

B. Received by *(Printed Name)*
C. Date of Delive

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail® ☒ Priority Mail Express™
☐ Registered ☒ Return Receipt for Merchandis
☐ Insured Mail ☐ Collect on Delivery

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number
(Transfer from service label) 7013 0600 0001 5149 4304

PS Form 3811, July 2013 Domestic Return Receipt

A Public Agency 12800 RIDGE ROAD, SUTTER CREEK, CA 95685 • (209) 223-3018 Fax: (209) 257-5267

July 7, 2016

Michael Mirelez
Cultural Resource Coordinator
Torres Martinez Desert Cahuilla Indians
P.O. Box 1160
Thermal, CA 92274

CERTIFIED MAIL –Return Receipt Requested

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Sincerely,

Damon Wyckoff
Operations Manager

Attachment

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Amador Water Agency
Damon Wyckoff
12800 Ridge Road
Sutter Creek, CA 95685

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Michael Mirelez
Cultural Resource Coordinator
Torees Martinez Desert Cahuilla Indians
PO Box 1160
Thermal, CA 92274-1160

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X
☐ Agent
☐ Addressee

B. Received by *(Printed Name)* JONES
C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

JUL 11 2016

3. Service Type
☑ Certified Mail® ☑ Priority Mail Express™
☐ Registered ☑ Return Receipt for Merchandise
☐ Insured Mail ☐ Collect on Delivery

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number
(Transfer from service labe 7013 0600 0001 5149 4298

PS Form 3811, July 2013 Domestic Return Receipt

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3. Records Search Results from the Native American Heritage Commission (NAHC)

4. Copies of letters sent to tribal groups listed by the NAHC

California Historical Resources Information System

NORTH CENTRAL INFORMATION CENTER

AMADOR
EL DORADO
NEVADA
PLACER
SACRAMENTO
YUBA

California State University, Sacramento
6000 J Street, Folsom Hall, Suite 2042
Sacramento, California 95819-6100
phone: (916) 278-6217
fax: (916) 278-5162
email: ncic@csus.edu

7/7/2016 NCIC File No.: AMA-16-17

Kris Kiehne
EN2 Resources, Inc.
PO Box 2260
Placerville, CA 95667

Records Search Results for
Amador Water Agency Ione Small Hydroelectric Project

Kris Kiehne:

Per your request received by our office on 7/1/2016, a complete records search was conducted by searching California Historic Resources Information System (CHRIS) maps for cultural resource site records and survey reports in Amador County within a 1/4-mile radius of the proposed project area.

Review of this information indicates that the search area contains zero (0) recorded prehistoric-period cultural resources and two (2) historic-period cultural resources (P-3-541, P-3-733). Additionally, five (5) cultural resources study reports on file at this office cover a portion the search area (150, 190, 5205, 5240, 10437).

In this part of Amador County, archaeologists locate prehistoric-period habitation sites "along streams or on ridges or knolls, especially those with southern exposure." (Moratto 1984:290) This region is known as the ethnographic-period territory of the Nisenan, also called the Southern Maidu. The Nisenan maintained permanent settlements along major rivers in the Sacramento Valley and foothills; they also periodically traveled to higher elevations (Wilson and Towne 1978:387-389). The proposed project search area is situated in the Sierra Nevada foothills in the immediate vicinity of drainage to Jackson Creek. Given the extent of known cultural resources and the environmental setting, there is low potential for locating prehistoric-period cultural resources in the vicinity of the proposed project area.

Within the search area, the 1870 GLO plat of T6N, R10E shows no evidence of nineteenth-century activity. The 1962 Ione 7.5' USGS topographical map shows evidence of a twentieth-century railroad. Given the extent of known cultural resources and patterns of local history, there is low potential for locating historic-period cultural resources in the vicinity of the proposed project area.

RECOMMENDATIONS:

1) Further archival and/or field study by a cultural resources professional **is not recommended**. A list of qualified local consultants is available at [http://chrisinfo.org].

2) If cultural resources are encountered during the project, avoid altering the materials and their context

until a qualified cultural resources professional has evaluated the project area. Project personnel should not collect cultural resources.

Prehistoric-period resources include: chert or obsidian flakes, projectile points, and other flaked-stone artifacts; mortars, grinding slicks, pestles, and other groundstone tools; and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials.

Historic-period resources include: stone or adobe foundations or walls; structures and remains with square nails; mine shafts, tailings, or ditches/flumes; and refuse deposits or bottle dumps, often located in old wells or privies.

3) Identified cultural resources should be recorded on DPR 523 (A-J) historic resource recordation forms, available at [http://ohp.parks.ca.gov/?page_id=1069].

4) Review for possible historic-period cultural resources has included only those sources listed in the referenced literature and should not be considered comprehensive. The Office of Historic Preservation has determined that buildings, structures, and objects 45 years or older may be of historical value. If the area of potential effect contains such properties not noted in our research, they should be assessed by an architectural historian before commencement of project activities.

   Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

   The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

Thank you for using our services. Please contact North Central Information Center at (916) 278-6217 if you have any questions about this record search. An invoice is enclosed.

Sincerely,

Nathan Hallam, Coordinator
North Central Information Center

Appendix B

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4. Copies of letters sent to tribal groups listed by the NAHC

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 FAX

July 25, 2016

Kris Kiehne
Amador Water Agency

Sent by Email: kriskiehne@en2resources.com
Number of Pages: 3

RE: Amador Water Agnecy Ione Small Hydroelectric Project, Amador County

Dear Ms. Kiehne:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties. Please note that the intent of the referenced codes are to avoid or to mitigate impacts to tribal cultural resources, as defined, for California Environmental Quality Act (CEQA) projects.

As of July 1, 2015, Public Resources Code Sections 21080.3.1 and 21080.3.2 require public agencies to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding or mitigating impacts to tribal cultural resources:

> Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section. (Public Resources Code Section 21080.3.1(d))

The law does not preclude agencies from initiating consultation with the tribes that are culturally and traditionally affiliated with their jurisdictions. The NAHC believes that in fact that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

In accordance with Public Resources Code Section 21080.3.1(d), formal notification must include a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. The NAHC believes that agencies should also include with their notification letters information regarding any cultural resources assessment that has been completed on the APE, such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

   - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE;
   - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
   - If the probability is low, moderate, or high that cultural resources are located in the APE.
   - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the potential APE; and

- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measurers.

     All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure in accordance with Government Code Section 6254.10.

3. The results of any Sacred Lands File (SFL) check conducted through Native American Heritage Commission. A search of the SFL was completed for the USGS quadrangle information provided returned negative results.

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the case that they do, having the information beforehand well help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance we are able to assure that our consultation list contains current information.

If you have any questions, please contact me at my email address: sharaya.souza@nahc.ca.gov

Sincerely,

Sharaya Souza
Staff Services Analyst

Native American Heritage Commission
Tribal Consultation List
Amador County
July 22, 2016

Buena Vista Rancheria
Rhonda Morningstar Pope, Chairperson
1418 20th Street, Suite 200 Me-Wuk / Miwok
Sacramento , CA 95811
rhonda@buenavistatribe.com
(916) 491-0011 Office

Calaveras Band of Mi-Wuk Indians
Charles Wilson, Chairperson
546 Bald Mountain Road Mi-Wuk
West Point , CA 95255
(209) 293-2189

Ione Band of Miwok Indians
Yvonne Miller, Chairperson
P.O. Box 699 Miwok
Plymouth , CA 95669
administrator@ionemiwok.org
(209) 245-5800 Office

Jackson Rancheria Band of Miwuk Indians
Adam Dalton, Chairperson
P.O. Box 1090 Me-Wuk - Miwok - Mi-
Jackson , CA 95642
(209) 223-1935 Office
(209) 223-8370

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Amador Water Agnecy Ione Small Hydroelectric Project, Amador County.

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EN2 RESOURCES, INC.
Water and Energy Consulting Services

July 20, 2016

Sam Baugh, Cultural Resources Representative
Jackson Rancheria Band of Miwuk Indians
1580 Long Gate Road
Plymouth, CA 95669

Subject: Proposed Amador Water Agency Ione Small Hydroelectric Project

Dear Mr. Baugh:

In its May 23, 2014 response letter to EN2 Resources, Inc. (EN2), the Native American Heritage Commission identified you as a point of contact regarding known or recorded sites of cultural resources within Amador County. This letter is a request that you please provide EN2 with any background information regarding Native American historic and/or sacred sites within the Proposed Project area as described below.

PROJECT LOCATION: The proposed Project is located in T06N, 10E, Section 31 MDB&M of the USGS 7.5-minute Amador City Quadrangle. The site location is approximately 38°20'13.155"N, 120°54'36.488"W. The Project Area is delineated on the attached Figure 1: Project Location Map.

PROJECT DESCRIPTION: The proposed Project would be located at the AWA Ione Reservoir. The project consists of construction and operation of a new 300 kW hydroelectric facility that would supplement power required by the water system. The Project would add an in-conduit turbine generator and 625 square foot powerhouse to existing water facilities at the Reservoir. The Project area, including power lines to connect the new hydroelectric equipment with an existing PG&E power line, would be less than 0.3 acre in size. Access to the site would be on existing roads.

The hydroelectric equipment would operate in conjunction with the flow demands of the water system; existing pipes would be modified and rerouted to serve the hydroelectric system. Minor changes in operations would result from reducing power generation during low water flow demands.

We would appreciate receipt of your comments within 30 days of the date of this letter. If you have any questions about Project activities, please call me at (530) 626-1401.

Sincerely,

Kris Kiehne

Kris Kiehne
Senior Biologist

Attachment

P.O. Box 2260 Placerville, CA 95667 **tel** 530 626 1401 **fax** 530 622 2820 www.en2resources.com

EN2 RESOURCES, INC.
Water and Energy Consulting Services

July 20, 2016

Anthony Burris, Chairperson
Ione Band of Miwok Indians Cultural Committee
P.O. Box 669
Plymouth, CA 95669

Subject: Proposed Amador Water Agency Ione Small Hydroelectric Project

Dear Mr. Burris:

In its May 23, 2014 response letter to EN2 Resources, Inc. (EN2), the Native American Heritage Commission identified you as a point of contact regarding known or recorded sites of cultural resources within Amador County. This letter is a request that you please provide EN2 with any background information regarding Native American historic and/or sacred sites within the Proposed Project area as described below.

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Senior Biologist

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P.O. Box 2260 Placerville, CA 95667 **tel** 530 626 1401 **fax** 530 622 2820 www.en2resources.com

EN2 RESOURCES, INC.
Water and Energy Consulting Services

July 20, 2016

Adam Dalton, Chairperson
Jackson Rancheria Band of Miwuk Indians
P.O. Box 1090
Jackson, CA 95642

Subject: Proposed Amador Water Agency Ione Small Hydroelectric Project

Dear Mr. Dalton:

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Kris Kiehne

Kris Kiehne
Senior Biologist

Attachment

P.O. Box 2260 Placerville, CA 95667 **tel** 530 626 1401 **fax** 530 622 2820 www.en2resources.com

EN2 RESOURCES, INC.
Water and Energy Consulting Services

July 20, 2016

Dwight Dutschke
Sierra Native American Council
9820 5 Mile Drive
Ione, CA 95640

Subject: Proposed Amador Water Agency Ione Small Hydroelectric Project

Dear Mr. Dutschke:

In its May 23, 2014 response letter to EN2 Resources, Inc. (EN2), the Native American Heritage Commission identified you as a point of contact regarding known or recorded sites of cultural resources within Amador County. This letter is a request that you please provide EN2 with any background information regarding Native American historic and/or sacred sites within the Proposed Project area as described below.

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Senior Biologist

Attachment

P.O. Box 2260 Placerville, CA 95667 **tel** 530 626 1401 **fax** 530 622 2820 www.en2resources.com

EN2 RESOURCES, INC.
Water and Energy Consulting Services

July 20, 2016

June Ortega Geary
P.O. Box 6675
Colusa, CA 95927

Subject: Proposed Amador Water Agency Ione Small Hydroelectric Project

Dear Ms. Geary:

In its May 23, 2014 response letter to EN2 Resources, Inc. (EN2), the Native American Heritage Commission identified you as a point of contact regarding known or recorded sites of cultural resources within Amador County. This letter is a request that you please provide EN2 with any background information regarding Native American historic and/or sacred sites within the Proposed Project area as described below.

PROJECT LOCATION: The proposed Project is located in T06N, 10E, Section 31 MDB&M of the USGS 7.5-minute Amador City Quadrangle. The site location is approximately 38°20'13.155"N, 120°54'36.488"W. The Project Area is delineated on the attached Figure 1: Project Location Map.

PROJECT DESCRIPTION: The proposed Project would be located at the AWA Ione Reservoir. The project consists of construction and operation of a new 300 kW hydroelectric facility that would supplement power required by the water system. The Project would add an in-conduit turbine generator and 625 square foot powerhouse to existing water facilities at the Reservoir. The Project area, including power lines to connect the new hydroelectric equipment with an existing PG&E power line, would be less than 0.3 acre in size. Access to the site would be on existing roads.

The hydroelectric equipment would operate in conjunction with the flow demands of the water system; existing pipes would be modified and rerouted to serve the hydroelectric system. Minor changes in operations would result from reducing power generation during low water flow demands.

We would appreciate receipt of your comments within 30 days of the date of this letter. If you have any questions about Project activities, please call me at (530) 626-1401.

Sincerely,

Kris Kiehne

Kris Kiehne
Senior Biologist

Attachment

P.O. Box 2260 Placerville, CA 95667 **tel** 530 626 1401 **fax** 530 622 2820 www.en2resources.com

EN2 RESOURCES, INC.
Water and Energy Consulting Services

July 20, 2016

Yvonne Miller, Chairperson
Ione Band of Miwok Indians
P.O. Box 669
Plymouth, CA 95669

Subject: Proposed Amador Water Agency Ione Small Hydroelectric Project

Dear Ms. Miller:

In its May 23, 2014 response letter to EN2 Resources, Inc. (EN2), the Native American Heritage Commission identified you as a point of contact regarding known or recorded sites of cultural resources within Amador County. This letter is a request that you please provide EN2 with any background information regarding Native American historic and/or sacred sites within the Proposed Project area as described below.

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Kris Kiehne

Kris Kiehne
Senior Biologist

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EN2 RESOURCES, INC.
Water and Energy Consulting Services

July 20, 2016

Rhonda Morningstar Pope, Chairperson
Buena Vista Rancheria
1418 20th Street, Ste. 200
Sacramento, CA 95811

Subject: Proposed Amador Water Agency Ione Small Hydroelectric Project

Dear Ms. Pope:

In its May 23, 2014 response letter to EN2 Resources, Inc. (EN2), the Native American Heritage Commission identified you as a point of contact regarding known or recorded sites of cultural resources within Amador County. This letter is a request that you please provide EN2 with any background information regarding Native American historic and/or sacred sites within the Proposed Project area as described below.

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Sincerely,

Kris Kiehne

Kris Kiehne
Senior Biologist

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EN2 RESOURCES, INC.
Water and Energy Consulting Services

July 20, 2016

Lois Williams
Calaveras Band of Miwuk Indians
P.O. Box 876
West Point, CA 95255

Subject: Proposed Amador Water Agency Ione Small Hydroelectric Project

Dear Ms. Williams:

In its May 23, 2014 response letter to EN2 Resources, Inc. (EN2), the Native American Heritage Commission identified you as a point of contact regarding known or recorded sites of cultural resources within Amador County. This letter is a request that you please provide EN2 with any background information regarding Native American historic and/or sacred sites within the Proposed Project area as described below.

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Sincerely,

Kris Kiehne

Kris Kiehne
Senior Biologist

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EN2 RESOURCES, INC.
Water and Energy Consulting Services

July 20, 2016

Charles Wilson, Chairperson
Calaveras Band of Mi-Wuk Indians
546 Bald Mountain Road
West Point, CA 95255

Subject: Proposed Amador Water Agency Ione Small Hydroelectric Project

Dear Mr. Wilson:

In its May 23, 2014 response letter to EN2 Resources, Inc. (EN2), the Native American Heritage Commission identified you as a point of contact regarding known or recorded sites of cultural resources within Amador County. This letter is a request that you please provide EN2 with any background information regarding Native American historic and/or sacred sites within the Proposed Project area as described below.

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Sincerely,

Kris Kiehne

Kris Kiehne

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EN2 RESOURCES, INC.
Water and Energy Consulting Services

July 20, 2016

Randy Yonemura
4305 39th Avenue
Sacramento, CA 95824

Subject: Proposed Amador Water Agency Ione Small Hydroelectric Project

Dear Mr. Yonemura:

In its May 23, 2014 response letter to EN2 Resources, Inc. (EN2), the Native American Heritage Commission identified you as a point of contact regarding known or recorded sites of cultural resources within Amador County. This letter is a request that you please provide EN2 with any background information regarding Native American historic and/or sacred sites within the Proposed Project area as described below.

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Sincerely,

Kris Kiehne

Kris Kiehne
Senior Biologist

Attachment

P.O. Box 2260 Placerville, CA 95667 **tel** 530 626 1401 **fax** 530 622 2820 www.en2resources.com

Appendix C

Comments Received and Reply

CALIFORNIA
Water Boards

RECEIVED
AMADOR WATER AGENCY
SEP 08 2016
12800 RIDGE ROAD
SUTTER CREEK, CA 95685

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

6 September 2016

Damon Wykoff
Amador Water Agency
12800 Ridge Road
Sutter Creek, CA 95685

CERTIFIED MAIL
91 7199 9991 7035 8360 9867

COMMENTS TO REQUEST FOR REVIEW FOR THE MITIGATED NEGATIVE DECLARATION, IONE SMALL HYDROELECTRIC PROJECT, SCH# 2016082037, AMADOR COUNTY

Pursuant to the State Clearinghouse's 15 August 2016 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Mitigated Negative Declaration* for the Ione Small Hydroelectric Project, located in Amador County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases,

the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues.

For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website: http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/.

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Policy is available on page IV-15.01 at: http://www.waterboards.ca.gov/centralvalleywater_issues/basin_plans/sacsjr.pdf

In part it states:

> *Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.*
>
> *This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.*

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan

(SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits[1]
The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/.

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Industrial Storm Water General Permit
Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml.

Clean Water Act Section 404 Permit
If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water

[1] Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.

Clean Water Act Section 401 Permit – Water Quality Certification
If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

Waste Discharge Requirements – Discharges to Waters of the State
If USACOE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml.

Dewatering Permit
If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Risk General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk Waiver) R5-2013-0145. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Risk General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Risk Waiver and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2013-0145_res.pdf

Regulatory Compliance for Commercially Irrigated Agriculture

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program. There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board's website at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/app_approval/index.shtml; or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.

2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100**. Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently $1,084 + $6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

Low or Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Dewatering and Other Low Threat Discharges to Surface Waters* (Low Threat General Order) or the General Order for *Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water* (Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0073.pdf

NPDES Permit

If the proposed project discharges waste that could affect the quality of the waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit.

For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/help/business_help/permit3.shtml

If you have questions regarding these comments, please contact me at (916) 464-4644 or Stephanie.Tadlock@waterboards.ca.gov.

Stephanie Tadlock

Stephanie Tadlock
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

George T. Kammerer
Attorney At law
P.O. Box 951
Sloughhouse, CA 95683

September 11, 2016

Mr. Damon Wyckoff
Operations Manager
Amador Water Agency
12800 Ridge Road
Sutter Creek, CA 95685

Via E-mail and USPS Mail
DWyckoff@amadorwater.org

RE: Proposed Mitigated Negative Declaration – Ione Small Hydroelectric Project Comments

Dear Mr. Wyckoff:

We submit these comments upon the above document on behalf of our client, PCB Properties, Inc. (PCBP), a subsidiary of Pacific Coast Building Products, Inc., one of the largest construction materials companies in the Sacramento region. PCBP owns parcels APN 011-250-009-000 and APN 011-250-011-000 located adjacent to the Amador Water Agency's (AWA) Ione Reservoir and its infrastructure.

A review of the Initial Study and Proposed Mitigated Negative Declaration (MND) – Ione Small Hydroelectric Project (ISHP), indicates that the Ione Reservoir, dam and much of its infrastructure are key components of the ISHP.

After reviewing the ISHP MND itself, and after viewing AWA's spray painted pre-construction markings (see attached photographs) on PCBP's property on APN 011-250-011-000, PCBP, for the first time, has been made aware that AWA apparently operates a substantial underground water line or lines which cross the entire width of APN 011-250-011-000 paralleling what PCBP refers to as Kirk Road. The alignment of the underground water line indicates that it continues southwesterly to also run underneath significant portions of PCBP's adjacent APN 011-250-009-000. The ISHP MND appears to describe this as a 16-inch pipeline.

This causes PCBP substantial concern because a detailed review of PCBP's title of ownership to PCBP's two parcels from the Amador County Recorder's Office reveals no evidence of any easements, any rights of way or any other legal rights in AWA's favor which allow AWA to locate and operate water line(s) or any other AWA infrastructure on or under PCBP's parcels.

In addition, after a detailed review of the ISHP MND, PCBP has great concern about the existence of potentially significant environmental effects which directly adversely affect PCBP's properties, which effects were not discussed at all in the ISHP MND.

As you are probably well aware, the California Environmental Quality Act (CEQA) mandates that whenever a fair argument can be made that a project may have a significant effect on the environment, an Environmental Impact Report (EIR), rather than an MND must be prepared. (Public Resources Code Secs. 21080(d), 21082.2(d).)

As explained below, PCBP provides the following substantial evidence into the record to AWA which satisfies the fair argument standard that the ISHP project may have a significant effect on the environment requiring an EIR to be prepared in order to comply with CEQA. Furthermore, the project description is inaccurate, incomplete and therefore inadequate as explained below.

Project Description

The project description in the ISHP MND is not accurate because it erroneously omits discussion of portions of the ISHP infrastructure and potentially significant flooding risks to downstream properties as a result of pipeline infrastructure of the ISHP, which includes PCBP's parcels. As stated above and as shown in the attached photographs, AWA's spray painted pre-construction markings on PCBP's property on APN 011-250-011-000, clearly show that the ISHP ties into and uses underground pipelines which result in drainage onto PCBP's parcels. This feature of the project was not discussed at all nor depicted in the ISHP MND project description, nor were its potential adverse effects upon the environment analyzed at all in the MND.

A recent investigation by PCBP, as a result of review of the ISHP MND, determined that AWA's underground water pipeline revealed by AWA's spray painted pre-construction markings on PCBP's APN 011-250-011-000, transmits water from AWA's ISHP under APN 011-250-011-000 and onto PCBP's APN 011-250-009-000 where AWA's pipeline daylights above ground on APN 011-250-009-000 depositing water from AWA's Ione Reservoir.

This component of the project was not analyzed in the ISHP MND in the project description, even though it is clearly part of the project. The project description is therefore inadequate under CEQA, and, as a result, must be revised and an EIR prepared for the ISHP.

Significant Effects On The Environment

Any CEQA document for the ISHP is inadequate without a discussion of direct and reasonably foreseeable indirect effects on the environment. (CEQA Guidelines Sec. 15358.)

Deposition of water and potential flooding on PCBP's APN 011-250-009-000 and APN 011-250-011-000 is not discussed at all in the ISHP MND which is likely due to regular ISHP operations or a failure of AWA's existing pipeline which runs from AWA's Ione Dam to and across PCBP's APN 011-250-011-000 to APN 011-250-009-000. Deposition and disposal of water from AWA's Ione Dam onto PCBP property, as mentioned above, is clearly a part of the ISHP operations envisioned by AWA and must be discussed in order to satisfy CEQA's public notice and information policies. (CEQA Guidelines Sec. 15201, et seq.)

A 16-inch pipeline (or any other size water pipeline [especially if it is under pressure]), has the potential to deposit substantial quantities of water in a very short period of time upon PCBP's parcels in the event of a major storm event or a system, valve or pipe malfunction or other failure. The ISHP MND notes that 12-inch and 10-inch diameter "water discharge pipelines will be built within the existing access road" which "discharge lines would be in addition to existing water lines that help reservoir circulation and aeration". (ISHP, MND, p.6.) The "existing access road" referred to in the MND is Kirk Road which runs across PCBP's APN 011-250-011-000. This is the same road under which the existing water pipeline runs from the Ione Reservoir across PCBP's APN 011-250-011-000 and deposits water upon PCBP's APN 011-250-009-000.

The MND states that "the proposed project would . . . b[e] operating at a maximum flow level for longer periods of time" so that "operations would affect the diurnal water levels of the Ione Reservoir such that the levels would vary more than historically". (ISHP, MND p. 11.)

It is reasonable to assume that this much more frequent use of the Ione Reservoir dam and pipelines, most likely under greater pressures for extended periods of time at "maximum flow levels", would increase the chances of a substantial leak or all out blowout of the dam or a pipe. Because PCBP's properties are immediately adjacent and directly downstream from the ISHP to which water will all flow by gravity, it is reasonable to anticipate that such occurrences could and would adversely affect PCBP's properties by flooding parts or all of them. The MND did not discuss in any way this very foreseeable, significant effect upon the environment.

Likewise, environmental effects to PCBP's properties as a result of a partial or complete failure of the Ione Dam itself which would drain a large volume all at once of flood waters directly onto PCBP's immediately adjacent downstream parcels was not discussed. This is certainly a foreseeable event for a number of reasons (i.e.., engineering defects, erosion from a burst pipe or large storm event over topping the dam, an earthquake, failure of the larger upstream Tanner Reservoir pipes, valves or dam and/or water control valves in between, failure of the Pelton turbine resulting in increased and uncontrolled water flows out of Ione Reservoir, etc.) By "operating at maximum flow levels for longer periods of time" the described more frequent fill ups and drawdowns of Ione Reservoir certainly increase the likelihood of a pipeline or dam failure. On the heavy clay soils in this part of Amador County, runoff from rainfall events can be very substantial in a very short amount of time. Recent rainstorm trends have been towards larger rainfall events over shorter time horizons which further increase and exacerbate runoff amounts and rates. No discussion of this climate change induced likelihood was analyzed.

None of these reasonably foreseeable occurrences resulting in adverse environmental effects upon downstream property owners like PCBP were anticipated or discussed in the ISHP MND.

For all of the reasons outlined above, use of an MND in these circumstances violates CEQA.

As a side note, CEQA Guidelines, Article 19 Categorical Exemptions, Section 15328 for small hydroelectric projects at existing facilities is inapplicable to the ISHP because the "timing of release" is being changed with the increased frequency of "maximum flow levels for longer periods of time" described within the ISHP MND. Furthermore, "rate and volume" changes due to these flow changes also obviate the applicability of this exemption.

The ISHP MND acknowledges that there will be increased vehicular traffic to the AWA site during construction which includes anticipated large amounts of "concrete would be trucked to the site from off-site batch plants in the region. One or possibly two concrete pumping trucks would be used for pouring a concrete base for the proposed turbine-generator powerhouse, and any footings needed for power line connections." (ISHP, MND, p. 10.)

"Construction equipment for Project activities would be expected to include the following during various periods of the 6- to 7-month construction period, although it is unlikely that more than 5 pieces of equipment would be in use at any one time.

"Equipment Needs

- Backhoe (1)
- Bulldozer (1)
- Motor Grader (1)
- Soil Compactor (Sheep-Foot) (1)
- Water Truck (1)
- General use pickups (2)
- Truck-mounted crane (1)
- Concrete Truck or Concrete Pumping Truck (1, possibly 2 at once)" (ISHP MND, p. 10.)

AWA fails to discuss the potential significance of this substantial increase in vehicular traffic involving large trucks and heavy equipment during ISHP facility construction on State Highway 104, local roads, and on the neighboring gravel Kirk Road owned by PCBP which AWA plans to use to access the AWA project site. It is reasonably foreseeable that this increase in traffic could cause a significant effect upon the environment, which AWA fails to analyze in the ISHP MND.

For all of these reasons, the ISHP MND is legally inadequate under CEQA to assess the potential adverse environmental effects of the ISHP. As stated previously, an EIR is required in this case.

Kirk Road Usage by AWA Across PCBP-Owned Private Property

The ISHP MND states that "[c]onstruction activity would occur primarily on AWA property, and mostly by the existing unpaved access road leading to the reservoir from California State Highway 104." (ISHP, MND p. 10.) In order for AWA to access AWA property, AWA and its contractors, must cross PCBP's APN 011-250-011-00 on the gravel Kirk Road.

"Construction equipment for the Project activities would be expected to include the following during various periods of the 6- to 7-month construction period . . . Backhoe (1), Bulldozer (1), Motor Grader (1), Soil Compactor (Sheep-Foot) (1), Water Truck (1), General use pickups (2), Truck-mounted crane (1), Concrete Truck or Concrete Pumping Truck (1, possibly 2 at once)" (ISHP MND, p. 10.)

The only access rights on Kirk Road are for "a right of way for vehicles and livestock, for ingress and egress to and from the above described tract of land" for livestock grazing. (Amador County Official Records, Book 10, Page 426.)

As stated by its terms, this right of way is limited by custom to standard passenger vehicles and livestock for ingress and egress for historical daily grazing access. Heavy construction vehicles such as cranes, bulldozers, backhoes, sheep's foot and concrete trucks or concrete pumping trucks were never contemplated or intended, and access by any of those clearly exceeds the scope of the right of way. For safety and other reasons, PCBP is unwilling to allow the use of Kirk Road by heavy equipment and construction vehicles.

Furthermore, as explained above, no evidence exists of any easements, rights of way or any other legal rights in AWA's favor which allow AWA to locate and operate water line(s) or any other AWA infrastructure on or under PCBP's parcels APN 011-250-009-000 or 011-250-011-000.

AWA's water pipeline on PCBP's parcels must either be removed or there must be an agreement reached that is acceptable to PCBP for that waterline to remain in place.

If AWA's water pipeline remains, it effectively bifurcates both parcels and renders large portions of them unbuildable, un-minable, and unavailable for storage of large, heavy building materials.

In summary, the MND in inadequate under CEQA and an EIR must instead be prepared for this project. Similarly, AWA does not have a legal right to locate a water pipeline on or under either of PCBP's two adjacent parcels and AWA's existing line must be removed or an agreement reached which is acceptable to PCBP in order to allow AWA's pipeline to remain.

Very truly yours,

George T. Kammerer
Attorney At Law
Enclosures

A Public Agency

12800 Ridge Road, Sutter Creek, CA 95685-9630 • www.amadorwater.org • OFFICE: (209) 223-3018
FAX: (209) 257-5267

September 14, 2016

To: Amador Water Agency Board of Directors

From: Damon Wyckoff, Operations Manager

RE: Proposed Ione Small Hydroelectric Project

Response to Comments received from Pacific Coast Building Properties, Inc., represented by George Kammerer, Letter Dated 09/11/2016

The comments received from Pacific Coast Building Properties, Inc. (PCBP) pertain to location of the proposed project, ownership and adjacency of parcels, easements, threats of flooding due to operational changes at the Ione Reservoir, and temporary traffic impacts resulting from project construction as a result of the proposed hydroelectric project.

The comment letter from PCBP contains a lengthy description of parcels and pipeline locations. These comments resulted from their misunderstanding of the location and operation of the proposed project and its components based on their misinterpretation and conjecture of the results of an underground survey of subsurface infrastructure (USA survey).

The proposed project is located entirely on AWA parcels APN 011-180-027 and 011-250-002. No project components are located on PCBP property. However, construction access is required on Kirk Road.

Mr. Greg Stevenson requested a USA survey on September 6, 2016 on behalf of PCBP. The survey showed that there is a pipeline which crosses PCBP's parcel APN 011-250-011. This is a 10 inch pipeline and was constructed by the State of California in 1989 and originally conveyed un-treated water from AWA's Tanner Reservoir in Sutter Creek to the Preston School of Industry's Water Treatment Plant in Ione on Waterman Road. This pipeline is known as the Preston Pipeline. The Agency acquired Temporary Right of Access and Use Agreement from the State of California in 2015 in order to ensure an adequate water supply to the city of Ione in the future. Through this agreement, which benefits the community overall, the Agency assumed responsibility for the operation and maintenance of this 10 inch pipeline.

PCBP erroneously inferred that this pipeline was associated with the proposed project. Many of their subsequent comments and concerns resulted from this misinterpretation.

I would like to direct your attention to the adequacy of the CEQA document before you consider the proposed project.

CEQA

On page 2 of their letter, PCBP claims that there is a “fair argument” that the project will cause Significant Effects on the Environment from:

- Flooding due to project operations
- Vehicular traffic

The “fair argument” standard under CEQA requires that an Environmental Impact Report (EIR) be prepared when the Lead Agency determines that it can be fairly argued , based on substantial evidence, in light of the whole record before the agency, that a project potentially may have a significant effect on the environment (PRC § 2109(d), 21082.2 (d)). Under this standard, project opponents, such as PCBP, must present substantial evidence that the project may have significant effects. To trigger the preparation of an EIR, the project opponent must demonstrate that these impacts have not or cannot be reduced to a less-than-significant level through implementation of suitable mitigation measures. Unsubstantiated opinion and speculation are not allowed under the “fair argument” standard of CEQA. Objections must be based on fact or expert opinion.

The IS/MND is complete and accurate and fulfills the requirements of CEQA. PCBP has not provided facts, or expert opinion supported by facts, of potential project impacts that have not been reduced to a less-than-significant level in the IS/MND for the project, as detailed below.

Impacts due to Flooding or Water Deposition:

PCBP claims that “more frequent use” of the dam and pipelines makes it “…reasonable to assume…” that this would increase the chances of “blowout” (page 3). PCBP does not provide facts or expert opinion on which to base this claim. PCBP’s narrative continues to speculate on pipeline failures, forces majeure, and climate change that could result in flooding due to project construction and activity.

In fact, the AWA Ione Reservoir dam is structurally sound The Ione Reservoir is currently operated such that there are changes in the water levels of and increased cycling of the water levels in the reservoir. This mode of operation has not been found to have adverse effects on parcels in the vicinity of the Ione Reservoir, and based on the integrity of the Ione Reservoir as exhibited in the attached dam inspection report(s), will not have an effect when the proposed project is constructed.

The Ione Reservoir was built in the 1850’s and has withstood many years of adverse weather. Most importantly, the dam’s structural integrity is inspected annually by the State of California Division of Safety of Dams to ensure its integrity.

PCBP claims that project appurtenances are located on PCBP-owned parcels and could result in flooding damage. This claim is the result of their misinterpretation of findings from the USA request. As described in the project description and in Figure 2 of the IS/MND, it is clear that all project appurtenances are located on the AWA-owned parcels (APN 011-800-027 & 011-250-002). All pipelines associated with the proposed project discharge to the Ione Reservoir and do not discharge to pipelines on PCBP-owned property (APN 011-250-011).

The timing of releases into the pipeline discharging from the Ione Reservoir, which does not cross APN 011-250-011, will not change in rate. These rates are established by water demand and are not associated with the hydroelectric project. The Preston Pipeline operation will not change whatsoever.

Incidentally, PCBP claims that the USA was requested by AWA for pre-construction work. This is incorrect. The pictures attached to PCBP's letter do not depict Agency pre-construction markings. The water line marked by AWA as a result of the request is the Preston Pipeline which is <u>not</u> a component of the proposed project. It is important to note that construction on the proposed project has not begun.

<u>Impacts Due to Increased Vehicular Traffic</u>

PCBP claims that it is "…reasonably foreseeable that…" the use of up to eight to 10 pieces of construction trucks and other equipment would result in a significant effect on the environment. PCBP provides no evidence to support this claim, only conjecture.

In fact, the temporary impact on traffic due to construction of the project is analyzed in the IS/MND (p 58-59). AWA has concluded that the proposed project would result in Less than Significant Impacts based on the facts that:

- The proposed project does not conflict with the Circulation Element of the Amador County General Plan.
- The temporary increase in the level of traffic associated with construction vehicles would not result in an impact to the existing Level of Service (LOS) of SH 104.

<u>Use of Kirk Road for Access</u>

AWA has established a prescriptive easement for use of Kirk Road.

The Ione Reservoir was constructed in the 1850's. AWA acquired the reservoir property in the 1980's from PG&E for purposes of storage and conveyance of raw water for treatment at its Ione Water Treatment Plant and use by the community of Ione. AWA, and PG&E before them, established the right to use Kirk Road by continuous use for a long period of time in an obvious manner for ingress and egress.

PCBP conflates the presence of the Preston Pipeline in Kirk Road with the proposed project and demands that the Preston Pipeline be removed or that and agreement be established to allow the Preston Pipeline to remain in place.

If at this time PCBP is demanding an agreement for use of Kirk Road, that is an issue linked to but separate from the Board's consideration of the proposed project and IS/MND.

In summary, the project IS/MND adequately discusses all direct and reasonably foreseeable indirect effects on the environment and presents adequate mitigation measures to reduce all potential project impacts to less-than-significant levels.

CC: File

Approved

AMADOR WATER AGENCY
Board of Directors
Regular Meeting

September 22, 2016

MINUTES

Directors Present:	Robert Manassero, Vice President Gary Thomas, Vice President Richard Farrington Art Toy
Directors Absent:	Paul Molinelli
Staff Present:	Gene Mancebo, General Manager Cris Thompson, Assistant General Manager Damon Wyckoff, Operations Manager

CALL TO ORDER- President Manassero called the meeting to order at 9:01 a.m.

ADDITIONS TO THE AGENDA – None

PUBLIC COMMENT:
Katharine Evatt, Foothill Conservancy

CONSENT AGENDA ITEMS: (02:20 – 3:00)

MOTION: It was moved by Director Toy, seconded by Director Thomas, and carried to approve consent agenda items 1.A Approval of Regular Board Meeting Minutes of September 8, 2016, 1.B Accounts Payable for August, 2016, and 3.A Adoption of Resolution 2016-21 – Revisions to the Conflict of Interest Code.

Ayes: Directors Toy, Farrington. Thomas and Manassero
Noes: None
Absent: Director Molinelli
Abstain: None

AWA WATER SYSTEMS (3:02:18- 1:24:14)
Long Term Water Needs Study
Presentation and Update by Dave Richardson, RMC Water and Environment

Public Comment:
Katherine Evatt, Foothill Conservancy President

Ione Hydro Project (1:24:25- 1:49:09)
Discussion and possible of the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Plan and direction to staff to file the notice of determination Admin Draft Initial Study/Proposed Mitigated Negative Declaration available for review at http://www.amadorwater.org/projects_studies.html

MOTION: It was moved by Director Toy, seconded by Director Thomas, and carried to adopt the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Plan with direction to staff to file the notice of determination

Matt Swindle, Nline Energy
Kris Kiehne, EN2 Resources

Ayes: Directors Toy, Farrington. Thomas and Manassero
Noes: None
Absent: Director Molinelli
Abstain: None

Discussion and possible adoption of Resolution No. 2016-22, authorizing the General Manger to execute all necessary documents required to apply for and accept the California Energy Commission 1% loan

MOTION: It was moved by Director Farrington, seconded by Director Toy, and carried to adopt Resolution No. 2016-22, authorizing the General Manger to execute all necessary documents required to apply for and accept the California Energy Commission 1% loan

Ayes: Directors Toy, Farrington. Thomas and Manassero
Noes: None
Absent: Director Molinelli
Abstain: None

RECESS was called at 10:53 a.m. **SESSION** resumed at 11:01 a.m.

CLOSED SESSION was called at 11:02 a.m.
Conference with Legal Counsel Pursuant to Government Code Section 54956.9(a) – Anticipated Litigation – Significant Exposure to Litigation Involving Claims Related to Sierra Mountain Construction Inc.'s performance of the AWA Gravity Supply Line Project.

Conference with Legal Counsel Pursuant to Government Code Section 54956.9(a) – Pending Litigation – Amador Water Agency v. Lazy Creek Family Trust, et al. (Amador Superior Court Case No. 15-CV-9203).

OPEN SESSION resumed at 11:35 a.m.

President Manassero reported out of closed session that the Board approved an agreement with Sierra Mountain Construction, Inc. to settle all claims between the Agency and SMCI related to construction of the Gravity Supply Line Project. The agreement provides for the Agency to pay SMCI the amount of $1,100,000 in exchange for a full release of all claims related to this project. Directors Toy, Thomas and Manassero voted to approve, Director Farrington voted no, and Director Molinelli was absent.

Ayes: Directors Toy, Thomas and Manassero
Noes: Director Farrington
Absent: Director Molinelli
Abstain: None

Water Sales and Production (1:53:02- 2:02:20)
Update regarding current water sales and water production

AGENCY GENERAL (2:02:21- 2:28:27)
Personnel Matters
Discussion and possible action to implement the Salary Structure Ad Hoc Committee recommendations

MOTION: It was moved by Director Toy, seconded by Director Thomas and carried to implement the adhoc committee recommendation to increase the Assistant General Manager's hourly salary immediately and give direction to staff to communicate with the employees and to complete an in house salary survey with a completion date of March, 2017.

Ayes: Directors Toy, Thomas, Farrington and Manassero
Noes: None
Absent: Director Molinelli
Abstain: None

PROJECT UPDATES (2:30:27- 2:56:20)

COMMITTEE REPORTS (2:56:20-3:05:06)
Engineering Committee (09-22-16)

GENERAL MANAGER'S REPORT (3:05:06- 3:16:45)

ASSISTANT GENERAL MANAGER'S REPORT (3:16:48- 3:25:10)

BOARD OF DIRECTOR DISTRICT REPORTS, COMMITTEE REPORTS AND DIRECTOR COMMENTS (3:25:15- 3:33:46)

FUTURE AGENDA TOPICS (3:33:50- 3:35:28)
Providing JVID service as a permanent customer

ADJOURNMENT
President Manassero adjourned the meeting at 2:35 p.m.

Cris Thompson
Clerk of the Board of Directors
Approved: 10-13-16

Notice of Determination

Appendix D

To:

☒ Office of Planning and Research

U.S. Mail: P.O. Box 3044, Sacramento, CA 95812-3044

Street Address: 1400 Tenth St., Rm 113, Sacramento, CA 95814

☒ County Clerk
County of: Amador
Address: 810 Court Street
Jackson, CA 95642

From:
Public Agency: Amador Water Agency
Address: 12800 Ridge Road
Sutter Creek, CA 95685
Contact: Damon Wyckoff, Operations Manager
Phone: (209) 257-5284

Lead Agency (if different from above)
(same)
Address:

Contact:
Phone:

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

ENDORSED
FILED
SEP 23 2016
KIMBERLY L. GRADY, County Clerk
AMADOR COUNTY
By T. HURT Deputy

State Clearinghouse Number (if submitted to State Clearinghouse): 2016082037

Project Title: Ione Small Hydroelectric Project

Project Applicant: Amador Water Agency

Project Location (include county): Amador

Project Description:

The project would add a 448 kW hydroelectric facility using an in-conduit trubine generator and 432 sq foot powerhouse to existing water facilities at AWA's Ione Reservoir.A short distribuition-level voltage power line would be installed below grade following an existing unpaved road from the hydroelectric facility to interconnect with exisiting 3-phase power lines approximately 1/3 mile away.

This is to advise that the Amador Water Agency (☒ Lead Agency or ☐ Responsible Agency) has approved the above described project on Sept 22, 2016 (date) and has made the following determinations regarding the above described project.

1. The project [☐ will ☒ will not] have a significant effect on the environment.
2. ☐ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
   ☒ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [☒ were ☐ were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [☒ was ☐ was not] adopted for this project.
5. A statement of Overriding Considerations [☐ was ☒ was not] adopted for this project.
6. Findings [☒ were ☐ were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at:
Amador Water Agency Office, 12800 Ridge Road, Sutter Creek, CA 95685

Signature (Public Agency): GENE MANCEBO Title: General Manager

Date: 9/22/2016 Date Received for filing at OPR:

Authority cited: Sections 21083, Public Resources Code.
Reference Section 21000-21174, Public Resources Code.

Revised 2011

File No. 2016-043
Posted On 09/23/2016
Posting Removed

State of California - Department of Fish and Wildlife

2016 ENVIRONMENTAL FILING FEE CASH RECEIPT

DFW 753.5a (Rev. 12/15/15) Previously DFG 753.5a

Print | StartOver | Finalize&Email

RECEIPT NUMBER:
03 — 09/23/2016 — 43

STATE CLEARINGHOUSE NUMBER *(If applicable)*

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.

LEAD AGENCY	LEAD AGENCY EMAIL	DATE
AMADOR WATER AGENCY	AHINTON@AMADORWATER.ORG	09/23/2016

COUNTY/STATE AGENCY OF FILING: Amador

DOCUMENT NUMBER:

PROJECT TITLE: IONE SMALL HYDROELECTRIC PROJECT

PROJECT APPLICANT NAME	PROJECT APPLICANT EMAIL	PHONE NUMBER
AMADOR WATER AGENCY	AHINTON@AMADORWATER.ORG	(209)257-5284

PROJECT APPLICANT ADDRESS	CITY	STATE	ZIP CODE
12800 RIDGE ROAD	SUTTER CREEK	CA	95685

PROJECT APPLICANT *(Check appropriate box)*

- [x] Local Public Agency
- [ ] School District
- [ ] Other Special District
- [ ] State Agency
- [ ] Private Entity

CHECK APPLICABLE FEES:

[ ] Environmental Impact Report (EIR)	$3,070.00	$	0.00
[x] Mitigated/Negative Declaration (MND)(ND)	$2,210.25	$	2,210.25
[ ] Certified Regulatory Program document (CRP)	$1,043.75	$	0.00

- [ ] Exempt from fee
  - [ ] Notice of Exemption (attach)
  - [ ] CDFW No Effect Determination (attach)
- [ ] Fee previously paid (attach previously issued cash receipt copy)

[ ] Water Right Application or Petition Fee (State Water Resources Control Board only)	$850.00	$	0.00
[ ] County documentary handling fee		$	0.00
[x] Other ADMINISTRATION FEE		$	50.00

PAYMENT METHOD:

[ ] Cash [ ] Credit [x] Check [ ] Other

TOTAL RECEIVED $ 2,260.25

SIGNATURE	AGENCY OF FILING PRINTED NAME AND TITLE
X	DEPUTY RECORDER/CLERK II

ORIGINAL - PROJECT APPLICANT | COPY - CDFW/ASB | COPY - LEAD AGENCY | COPY - COUNTY CLERK

State of California - Department of Fish and Wildlife

2016 ENVIRONMENTAL FILING FEE CASH RECEIPT

DFW 753.5a (Rev. 12/15/15) Previously DFG 753.5a

NOTICE

Each project applicant shall remit to the county clerk the environmental filing fee before or at the time of filing a Notice of Determination (Pub. Resources Code, § 21152; Fish & G. Code, § 711.4, subdivision (d); Cal. Code Regs., tit. 14, § 753.5). Without the appropriate fee, statutory or categorical exemption, or a valid No Effect Determination issued by the California Department of Fish and Wildlife (CDFW), the Notice of Determination is not operative, vested, or final, and shall not be accepted by the county clerk.

COUNTY DOCUMENTARY HANDLING FEE

The county clerk may charge a documentary handling fee of fifty dollars ($50) per filing in addition to the environmental filing fee (Fish & G. Code, § 711.4, subd. (e); Cal. Code Regs., tit. 14, § 753.5, subd. (g)(1)). A county board of supervisors shall have the authority to increase or decrease the fee or charge, that is otherwise authorized to be levied by another provision of law, in the amount reasonably necessary to recover the cost of providing any product or service or the cost of enforcing any regulation for which the fee or charge is levied (Gov. Code, § 54985, subd. (a)).

COLLECTION PROCEDURES FOR COUNTY GOVERNMENTS

Filing Notice of Determination (NOD):

- ☐ Collect environmental filing fee or copy of previously issued cash receipt. *(Do not collect fee if project applicant presents a No Effect Determination signed by CDFW. An additional fee is required for each separate environmental document. An addendum is not considered a separate environmental document. Checks should be made payable to the county.)*
- ☐ Issue cash receipt to project applicant.
- ☐ Attach copy of cash receipt and, if applicable, previously issued cash receipt, to NOD.

If the project applicant presents a **No Effect Determination** signed by CDFW, also:

- ☐ Attach No Effect Determination to NOD *(no environmental filing fee is due)*.

Filing Notice of Exemption (NOE) *(Statutorily or categorically exempt project (Cal. Code Regs., tit. 14, §§ 15260-15285, 15300-15333))*

- ☐ Issue cash receipt to project applicant.
- ☐ Attach copy of cash receipt to NOE *(no environmental filing fee is due)*.

Within 30 days after the end of each month in which the environmental filing fees are collected, each county shall summarize and record the amount collected on the monthly State of California Form No. CA25 (TC31) and remit the amount collected to the State Treasurer. Identify the remittance on Form No. CA25 as "Environmental Document Filing Fees" per Fish and Game Code section 711.4.

The county clerk shall mail the following documents to CDFW on a monthly basis:

- ✓ A photocopy of the monthly State of California Form No. CA25 (TC31);
- ✓ CDFW/ASB copies of all cash receipts (including all voided receipts);
- ✓ A copy of all CDFW No Effect Determinations filed in lieu of fee payment;
- ✓ A copy of all NODs filed with the county during the preceding month; and
- ✓ A list of the name, address and telephone number of all project applicants for which an NOD has been filed. If this information is contained on the cash receipt filed with CDFW under California Code of Regulations, title 14, section 753.5, subdivision (e)(6), no additional information is required.

DOCUMENT RETENTION

The county shall retain two copies of the cash receipt (for lead agency and county clerk) and a copy of all documents described above for at least 12 months.

RECEIPT NUMBER

- # The first two digits automatically populate by making the appropriate selection in the County/State Agency of Filing drop down menu.
- # The next eight digits automatically populate when a date is entered.
- # The last three digits correspond with the sequential order of issuance for each calendar year. For example, the first receipt number issued on January 1 should end in 001. If a county issued 252 receipts for the year ending on December 31, the last receipt number should end in 252. CDFW recommends that counties and state agencies save a local copy of this form. CDFW recommends that counties track receipt numbers on a spreadsheet tabbed by month to ensure accuracy.

DO NOT COMBINE THE ENVIRONMENTAL FEES WITH THE STATE SHARE OF FISH AND WILDLIFE FEES.

Mail to:

California Department of Fish and Wildlife
Accounting Services Branch
1416 9th Street, 12th Floor, Suite 1215
Sacramento, California 95814

RESOLUTION NO: 17-0412-13a

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: AMADOR WATER AGENCY PROJECT

WHEREAS, the Amador Water Agency is the Lead Agency for "Ione Small Hydroelectric Project" (hereinafter, "Project,") designing, testing, developing, and demonstrating a high-efficiency Pelton turbine runner at a pressure reducing station in Ione, California; and

WHEREAS, the Amador Water Agency, in 2016, prepared an Initial Study/Mitigated Negative Declaration (hereinafter "MND") for the Project to evaluate the potential environmental impacts of implementing the Project, copies of which are on file with the California Energy Commission; and

WHEREAS, the Amador Water Agency, on September 22, 2016, approved and adopted the MND for the Project; and

WHEREAS, the Amador Water Agency adopted findings required by the California Environmental Quality Act ("CEQA"), and approved the Project, by motion during its regular Board Meeting, a copy of the Minutes of that Board Meeting is on file with the Energy Commission; and

WHEREAS, the Energy Commission is considering proposed Agreement EPC-16-037, "The Amador Water Agency In-Conduit Hydropower Development Project" (hereafter, "EPC-16-037"), a grant to fund the design, testing, development and demonstration of the Pelton turbine; and

Prior to acting on the Agreement EPC-16-037, the Energy Commission desires to make certain findings pursuant to the CEQA Guidelines, title 14, section 15096;

NOW THEREFORE, BE IT RESOLVED:

1. The Energy Commission has reviewed the information contained in the Initial Study and Mitigated Negative Declaration that is relevant to its approval of EPC-16-037, and has reviewed the CEQA findings contained in the Amador Water Agency's Initial Study and Mitigated Negative Declaration, which are adopted to the extent that they are relevant to the Energy Commission's decision to approve EPC-16-037.
2. The Amador Water Agency has already adopted the mitigation measures recommended in the Mitigated Negative Declaration, has authority to implement

the mitigation measures or to seek any required approvals for the mitigation measures, and the Energy Commission has no direct authority to implement the mitigation measures.

3. The Energy Commission has reviewed and considered the Initial Study and Mitigated Negative Declaration, and finds that these documents are adequate for its use as the decision-making body for its consideration of EPC-16-037.
4. Approval of EPC-16-037 is within the scope of the Amador Water Agency Ione Small Hydroelectric Project, and the activities evaluated in the Mitigated Negative Declaration.
5. Since the Mitigated Negative Declaration was finalized, there have been no substantial project changes and no substantial changes in the project circumstances that would require major revisions to the Mitigated Negative Declaration, due to the involvement of new significant environmental effects or an increase in the severity of previously identified significant impacts, and there is no new information of substantial important that would change the conclusion set forth in the Mitigated Negative Declaration.
6. The Energy Commission has not identified any feasible alternative or additional feasible mitigation measures within its power that would substantially lessen or avoid any significant effect the Amador Water Agency In-Conduit Hydropower Development Project would have on the environment.

THEREFORE BE IT RESOLVED, that the Energy Commission finds, on the basis of the entire record before it, that the mitigation measures incorporated in the Mitigated Negative Declaration will prevent EPC-16-037 from having any significant environmental impacts; and

BE IT FURTHER RESOLVED, that the Energy Commission approves Agreement EPC-16-037 with Amador Water Agency, for $750,000; and

BE IT FURTHER RESOLVED, that this document authorizes the Executive Director or his or her designee to execute the same on behalf of the Energy Commission.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a RESOLUTION duly and regularly adopted at a meeting of the California Energy Commission held on April 12, 2017.

AYE: [List of Commissioners]
NAY: [List of Commissioners]
ABSENT: [List of Commissioners]
ABSTAIN: [List of Commissioners]

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Cody Goldthrite,
Secretariat