

## SECTION 4

# ISSUES AND PROPOSED STUDIES

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In addition to this introductory information, this section is divided into three subsections. Section 4.1 provides YCWA’s “data gap analysis”, which includes a preliminary list of potential environmental issues that may need to be evaluated during the relicensing process. In addition, Section 4.1 identifies known Project effects<sup>1</sup> and existing, relevant and reasonably available information regarding potentially-affected resources that would inform an analysis of each identified potential environmental issue and requirements in a new license regarding the issue and, if there is a data gap, any relicensing studies<sup>2</sup> YCWA proposes to undertake to close the data gap. Studies suggested by others are also noted in this section. Section 4.2 describes Project O&M activities YCWA proposes to undertake as a condition (i.e., PM&E measure) of the new license for the purpose of: 1) protecting or mitigating impacts from continued Project O&M; or 2) enhancing resources affected by continued Project O&M (proposed PM&E measures). Section 4.3 provides a list of relevant qualifying federal and State comprehensive waterway plans and resource management plans.

## 4.1 Data Gap Analysis

### 4.1.1 Known Project Effects

YCWA is unaware of any existing, unmitigated Project effects.

### 4.1.2 Identification of Study Needs

Identification of potential environmental issues is a key step in the relicensing process because the issues represent specific concerns or questions that may need to be addressed. Once environmental issues that are to be evaluated are identified, existing information relevant to the issues can be assessed for adequacy, and additional information and potential studies needed to augment existing information can be identified. Identified potential environmental issues may or may not ultimately warrant specific PM&E measures. Table 4.1-1 includes a list of potential environmental issues identified by agencies, tribes, and NGOs in response to YCWA’s outreach for information on or about June 16, 2020 (responses received are provided in Appendix A to this PAD), and other potential environmental issues identified by YCWA. For each potential environmental issue, Table 4.1-1 identifies if an agency or NGO suggested YCWA conduct a

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<sup>1</sup> In this PAD, consistent with the July 16, 2020, Council on Environmental Quality (CEQ) rule amending its regulations implementing the National Environmental Policy Act of 1969, an effect is a change to the human environment from the proposed Project that is reasonably foreseeable and has a reasonably close causal relationship to the proposed Project. Further, consistent with the CEQ’s rule, an effect should generally not be considered significant if it is remote in time, geographically remote, or the product of a lengthy causal chain.

<sup>2</sup> For the purpose of this PAD, a “study” is any data gathering effort to be undertaken by YCWA as part of the relicensing needed for YCWA, FERC and others to assess Project effects inform proposed requirements in the new license. Studies may or may not include fieldwork, and do not include analysis of Project effects.

relicensing study to supplement existing information related to the issue, YCWA's assessment of existing information to address the issue; YCWA's identification of data gaps, if any; and, if a data gap is identified, YCWA's proposed study to address the data gaps.

**Table 4.1-1. Summary of preliminary potential environmental issues, related studies suggested by agencies and others, existing information to address the issues, data gaps, and YCWA’s proposed relicensing studies to close the data gaps.**

Preliminary Potential Environmental Issue	Agency or NGO Suggested Study, If Any	Existing, Relevant, and Reasonably Available Information	YCWA’s Identified Data Gap(s), If Any	YCWA’s Proposed Study to Close Data Gap(s), If Any
Effects of the proposed Project on downstream channel morphology	Geomorphology (FWN <sup>1</sup> )	The Project does not capture sediment or LWM, or add shot rock, sediment or LWM to the lower Yuba River. In addition, the condition of the lower Yuba River channel morphology, including sediment and LWM, has been highly studied over the past 20 years, and is described in Section 3.2.1 and 3.2.3.	A data gap does not exist. The data are adequate to assess potential Project effects and to inform requirements in the new license.	None
	Sediment Transport, including Shot Rock (FWN <sup>1</sup> )			
Effects of the proposed Project on downstream large woody material		Existing information is readily available, and either explicitly included or incorporated by reference in this PAD. See the information provided in Section 3.2.5.	A data gap does not exist. The data are adequate to assess potential Project effects and to inform requirements in the new license.	None
Effects of the proposed Project on soil erosion within the Project Boundary		The Project includes no roads or spoil/borrow areas, and routine Project maintenance does not require ground disturbance. A census of the area does not reveal any active erosion areas associated with the Project and the slopes where the facilities occur appear stable.	A data gap does not exist. Existing information is adequate to assess potential Project effects on soil erosion and to inform requirements in the new license.	None
Effects of the proposed Project on downstream water quantity and flow regime	Water Balance / Operations Model (USFWS <sup>2</sup> )	Hydrology (water quantity and flow) and water balance/operation models are pertinent and readily available from the recent relicensings of the upstream Yuba-Bear and Drum-Spaulding projects and the Yuba River Development Project. YCWA modified the models for use in the Narrows Project relicensing and included the resulting Narrows Ops Model and environmental baseline model run in Attachment C to this PAD.	A data gap does not exist since existing information on water quantity and flows (i.e., historic hydrology and the Narrows Ops Model) is readily available (i.e., included in this PAD). Existing information is adequate to assess Project effects on water quantity and flow regimes and to inform requirements in the new license.	None
Effects of the proposed Project on water quality	Water Quality (FWN <sup>1</sup> & USFWS <sup>2</sup> )	Recent water quality data, including organic compounds and trace metals, are available for Englebright Reservoir and the Yuba River downstream of the Project from the Yuba River Development Project relicensing. In addition, YCWA collected water quality data in 2020 from near the Narrows 1 Powerhouse release while it was operating. These data are summarized in Section 3.2.2 of this PAD.	A data gap does not exist since existing water quality information is readily available and included in this PAD. Existing data are adequate to assess potential Project effects and to inform requirements in the new license related to water quality.	None
	Mercury (FWN <sup>1</sup> )	Mercury has been studied extensively in the Yuba River, particularly in Englebright Reservoir, and mercury data in the reservoir and the Yuba River downstream of the Project are available from the Yuba River Development Project relicensing. In addition, YCWA collected mercury samples in 2020 from near the Narrows 1 Powerhouse outflow while it was operating. These data are summarized in Section 3.2.2 of this PAD.	A data gap does not exist since existing mercury information is readily available and included in this PAD and Further, there is no reasonable mechanism for the Project to introduce mercury or mobilize mercury into the Yuba River. Existing data are adequate to assess potential Project effects and to inform requirements in the new license related to mercury.	None

**Table 4.1-1. (continued)**

Preliminary Potential Environmental Issue	Agency or NGO Suggested Study, If Any	Existing, Relevant, and Reasonably Available Information	YCWA's Identified Data Gap(s), If Any	YCWA's Proposed Study to Close Data Gap(s), If Any
Effects of the proposed Project on water quality	Bioaccumulation in Englebright Reservoir (USFWS <sup>2</sup> )	Bioaccumulation has been studied in Englebright Reservoir and, based on existing information, OEHHA has established fish ingestion advisories in Englebright Reservoir and the Yuba River downstream of the Project for several sportfish species. These data are summarized in Section 3.2.2 of this PAD.	A data gap does not exist since existing mercury bioaccumulation information is readily available and included in this PAD and there is no mechanism for the Project to cause mercury bioaccumulation in Englebright Reservoir or in the Yuba River downstream of the Project. The data are adequate to assess potential Project effects and to inform requirements in the new license related to mercury bioaccumulation.	None
Effects of the proposed Project on water temperature	Water Temperature Monitoring (FWN <sup>1</sup> & USFWS <sup>2</sup> )	Water temperature data are available for Englebright Reservoir and the Yuba River from the Yuba River Development Project relicensing. In addition, YCWA collected water temperature data in 2020 from upstream and downstream of Narrows 1 Powerhouse. These data are summarized in Section 3.2.2 of this PAD.	A data gap does not exist since existing information is readily available and included in this PAD. The data are adequate to assess potential Project effects and to inform requirements in the new license related to water temperature.	None.
	Water Temperature Modeling (FWN <sup>1</sup> & USFWS <sup>2</sup> )	Water temperature models are available for Englebright Reservoir and the Yuba River from the Yuba River Development Project relicensing. A description of the water temperature models, and results from the water temperature models for representative wet, dry, and normal Water Years are presented in Section 3.2.2.1.2 of this PAD.	A data gap does not exist since existing water temperature models are readily available and included in this PAD. The models are adequate to assess potential Project effects related to downstream water temperatures.	None
Effects of proposed Project on fishes in Englebright Reservoir	Fish Populations	Information regarding Englebright Reservoir fish population composition, relative abundance, and spatial distribution is available from the Yuba River Development Project relicensing. A description of that information is provided in Section 3.2.3.1.2 of this PAD.	A data gap does not exist since existing information is readily available and included in this PAD. The data are adequate to assess potential Project effects related to Englebright Reservoir fish populations.	None.
	Entrainment	Information regarding the potential for entrainment of Englebright Reservoir fishes into Narrows 2 Intake Tunnel is available from the Yuba River Development Project relicensing. A description of the information is provided in Section 3.2.3 of this PAD.	A data gap does not exist because, while the available information describes the potential for entrainment at Narrows 2 Intake Tunnel, that information is adequate to assess the potential for entrainment of Englebright Reservoir fishes into Narrows 1 Intake Tunnel since the highest elevation extent for both intake structures occurs at the same range of depths in the reservoir.	None.

**Table 4.1-1. (continued)**

<b>Preliminary Potential Environmental Issue</b>	<b>Agency or NGO Suggested Study, If Any</b>	<b>Existing, Relevant, and Reasonably Available Information</b>	<b>YCWA's Identified Data Gap(s), If Any</b>	<b>YCWA's Proposed Study to Close Data Gap(s), If Any</b>
Effects of the proposed Project on downstream non-anadromous fishes and aquatic resources	Instream Flow (FWN <sup>1</sup> )	Existing information is readily available, and either explicitly included or incorporated by reference in this PAD. See the information provided in Sections 3.2.2, 3.2.3 and 3.2.5.	A data gap does not exist. The data are adequate to assess potential Project effects and to inform requirements in the new license.	None
	Fish Populations (FWN <sup>1</sup> )	Existing information is readily available from the Yuba River Development Project relicensing, and either explicitly included or incorporated by reference in this PAD. See the information provided in Sections 3.2.3 and 3.2.5, as well as RMT (2013).	A data gap does not exist. The data are adequate to assess potential Project effects and to inform requirements in the new license.	None
	Benthic Macroinvertebrates (USFWS <sup>2</sup> )	Existing information is readily available from the Yuba River Development Project relicensing, and either explicitly included or incorporated by reference in this PAD. See the information provided in Section 3.2.3.	A data gap does not exist. The data are adequate to assess potential Project effects and to inform requirements in the new license.	None
Effects of the proposed Project on downstream riparian habitat	Riparian (FWN <sup>1</sup> & USFWS <sup>2</sup> )	Riparian vegetation along the lower Yuba River was surveyed, characterized, and evaluated for the Yuba River Development Project relicensing process. Existing information is readily available, and either explicitly included or incorporated by reference in this PAD. See the information provided in Section 3.2.3.	A data gap does not exist. The data are adequate to assess potential Project effects and to inform requirements in the new license.	None
	Wetland (USFWS <sup>2</sup> )	The Project does not include a reservoir or any impoundments. Existing information is included in Section 3.2.4.1.5.	A data gap does not exist. The data are adequate to assess potential Project effects and to inform requirements in the new license.	None
Effects of the proposed Project on Special-status plants	Plant Surveys (USFWS <sup>2</sup> )	Plant surveys were conducted in the FERC Project Boundary on May 21, 2020. No special-status plants were located. Vegetation mapping was also conducted, and sensitive vegetation communities occur.	A data gap does not exist since recent information of botanical resources and sensitive vegetation communities is available and included in the PAD. The data are adequate to assess potential Project effects and to inform requirements in the new license related to botanical resources.	None.
Effects of the proposed Project on the spread of invasive plant species	Non-Native Invasive Species Surveys (USFWS <sup>2</sup> )	Plant surveys were conducted in the FERC Project Boundary on May 21, 2020. No CDFA-listed NNIP were located. Eleven NNIP with a Cal-IPC rating were recorded.	A data gap does not exist since recent information of NNIP is available and included in the PAD. The data are adequate to assess potential Project effects and to inform requirements in the new license related to NNIP.	None.

**Table 4.1-1. (continued)**

Preliminary Potential Environmental Issue	Agency or NGO Suggested Study, If Any	Existing, Relevant, and Reasonably Available Information	YCWA's Identified Data Gap(s), If Any	YCWA's Proposed Study to Close Data Gap(s), If Any
Effects of the proposed Project on special-status wildlife species	Nesting and Foraging Bird Surveys (USFWS <sup>2</sup> )	Data from a variety of sources, including the CNDDDB, IPaC, CWHR and recent relicensings for the Yuba River Development Project and Narrows No. 2 Transmission Line were gathered to determine a list of potential nesting and foraging bird species that may be affected by the Project. Incidental observations of nesting and foraging bird species were taken during May 2020 surveys within the FERC Project Boundary.	A data gap does not exist. Data from existing sources is sufficient to determine what bird species do or may use the proposed Project for nesting and foraging. These data are included in the PAD and adequate to determine effects and inform requirements in the new license related to special-status wildlife.	None.
Effects of the proposed Project on special-status bats	Bats (USFWS <sup>2</sup> )	Data from a variety of sources, including the CNDDDB, IPaC, CWHR and recent relicensings for the Yuba River Development Project and Narrows No. 2 Transmission Line were gathered to determine a list of potential special-status bats that may be affected by the Project. In addition, YCWA conducted bat roosting surveys at Project facilities on May 21, 2020. No signs of roosting bats were located.	A data gap does not exist since information, including a bat roosting survey existing and is included in the PAD. These data are adequate to assess Project effects and inform requirements in the new license related to bats.	None.
Effects of the proposed Project on ESA-listed plants	Plant Surveys (USFWS <sup>2</sup> )	Plant surveys were conducted in the FERC Project Boundary on May 21, 2020. No habitat for ESA-listed plants was determined to be present, and no ESA-listed plants were observed or recoded to occur within the FERC Project Boundary.	A data gap does not exist since recent surveys did not find ESA-listed plants or their habitat within the FERC Project Boundary, and the information is included in the PAD. These data are adequate to assess Project effects and inform requirements in the new license related to ESA-listed plants. Further, this existing information is adequate for Section 7 consultation with USFWS under the ESA.	None.
Effects of the proposed Project on ESA-listed wildlife species and their critical habitats		Data from a variety of sources, including the CNDDDB, IPaC, CWHR and recent relicensings for the Yuba River Development Project and Narrows No. 2 Transmission Line were gathered to determine a list of potential ESA-listed wildlife species that have the potential to be affected by the Project. A habitat assessment of the FERC Project Boundary was performed during surveys on May 21, 2020. Per IPaC, there are no critical habitats for terrestrial ESA-listed wildlife species within the boundary, and no ESA-listed wildlife species have been documented to occur in the boundary.	A data gap does not exist. Habitat assessment of the proposed Project in May 2020 confirmed the lack of critical habitat for all potential ESA-listed terrestrial wildlife species within the FERC Project Boundary and no ESA-listed wildlife species are documented to occur in the boundary. These data are adequate to assess Project effects and inform requirements in the new license related to ESA-listed terrestrial wildlife species. Further, this existing information is adequate for Section 7 consultation with USFWS under the ESA.	None.

**Table 4.1-1. (continued)**

Preliminary Potential Environmental Issue	Agency or NGO Suggested Study, If Any	Existing, Relevant, and Reasonably Available Information	YCWA's Identified Data Gap(s), If Any	YCWA's Proposed Study to Close Data Gap(s), If Any
Effects of proposed Project on ESA-listed fishes and their critical habitats	Instream Flow (FWN <sup>1</sup> )	Existing information on water quantity and flow (i.e., historic hydrology and the Narrows Ops Model) and on lower Yuba River fisheries evaluation methodologies is readily available, and either explicitly included or incorporated by reference in this PAD. See the information provided in Sections 3.2.2, 3.2.3 and 3.2.5 and Attachment C.	A data gap does not exist. The data are adequate to assess potential Project effects and to inform requirements in the new license.	None
	Fish Populations (FWN <sup>1</sup> )	Existing information is readily available from RMT (2013) and from the Yuba River Development Project relicensing, and either explicitly included or incorporated by reference in this PAD. See the information provided in Sections 3.2.3 and 3.2.5.	A data gap does not exist. The data are adequate to assess potential Project effects and to inform requirements in the new license.	None
	Redd Survey (FWN <sup>1</sup> )	Existing information is readily available from RMT (2013) and the Yuba River Development Project relicensing, and either explicitly included or incorporated by reference in this PAD. See the information provided in Section 3.2.5.	A data gap does not exist. The data are adequate to assess potential Project effects and to inform requirements in the new license.	None
	Juvenile Chinook Escapement Survey Study (FWN <sup>1</sup> )	Existing information is readily available from RMT (2013) and the Yuba River Development Project relicensing, and either explicitly included or incorporated by reference in this PAD. See the information provided in Section 3.2.5.	A data gap does not exist. The data are adequate to assess potential Project effects and to inform requirements in the new license.	None
	Fish Behavior / Stranding associated with Narrows 1 Powerhouse (USFWS <sup>2</sup> )	Existing information is readily available from the Yuba River Development Project relicensing, and either explicitly included or incorporated by reference in this PAD. See the information provided in Section 3.2.5.	A data gap does not exist. The data are adequate to assess potential Project effects and to inform requirements in the new license.	None
	Bioenergetics (FWN <sup>1</sup> )	Existing information is readily available from RMT (2013) and the Yuba River Development Project relicensing, and either explicitly included or incorporated by reference in this PAD. See the information provided in Sections 3.2.3 and 3.2.5.	A data gap does not exist. The data are adequate to assess potential Project effects and to inform requirements in the new license.	None
	Fish Passage and Migration (FWN <sup>1</sup> )	Existing information is readily available from the Yuba River Development Project relicensing, and either explicitly included or incorporated by reference in this PAD. See the information provided in Sections 3.2.3 and 3.2.5.	A data gap does not exist. The data are adequate to assess potential Project effects and to inform requirements in the new license.	None

**Table 4.1-1. (continued)**

Preliminary Potential Environmental Issue	Agency or NGO Suggested Study, If Any	Existing, Relevant, and Reasonably Available Information	YCWA's Identified Data Gap(s), If Any	YCWA's Proposed Study to Close Data Gap(s), If Any
Effects of the proposed Project on recreation in Englebright Reservoir		YCWA coordinates operations and maintenance of the Project with USACE's operations and maintenance of Englebright Dam and Reservoir through existing agreements, and annually provides funding to the CDFW to plant fish in Englebright Reservoir.	A data gap does not exist since existing recreation at Englebright Reservoir is readily available and included in this PAD. Existing information is adequate to assess potential Project effects on recreation in Englebright Reservoir and to inform requirements in the new license.	None
Effects of the proposed Project on recreation downstream of the Project		Existing recreation facilities and uses in the Yuba River downstream of the Project are known and described in Section 3.2.7 of this PAD. Generally, instream flows in the Yuba River are predominantly driven by non-Project factors (i.e., the Yuba Accord and/or FERC license conditions of the Yuba River Development Project) and the flow requirements for the Project are considerably less than those on the Yuba River Development Project. Hydrology and an operations model are available and included in Attachment C to this PAD to understand flows in the Yuba River downstream of the Project.	A data gap does not exist. Existing information is adequate to assess potential effects on recreation downstream of the Project and to inform requirements in the new license.	None
Effects of the proposed Project on land use		The lands within the FERC Project Boundary are minimal and predominantly private lands, with no aboveground facilities except on YCWA lands. The existing land uses for the surrounding lands are known and summarized in Section 3.2.7 of this PAD.	A data gap does not exist. Existing information is adequate to assess potential Project effects on land uses and to inform requirements in the new license.	None
Effects of Project facilities on visual resources		The existing visual character and public viewsheds of the Project are known and summarized in Section 3.2.7 of this PAD.	A data gap does not exist since existing visual character information is readily available and included in this PAD and given the few above ground Project facilities and the very limited opportunity for the public to view the facilities. Existing information is adequate to assess potential Project effects on visual resources and to inform requirements in the new license.	None

**Table 4.1-1. (continued)**

Preliminary Potential Environmental Issue	Agency or NGO Suggested Study, If Any	Existing, Relevant, and Reasonably Available Information	YCWA's Identified Data Gap(s), If Any	YCWA's Proposed Study to Close Data Gap(s), If Any
Effects of the proposed Project on cultural resources		Archaeological and historical built environment resources studies were conducted between April and August 2020 and are summarized in Section 3.2.9 of the PAD. The studies included a review of existing, relevant, and easily available information, in addition to information solicited from Native American tribes and agencies and gathered from YCWA's archives. There are no archaeological resources in the FERC Project boundary. The historical built environment resources consist only of the Project operating facilities and are recommended as not eligible for listing on the NRHP as they do not meet any of the NRHP criteria of significance either individually or as a historic district.	A data gap does not exist. Existing data from the 2020 background research and studies are adequate to demonstrate that no archaeological resources are present in the FERC Project boundary and, pending SHPO concurrence, that the built resources are ineligible for listing on the NRHP, indicating that there are no historic properties in the FERC Project boundary. These data are adequate to assess Project effects and inform requirements in the new license related to cultural resources. Existing information is adequate at this time to initiate NHPA Section 106 consultation with interested tribes, Native Americans, the USACE, and the SHPO. YCWA anticipates this Section 106 consultation will result in the development of an HPMP that will be included in the new license.	None
Effects of the proposed Project on tribal resources		A tribal resources study was previously completed between 2009 and 2013; the area included in the tribal study encompassed the land on the north/northwest side of the Narrows 1 Powerhouse within the FERC Project Boundary. The results of this study identified no TCPs, ITAs, Indian Reservations, lands designated under tribal ownership, or specific ethnographic locales within the FERC Project Boundary. Potentially interested Native American tribes and organizations have been identified with the assistance of the NAHC. Initial correspondence began in June 2020 with potentially interested Native American tribes and organizations to provide Project information, to request information about tribal resources within the FERC Project Boundary, and to solicit any concerns about the Project. No tribal resources within or adjacent to the FERC Project boundary were identified and no concerns regarding the Project were identified by the individuals that were contacted.	A data gap does not exist. Existing information is adequate at this time to initiate NHPA Section 106 consultation with interested tribes and Native Americans. YCWA anticipates this Section 106 consultation will result in the development of an HPMP that will be included in the new license.	None.

**Table 4.1-1. (continued)**

Preliminary Potential Environmental Issue	Agency or NGO Suggested Study, If Any	Existing, Relevant, and Reasonably Available Information	YCWA's Identified Data Gap(s), If Any	YCWA's Proposed Study to Close Data Gap(s), If Any
Effects of proposed Project under climate change scenarios	Climate Change (FWN <sup>1</sup> )	<p>YCWA is unaware of any reliable and validated existing climate model that would allow the prediction of matters, such as meaningful changes in water flows and water temperatures, in the Yuba River for a 30-50 year term of a typical hydropower license in such a manner as to support reasoned decision-making.</p> <p>Relevant hydrologic information in the Yuba Basin is available for almost 100 years, depending on the location in the basin. These data reflect historic dry, wet, and normal WYs and periods, as well as extended drought periods.</p> <p>The Narrows Ops Model as described above, is existing and readily available, and its models flow for 33 years from WY 1976 through WY 2008.</p>	<p>A data gap does not exist since existing information (i.e., historic hydrology and the Narrows Ops Model) is readily available (i.e., included in this PAD) and is adequate to characterize the range and variability of annual flows, including wet, dry, and normal WYs as well as extended drought periods. This form of analysis considers long term hydrologic trends and provides sufficient information to assess the impacts of changing climatic conditions on the Project. Further, YCWA proposes a release schedule that includes WY types to reflect changes in hydrologic conditions. Last, YCWA anticipates FERC will include in the new license a reopener condition, as it does with all hydro licenses, which allows FERC to alter license requirements in response to changes in environmental conditions. This practice provides appropriate environmental safeguards that are more certain environmental protection than hard conditions in a license based on questionable predictions about future environmental conditions.</p>	None

Key:

See FWN's letter dated July 3, 2020, in Appendix A to this PAD.  
 See USFWS's email dated July 3, 2020, in Appendix A to this PAD.

In their response to YCWA's outreach, some agencies, tribes, and NGOs made requests that are not specifically related to potential environmental issues. The major requests and YCWA's response to each are briefly discussed below.

- NMFS requested that YCWA include in the PAD:

Description of the history and construction of Narrows 1 Project as it relates to the construction of Englebright Dam, including why the tunnel and intake are USACE owned and not part of the Project.

Description of if and/or when operational decisions are made at Narrows 1 to optimize renewable energy credits and hydropower revenue in general.

Description of how Narrows 1 was characterized in the YRDP licensing process and any PM&E measures that were not adopted because Narrows 1 was owned by PG&E at the time.

Description of how the P-1403 and P-2246 Projects are jointly coordinated and operated. (NMFS's July 2, 2020 email)

A description of the history and construction of the Project is provided in Section 3.2.9.1.2 of this PAD. The USACE intake in Englebright Reservoir and the USACE tunnel were constructed by USACE and have always been operated and maintained as U.S. facilities; they have never been part of the Narrows Hydroelectric Project. YCWA cannot speculate why this was determined in 1942 when the Project's original license was issued, but in any case, proposes no changes to this relationship that has been in place for over 80 years.

Refer to Section 3.0 in the draft Exhibit B included in Appendix C to this PAD for a description of operations of the Narrows 1 Powerhouse, including coordination with the Yuba River Development Project.

YCWA is unaware of any recommended PM&E measures that FERC's and USACE's staff did not adopt in the Yuba River Development Project relicensing FEIS for the expressed reason in the FEIS that PG&E owned the Narrows Hydroelectric Project.

- CDFW requested:

For all PM&Es that were included in the CDFW YRDP 10js, CDFW believe the same scope of issues, requirements and coordinated operations language should be considered for the Narrows 1 relicensing, so that these projects may work in coordination for protection of the Lower Yuba River.

YCWA believes it has identified the relevant issues in Table 4.1-1.

- FWN requested that YCWA:

...review FWN's previously filed comments on YRDP for further rationale for incorporating Englebright Dam into this [Narrows Hydroelectric Project] Project Definition and Scope. (pp. 2 & 3, FWN).

YCWA is familiar with FWN's filings related to the Yuba River Development Project relicensing and concludes for the same general reasons explained by YCWA in its responses to those comments, that Englebright Dam cannot, by law, be included in the license for the Narrows Hydroelectric Project because the Dam is not under FERC's jurisdiction. However, the effects of the proposed Project on environmental resources associated with Englebright Reservoir are issues for assessment in the Narrows Hydroelectric Project relicensing and are considered in this PAD.

- FWN requested that YCWA provide the following information in the PAD:
  - Outages: Please discuss the annual outage schedule, and the flexibility of outages. Please also discuss major outages in the last 10 years and their causes.
  - Maintenance: Please disclose the recent and future planned major maintenance, in the past ten years and in the next ten years.
  - Spill Operations and Frequency: Please describe YCWA's ability or lack of ability to operate Narrows 1 PH during spills. If there are times that Narrows 1 cannot operate, please describe how long after spill it takes to get Narrows 1 Powerhouse back up and running. (p.3, FWN).

Section 5.4 of the draft Exhibit B in Appendix C to this PAD states that planned annual outages for the Narrows Hydroelectric Project usually occur in early July and extend for approximately 2 weeks but can be longer or shorter depending on the planned maintenance activities to occur during the outage. At this time, YCWA has no plans to change the period when planned annual outages are taken but may do so as long as the outage is not in conflict with any license terms or applicable laws or regulations.

Unscheduled outages may be caused by a variety of factors, many of which are beyond YCWA's control. "Momentary" outages may be caused by transmission trouble; YCWA is usually able to quickly restore the Project to service shortly after these occur. Unscheduled outages may also occur so that YCWA may respond to emergency conditions (e.g., response to equipment failure).

YCWA will address future planned major maintenance activities, to the extent appropriate, in Exhibit D of its Application for New License when that is issued.

The ability of the Narrows 1 Powerhouse to operate is not constrained by spill at Englebright Dam.

- FWN requested:
  - ...disclosure and discussion of the terms of the new power purchase agreement (PPA) at Narrows 1. FWN would like to learn more about how this compares to the previous Narrows 1 operations as directed by PG&E. (p. 4, FWN).

Section 4.2.5 of the draft Exhibit B in Appendix C to this PAD provides a general description of the current power purchase contract for the Project. The terms and conditions of the contract are not publicly available since the contract includes business-sensitive information.

- FWN stated:

Without Section 401 in the YRDP license, there are a number of unresolved environmental issues for the Project Area that should be addressed in the relicensing of Narrows 1. (p.4, FWN).

The Yuba River Development Project relicensing and Narrows Hydroelectric Project relicensing are separate and distinct relicensings, and YCWA does not agree that the Narrows Hydroelectric Project relicensing should address operations or impacts of the Yuba River Development Project.

### **4.1.3 YCWA Proposed Studies**

As shown in Table 4.1-1, existing information is adequate to assess Project effects and inform requirements in the new license. At this time, YCWA believes no relicensing studies are needed.

## **4.2 YCWA Proposed Measures**

YCWA will propose measures at the appropriate time in the relicensing.

## **4.3 Relevant Qualifying Plans**

Section 10(a)(2)(A) of the FPA (16 U.S.C. § 803(a)(2)(A)) requires the Commission to consider the extent to which a project is consistent with federal and state comprehensive plans for improving, developing, or conserving waterways affected by the Project. On April 27, 1988, FERC issued Order No. 481-A, which revised Order No. 481, issued on October 26, 1987. This order provides that FERC will give FPA Section 10(a)(2)(A) comprehensive plan status to any federal or state plan that meet each of the following three criteria: 1) it is a comprehensive study of one or more of the beneficial uses of a waterway or waterways; 2) it specifies the standards, the data, and the methodology used to develop the plan; and 3) it is filed with FERC. FERC's Revised List of Comprehensive Plans, dated March 2019, can be found at FERC's eLibrary (<http://www.ferc.gov/industries/hydropower/gen-info/licensing/complan.pdf>). A review of this list shows that the Commission has listed, under FPA Section 10(a), 94 comprehensive plans for the State of California. Provided below is a list of Qualifying Plans currently on file with the Commission that may be relevant to the Narrows Hydroelectric Project relicensing.

1. California Department of Fish and Game. 2007. California Wildlife: Conservation Challenges, California's Wildlife Action Plan. Sacramento, California. 2007.
2. California Department of Fish and Game. U.S. Fish and Wildlife Service. National Marine Fisheries Service. Bureau of Reclamation. 1988. Cooperative agreement to implement actions to benefit winter-run Chinook salmon in the Sacramento River Basin. Sacramento, California. May 20, 1988.

3. California Department of Fish and Game. 1990. Central Valley Salmon and Steelhead Restoration and Enhancement Plan. Sacramento, California. April 1990.
4. California Department of Fish and Game. 1993. Restoring Central Valley Streams: A Plan for Action. Sacramento, California. November 1993.
5. California Department of Fish and Game. 1996. Steelhead Restoration and Management Plan for California. February 1996.
6. California Department of Fish and Wildlife. 2003. Strategic Plan for Trout Management: A Plan for 2004 and Beyond. Sacramento, California. November 2003.
7. California Department of Fish and Wildlife. 2008. California Aquatic Invasive Species Management Plan. Sacramento, California. January 18, 2008.
8. California Department of Parks and Recreation. 1998. Public Opinions and Attitudes on Outdoor Recreation in California. Sacramento, California. March 1998.
9. California Department of Parks and Recreation. 1980. Recreation Outlook in Planning District 3. Sacramento, California. June 1980. 82 pp.
10. California Department of Parks and Recreation. 1994. Statewide California Outdoor Recreation Plan (SCORP). Sacramento, California. April 1994.
11. California State Water Resources Control Board. 2018. Bay-Delta Plan: Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary. Sacramento, California. December 2018.
12. California State Water Resources Control Board. 2018. Water Quality Control Plan for the Sacramento and San Joaquin River Basins and Appendices. Sacramento, California. May 2018.
13. The Resources Agency. 1989. Upper Sacramento River Fisheries and Riparian Habitat Management Plan. Sacramento, California. January 1989.
14. National Marine Fisheries Service. 2014. Recovery Plan for the Evolutionary Significant Units of Sacramento River Winter-run Chinook salmon and Central Valley Spring-run Chinook salmon and the Distinct Population Segment of California Central Valley steelhead. Sacramento, California. July 2014.
15. National Marine Fisheries Service. 2018. Final Recovery Plan for the Southern Distinct Population of North American Green Sturgeon. Sacramento, California. August 8, 2018.
16. National Marine Fisheries Service. Pacific Fishery Management Council. 1978. Fishery Management Plan for Commercial and Recreational Salmon Fisheries off the Coasts of Washington, Oregon and California Commencing in 1978. March 1978.
17. National Park Service. The Nationwide Rivers Inventory. Department of the Interior, Washington, D.C. 1993.
18. Pacific Fishery Management Council. 1988. Eighth Amendment to the Fishery Management Plan for Commercial and Recreational Salmon Fisheries off the Coasts of Washington, Oregon and California Commencing in 1978. Portland, Oregon. January

1988.

19. U.S. Fish and Wildlife Service. 1990. Central Valley Habitat Joint Venture Implementation Plan: A Component of the North American Waterfowl Management Plan. February 1990.
20. U.S. Fish and Wildlife Service. 2001. Final Restoration Plan for the Anadromous Fish Restoration Program. Department of the Interior, Sacramento, California. January 9, 2001.
21. U.S. Fish and Wildlife Service. Canadian Wildlife Service. 1986. North American Waterfowl Management Plan. Department of the Interior. Environment Canada. May 1986.
22. U.S. Fish and Wildlife Service. n.d. Fisheries USA: The Recreational Fisheries Policy of the U.S. Fish and Wildlife Service. Washington, D.C.

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