

FEDERAL ENERGY REGULATORY COMMISSION
Washington, DC 20426
March 5, 2020

OFFICE OF ENERGY PROJECTS

Project No. 14873-001 – Alaska
Nuyakuk River Hydroelectric Project
Nushagak Cooperative, Inc.

VIA FERC Service

Reference: Scoping Document 2 for the Nuyakuk River Hydroelectric Projects (P-14873-001)

To the Parties Addressed:

The Federal Energy Regulatory Commission (Commission) is currently reviewing the Pre-Application Document (PAD) submitted by Nushagak Cooperative, Inc. (Nushagak Cooperative) for licensing the Nuyakuk River Hydroelectric Project (Nuyakuk River Project) (FERC No. 14873). The project would be located on the Nuyakuk River, in the Dillingham Census Area, Alaska. The project would occupy 357 acres of Bureau of Land Management lands.

Pursuant to the National Environmental Policy Act of 1969, as amended, Commission staff intends to prepare an environmental assessment (EA), which will be used by the Commission to determine whether, and under what conditions, to issue a license for the project. To support and assist our environmental review, we are beginning the public scoping process to ensure that all pertinent issues are identified and analyzed, and that the EA is thorough and balanced. Although our current intent is to prepare an EA, there is a possibility that an environmental impact statement (EIS) will be required. The scoping process will satisfy the NEPA scoping requirements, irrespective of whether the Commission issues an EA or an EIS.

Our preliminary review of the scope of environmental issues associated with the proposed licensing of this project was described in Scoping Document 1 (SD1), issued on November 8, 2019. We requested comments on SD1, conducted environmental site reviews, and held scoping meetings on December 11, 2019, to hear the views of all interested parties on the scope of issues that should be addressed in the EA. Based on the meetings and the submission of written comments, we have prepared a Scoping

Document 2 (SD2) to reflect our current view of issues and alternatives to be considered in the EA. *Key changes from SD1 to SD2 are identified in bold and italicized type.*

SD2 is being distributed to both Nushagak Cooperative's distribution list and the Commission's official mailing list (see section 10.0 of the attached SD1). If you wish to be added to or removed from the Commission's official mailing list, please send your request by email to FERCOnlineSupport@ferc.gov or by mail to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street, N.E., Room 1A, Washington, DC 20426. All written or emailed requests must specify your wish to be removed from or added to the mailing list and must clearly identify the following on the first page: **Nuyakuk River Project No. P-14873-001.**

If you have any questions about SD2, the scoping process, or how Commission staff will develop the EA for this project, please contact Julia Kolberg at (202) 502-8261 or julia.kolberg@ferc.gov. Additional information about the Commission's licensing process and the projects may be obtained from our website, www.ferc.gov.

Enclosure: Scoping Document 2

SCOPING DOCUMENT 2
NUYAKUK RIVER HYDROELECTRIC PROJECT

ALASKA

PROJECT NO. 14873-001

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

March 2020

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SCOPING DOCUMENT 1

Nuyakuk River Hydroelectric Project (FERC No. 14873-001)

1.0 INTRODUCTION

The Federal Energy Regulatory Commission (Commission or FERC), under the authority of the Federal Power Act (FPA),¹ may issue licenses for terms ranging from 30 to 50 years for the construction, operation, and maintenance of non-federal hydroelectric projects. On October 7, 2019, Nushagak Cooperative, Inc. (Nushagak Cooperative), filed a Pre-Application Document (PAD) for the proposed Nuyakuk River Hydroelectric Project (Nuyakuk River Project) (FERC No. 14873-001).

The Nuyakuk River Project would be located on the Nuyakuk River in the Dillingham Census Area, Alaska (figure 1). The total installed capacity would be 10-megawatts (MW) with an average annual generation of approximately 62,691 megawatt hours (MWh). A detailed description of the projects is provided in section 3.0. The proposed project would occupy 357 acres of Bureau of Land Management lands.

The National Environmental Policy Act (NEPA) of 1969,² the Commission's regulations, and other applicable laws require that we independently evaluate the environmental effects of licensing the Nuyakuk River Project as proposed and consider reasonable alternatives to the licensees' proposed action. At this time, we intend to prepare an environmental assessment (EA) for the Nuyakuk River Project that describes and evaluates the probable effects, including an assessment of the site-specific and cumulative effects, if any, of the proposed actions and alternatives.

Although our current intent is to prepare an EA, there is a possibility that an environmental impact statement (EIS) will be required. The scoping process will satisfy the NEPA scoping requirements, irrespective of whether the Commission issues an EA or an EIS.

¹ 16 U.S.C. § 791(a)-825(r) (2018).

² National Environmental Policy Act of 1969, 42. U.S.C. §§ 4321-4370(f) (2012).

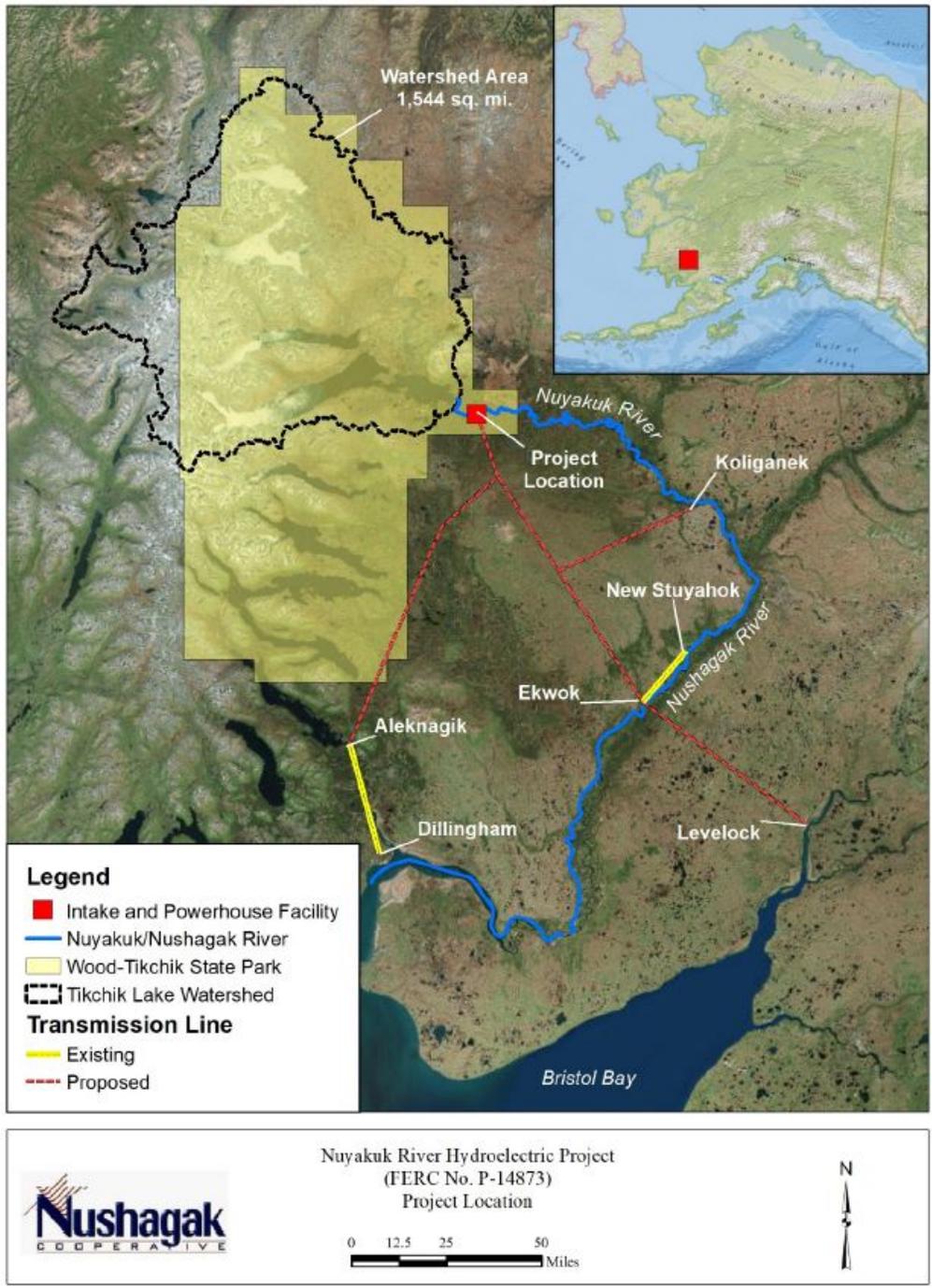


Figure 1: Location of the proposed Nuyakuk River Project (Source: PAD).

2.0 SCOPING

This Scoping Document 2 (SD2) is intended to advise all participants as to the proposed scope of the EA and to seek additional information pertinent to this analysis. This document contains: (1) a description of the scoping process and schedule for the development of the EA; (2) a description of the proposed actions and alternatives; (3) a preliminary identification of environmental issues; (4) a proposed EA outline; and (5) a preliminary list of comprehensive plans that are applicable to the projects.

2.1 PURPOSES OF SCOPING

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

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

2.2 COMMENTS AND SCOPING MEETINGS

Commission staff issued SD1 on November 8, 2019 to enable resource agencies, Alaskan Natives, NGOs, and the public to more effectively participate in and contribute to the scoping process. In SD1, we requested clarification of preliminary issues concerning the Nuyakuk River Project and identification of any new issues that need to be addressed in the EA. We revised SD1 based on the comments received during the scoping period, which ended February 4, 2020. SD2 presents our current view of issues and alternatives to be considered in the EA. To facilitate review, key changes to issues from SD1 are identified in bold and italicized type.

We conducted scoping meetings in Anchorage, Alaska on December 11, 2019 to identify potential issues associated with the projects. A court reporter recorded oral comments made during both scoping meeting. Those who were unable to attend the scoping meeting in person were able to attend via teleconference.

In addition to the oral comments received at the scoping meetings, written comments were also received from the following entities:

<u>COMMENTING ENTITY</u>	<u>FILING DATE</u>
<i>Wood-Tikchik State Park Management Council</i>	<i>December 9, 2019 and January 15, 2020</i>
<i>Pat Vermillion</i>	<i>December 11, 2019</i>
<i>U.S. Department of Commerce - National Marine Fisheries Service</i>	<i>February 4, 2020</i>
<i>Alaska Department of Fish and Game</i>	<i>February 4, 2020</i>
<i>Royal Coachman Lodge</i>	<i>February 4, 2020</i>
<i>United Tribes of Bristol Bay</i>	<i>February 5, 2020</i>
<i>Alaska State Historic Preservation Office</i>	<i>February 5, 2020</i>

All comments received are part of the Commission's official record for the project. Information in the official file is available for inspection and reproduction at the Commission's Public Reference Room, located at 888 First Street, NE, Room 2A, Washington, DC 20426, or by calling (202) 502-8371. Information also may be accessed through the Commission's eLibrary system using the "Documents & Filings" link on the Commission's webpage at <http://www.ferc.gov>. Call (202) 502-6652 for assistance.

2.2.1 Issues Raised During Scoping

The issues raised by participants in the scoping process are summarized and addressed below. The primary purpose of SD2 is to identify issues to be analyzed in the EA. Therefore, we revised SD1 to address only those comments related directly to the scope of environmental issues. The summaries do not include every comment received during the scoping process. For example, we do not address comments that are recommendations for license conditions, such as protection, mitigation, and enhancement (PM&E) measures, as the need for these measures will be analyzed in the EA or any license order that is issued for the project. We also do not address comments or recommendations that are administrative in nature, such as requests for changes to the mailing list. Those items will be addressed separate from the EA. Lastly, we do not address comments on the need for environmental studies. The need for studies will be addressed during the upcoming ILP study planning process.

General

Comment: U.S. Department of Commerce - National Marine Fisheries Service (NMFS) states that section 3.2.3, Proposed Environmental Measures, of the scoping document is incorrect because it only identifies environmental measures for terrestrial resources. NMFS contends that the PAD and the applicant's November 14, 2019 additional information request response, also propose the following environmental measures for fisheries resources: a minimum flow in the bypassed reach, a tailrace barrier, and a diversion structure to deflect upstream migrating adult salmon away from the intake. NMFS asserts that these features should be included as environmental measures in the SD2 and evaluated in the EA for their potential merit.

Response: We agree that the proposed 1,000-cfs minimum flow is an environmental measure and have modified section 3.2.3 accordingly. However, we disagree that the other two measures identified by NMFS are proposed environmental measures and have not added them to section 3.2.3. The proposed diversion structure is a project design feature that is primarily intended to facilitate flow diversions into the project intake, and therefore, is included in the project facility discussion in section 3.2.1 of the SD2. Although the applicant states in section 3.3.6 of the PAD that it will evaluate whether a tailrace barrier is needed to protect migrating fish in the project's tailrace, it does not propose a tailrace barrier at this time. Nevertheless, the EA will evaluate the effects of all project features including the diversion structure, and any proposed or recommended PM&E measures such as a tailrace barrier, on migrating salmon and other aquatic resources.

Comment: *The Wood-Tikchik State Park Management Council (Council) objects to FERC holding a single scoping meeting in Anchorage. The Council states that the development of the proposed project is of interest and concern to residents in communities close to the park and that these individuals, tribes, and other local entities will not receive adequate opportunity to participate in the scoping process due to the significant travel costs associated with attending the scoping meetings in Anchorage. The Council requests that FERC convene one or more additional public scoping meetings in Dillingham.*

Response: *We agree that it is important that local individuals, Alaskan Natives, and other entities engage in the licensing process for the Nuyakuk River Project. A limited travel budget, weather considerations in traveling to remote areas, and a need to keep the study plan development process on track resulted in the necessity to hold the project scoping meeting in Anchorage. Those who were unable to attend the scoping meeting in person were able to attend via teleconference or submit written or electronic comments to the project record. Additional meetings will be held in Dillingham as part of the study planning process, during which members of the public may make further comments on the project. The timing and location details of these meetings will be filed with the Proposed Study Plan.*

Comment: *Pat Vermillion asks what other studies have been done for alternative energy sources. United Tribes of Bristol Bay (UTBB) asks when an economic feasibility study will be conducted for the project.*

Response: *In making its licensing decision, the Commission considers whether the hydropower project can be constructed and operated in a fashion that is in the public interest. It does not look to alternative sources of energy as reasonable alternatives to the project because the Commission cannot compel a licensee to construct alternative sources to provide the needed power. In evaluating the need for the project, the EA will evaluate the regional need for power using the most recent forecasts for the energy market in which the project would be located and the likely source of that power. The scope of the need for power analysis encompasses such factors as whether there is a regional need for power, displacement of non-renewable fossil fuels, and diversification of generation mix. Future power demand and supply, the protection of fish and wildlife, and the protection of recreational opportunities are examples of the factors that will be considered in the Commission's broader public interest finding of whether to license the project or not, and if so, under what conditions.*

Additionally, the Commission's regulations require the applicant to provide a detailed statement of project costs and financing with its license application. This information would be used in the EA to describe the costs of constructing and operating the project, the estimated sale price of the power at the time of licensing, estimated annual operating expenses, and estimated total annual revenue. Whether the project is economically feasible based on the conditions in any license that may be issued for the project would be a business decision of the licensee.

Comment: *The Council requests that FERC accept the following as comprehensive plans under section 10(a)(2) of the FPA: the Nushagak Mulchatna Subwatershed Prioritization Process (Nushagak Mulchatna Watershed Council, 2001); the Nushagak River Watershed Traditional Use Area Conservation Plan (Nushagak Mulchatna Watershed Council, 2012); the Strategic Conservation Action Plan for Southwest Alaska Watersheds (Southwest Alaska Salmon Habitat Partnership, 2017); the Bristol Bay Comprehensive Management Plan and Final EIS (Bristol Bay Study Group, 1985); and the Management Plan for the Salmon Fisheries in the EEZ off Alaska (ADFG et al., 2012). NMFS also recommends including the Strategic Conservation Action Plan for Southwest Alaska Watersheds (2017) as well as the Nushagak River Watershed Traditional Use Area Conservation Plan (2018).*

Response: *We revised section 9.0 to include the Strategic Conservation Action Plan for Southwest Alaska Watersheds (2017) because the plan is already included in FERC's list of approved comprehensive plans for Alaska. FERC has evaluated the other plans submitted by the Council and NMFS and determined that they meet the requirements of a qualifying comprehensive plan under section 10(a)(2) of the FPA. Therefore, we revised section 9.0 to also include these plans.*

Comment: *The Council requests that FERC utilize meeting minutes related to hydroelectric development within Wood-Tikchik State Park as public comments, as well as previous studies and public comments received during FERC licensing processes P-13238 and P-14356, both hydroelectric facilities proposed within the boundaries of Wood-Tikchik State Park, when compiling Proposed Study Plans.*

Response: *In order to ensure that FERC considers available information when deciding on the appropriateness of a study request, it must be filed in the project record. Additionally, study requests must explain how the information contained in these filings is relevant.*

Comment: *Royal Coachman Lodge states that, given the potential effects of the project on the local ecosystem, FERC should prepare an Environmental Impact*

Statement (EIS) rather than an EA.

Response: *As discussed in section 1.0, our current intent is to prepare an EA; however, there is a possibility that an EIS will be required. This decision will be finalized upon review of the final license application and the applicant's proposal for the project. Based on our experiences with projects of similar size and scope, and in consideration of all scoping comments received from state and federal agencies and the public to date, we think that an EA would be enough at this time. However, consistent with NEPA and its implementing regulations, if we determine in the EA or at a point in time thereafter that the project would significantly affect the quality of the human environment, then we would prepare an EIS.*

Comment: *UTBB asks what other state or federal permits would be required for the project.*

Response: *The EA will describe how the Commission will comply with the additional regulatory requirements or authorizations that are needed by the Commission prior to license issuance (e.g., section 7 of the Endangered Species Act, section 401 of the Clean Water Act). However, the EA will not address any other state or federal permits the applicant may need to obtain because such permits and approvals are outside of the Commission's licensing purview.*

Aquatic Resources

Comment: *EPA requests that the EA analyze the effects of project facilities (e.g., diversion structure) and project operation on the stream channel, stream banks, and sediment transport in the project area.*

Response: *We have modified the SD2 to include these issues.*

Comment: *EPA and UTBB request that we include an analysis of the effects of project operation on ice processes in the project area. Alaska Department of Natural Resources Division of Parks and Outdoor Recreation (Alaska DNR Parks Division), NMFS, and UTBB request that we analyze the effects of icing on the structural integrity and operation of project facilities.*

Response: *Lower flows during project operation could affect ice formation in the bypassed reach, notably due to lower flow velocities causing ice-cover formation in areas of the falls that may not be ice-covered under existing conditions. Therefore, we have revised section 4.2.2 to include the effects of project operation on river ice*

processes.

However, we see no reason for the EA to assess the effects of icing on the structural integrity and operation of project facilities. The applicant will be required to file design drawings and a supporting design report with its final license application that demonstrates that its proposed structures, including the diversion structure and intake, are safe and adequate to fulfill their stated functions during all potential operating conditions (e.g., during periods of low and high flow, and open-water and ice-covered conditions). Once the license application is filed, Commission staff will perform a safety assessment and review of the project's design before any license would be issued.

Comment: *Multiple commenters request that we include an analysis of project effects on upstream migrating adult and downstream migrating juvenile (fry and smolt) pink, chum, coho, Chinook, and sockeye salmon passing through the project area. This would include the effects of the project diversion structure, intake, penstock, turbines, tailrace, and reduced flows over the falls during project operation on upstream and downstream anadromous fish migrations, including the potential for false attraction, delay, increased predation risk, injury and mortality (e.g., intake impingement and turbine blade strike), or passage failure.*

Response: *We have modified the SD2 to specifically highlight the effects of each of the project's relevant facilities (e.g., diversion structure, intake, penstock, turbines, tailrace) as well as reduced bypassed reach flows on upstream and downstream juvenile and adult anadromous fish migrations through the project area.*

We understand that the Nuyakuk River is an important salmon producer and that all five species of anadromous Pacific salmon are present in the project area. However, for the purposes of this SD2, the term "anadromous fish" is synonymous with naming all five species of Pacific salmon.

Comment: *EPA requests that we analyze the effects of project operation and project structures on fish behavior and nutrient distribution (e.g., fish holding and feeding stations) in the project area.*

Response: *We have modified the SD2 to include the effects of project operation and the physical presence of project facilities on fish use and fish habitat in the project area.*

Comment: *Pat Vermillion requests that we include an analysis of project effects*

on dissolved oxygen levels, and corresponding effects on juvenile salmon and their migrations.

Response: *We have modified the SD2 to include this issue.*

Comment: *Pat Vermillion and NMFS state that proposed project operation (i.e. a minimum flow of 1,000 cfs) is inconsistent with the flow requirement of Alaska Stat. Ann. § 41.21.167(e) (West 2019) which specifies that minimum flows be maintained at a level that is equal to 70 percent of inflow. Pat Vermillion requests a detailed description of proposed project operations at river flows below 5,000 cfs. Alaska DNR Parks Division states that the proposed 1,000-cfs minimum flow is inconsistent with Alaska DFG's instream flow reservations for the Nuyakuk River, which range between 1,600 and 2,700 cfs on the low end during the winter and are considerably higher during the remainder of the year.*

Response: *Under section 814 of the FPA, “no licensee may use the right of eminent domain under this section to acquire any lands that, prior to October 24, 1992, were owned by a State or political subdivision thereof and were part of or included within any public park, recreation area or wildlife refuge established under State or local law.” Although we recognize the potential conflict between the applicant’s preliminary minimum flow proposal and the minimum flows allowed under Alaska Senate Bill 91 and Alaska DFG’s instream flow reservations, the Commission does not administer Alaska state law. Instead, staff’s analysis of minimum flow alternatives in the EA will be based on the Commission’s requirements under sections 10(a) and 4(e) of the FPA. This would include balancing the benefits and costs of minimum flow alternatives and determining that the project as licensed is best adapted to a comprehensive plan for improving the Nuyakuk River waterway. The EA will assess the effects of project operation and minimum flows across the full range of hydrologic conditions, including when inflow falls below 5,000 cfs.*

Comment: *Pat Vermillion questions whether the project would be shut down and removed if it’s determined after licensing and during project operation that it is having an unexpected adverse effect on the salmon runs and fisheries.*

Response: *The EA will assess the effects of the project on the Nuyakuk River salmon fisheries. Although Commission licenses do not typically include requirements to shut down and remove projects in the event of unforeseen environmental impacts that occur during project operation, they do include a standard article that allows for the license to be reopened, after notice and opportunity for hearing, to make*

reasonable modifications to project facilities or operations to address impacts on fish and wildlife resources.

Comment: *Pat Vermillion states that the proposed project would reduce salmon fry and smolt populations by a certain percentage each year, and therefore, aquatic resources would be cumulatively affected by the project.*

Response: *The EA will analyze the effects of the project on juvenile anadromous fish survival through the project area, including whether any such losses would affect anadromous fish populations over time. However, juvenile anadromous fish losses due to project operation would be a result of the direct effects of the project and would not be a cumulative effect as defined by NEPA. As explained in section 4.1 of the SD2, a cumulative effect is the effect on the environment that results from the incremental effect of the action when added to other past, present, and reasonably foreseeable future actions. We have not identified any other specific actions in the watershed that are in addition to the proposed project that would also affect anadromous fish populations. Therefore, we see no reason to include a cumulative effects analysis for aquatic resources in the SD2.*

Comment: *NMFS states that the project will contribute to cumulative effects because there are reasonably foreseeable future actions that would occur as a result of the project. The addition of over 100 miles of transmission lines could result in improved access to undeveloped and pristine habitats. Additionally, the reliable and low-cost electricity generated by the project could result in additional settlement at existing villages and make mining more viable, which would affect water quality, fisheries, and habitat.*

Response: *The EA will consider access-related direct effects of the transmission line and other project facilities. However, the remaining actions cited by NMFS are too speculative to assess in a meaningful way. In the event that NMFS or others become aware of any reasonably foreseeable specific actions occurring in the project area and that may affect the same resources under consideration here, we would consider the need for a cumulative effects analysis at that time.*

Comment: *The Council requests that the EA evaluate the potential for the project to increase total dissolved gas levels due to turbine operation.*

Response: *The proposed run-of-river project would include: diverting flows from the river above the falls; routing them through an intake, power tunnel, and turbines; and discharging them back to the river through a tailrace at the base of the*

falls, thus bypassing about 2,000 feet of the river at the falls. A project configured in this manner would not include any of the features (e.g., high-head dam, spillways, outlet works) that typically cause elevated total dissolved gas levels when water is passed through them causing turbulence and/or plunging of flows and the forcing of entrained air into solution at depth. In fact, routing flows through the turbines instead of over the falls would reduce total dissolved gas levels over existing conditions because it would reduce the amount of flow that is subject to turbulence and entrainment of atmospheric gases when passing over the falls. Instead, the diverted flows would be routed through the turbines which would extract energy from the water and discharge flows into a less turbulent environment in the powerhouse tailrace below the falls. For these reasons, we see no evidence that the project would increase total dissolved gases and see no reason to evaluate this issue in the EA.

Comment: *Jennifer King requests that the EA evaluate the potential for the project to have beneficial effects on aquatic resources due to the reduction of barge transport in Bristol Bay and the Nushagak River of up to 1.6 million gallons of diesel fuel per year that would be displaced by project operation.*

Response: *We have modified the SD2 to include this issue.*

Comment: *NMFS requests that the EA evaluate the effects of project construction and operation on the introduction and spread of invasive aquatic species.*

Response: *We have revised the SD2 to include this issue.*

Comment: *Royal Coachman states that two years of study under the Integrated Licensing Process is not enough time to fully understand the movements of anadromous fish through the project area. It requests that studies be conducted over a five-year period.*

Response: *Under the ILP, the Director of the Office of Energy Projects will approve a study plan, which will consist of a compilation of various studies that must be completed before the Commission will issue its notice that the application is ready for environmental analysis and is proceeding with preparation of the EA. The time needed to complete the various studies will be study-specific, and will be based on multiple factors, including the availability of existing information, the study methods proposed, and the adequacy of the data collection efforts at meeting the study objectives. Although the ILP process plan currently provides for two study seasons and this is typically enough time to collect the necessary data to inform the Commission's*

NEPA analysis and develop license requirements, it's possible that studies could continue for more than two years.

Comment: *Royal Coachman requests that FERC determine the minimum flow required to operate the project turbines. NMFS states that another turbine size may be more efficient during winter, when flows in the river are lower.*

Response: *The Commission's regulations require the applicant to include the minimum and maximum hydraulic capacity of the proposed turbines in the final license application, and the EA will assess the effects of turbine operation on bypassed reach minimum flows across the full range of the turbines' operating conditions and Nuyakuk River stream flows. This analysis would include the applicant's proposed turbines and their flow operating ranges as well as any alternative turbine configurations recommended by any entity in response to the Commission's ready for environmental analysis notice.*

Terrestrial Resources

Comment: *Bureau of Land Management (BLM) requests that the potential presence of invasive terrestrial species be investigated*

Response: *We assume that this is a request for an analysis in the EA of the potential for the project to introduce or spread invasive terrestrial species rather than a study request. Section 4.2.3 already states that the EA will address the effects of project construction and operation (project roads and facilities) on distribution and abundance of invasive plant species. Therefore, no change to the scoping document is necessary.*

Comment: *EPA states that it is uncertain whether or to what extent bears utilize the falls for feeding on salmon under existing conditions, and requests that the EA assess whether changes in river flow during project operation would affect the number of bears using the project area for feeding.*

Response: *We have revised section 4.2.3 to include the effects of project operation on bear use of the project area for feeding.*

Comment: *Multiple commenters request that the EA assess the effects of project construction and operation (e.g., increased noise and disturbance, physical presence of project facilities) on wildlife species, migrations, and their habitat, including the Mulchatna caribou herd's population size, calving range, and migration routes.*

Response: *We have revised section 4.2.3 to include the effects of project construction and operation, including increased noise and disturbance, on these resources.*

Comment: *The Council asks that we analyze the potential effects of noise on furbearer presence, trapping, and subsistence use during project construction and operation.*

Response: *We have revised section 4.2.3 to include potential effects of noise on furbearer presence, trapping, and subsistence use during project construction and operation.*

Comment: *Multiple commenters state that Nuyakuk falls serve as a food resource at a critical time of year for birds preying on outmigrating juvenile salmon. Pat Vermillion states that at certain flow levels there are a lot of birds and at other flow levels the birds disappear. Therefore, the commenters request that the EA assess the effects of reduced flows during project operation on birds feeding at the falls.*

Response: *We have revised section 4.2.3 to include the effect of project operation on birds feeding on fish at the falls.*

Comment: *UTBB requests that the EA identify the timing of transmission line construction and assess the number of streams and acres of wetlands the transmission line would cross. UTBB and EPA request that the EA analyze the effects from project construction and operation on wetlands.*

Response: *The Commission's regulations require the applicant to include a construction schedule in Exhibit C of the final license application that would identify the proposed timing of transmission line construction. We have revised section 4.2.3 to specifically include an analysis of project construction and operation, including the transmission line, on streams, riparian habitat, and wetlands.*

Comment: *BLM requests that the EA assess the potential for the proposed transmission line to cause wildfires.*

Response: *We have revised section 4.2.3 to include the potential for the transmission line to cause wildfires.*

Recreation and Land Use

Comment: *Kay Andrews requests that the EA analyze the potential for the proposed transmission line right-of-way to become a transportation corridor into areas that currently lack access, including Wood-Tikchik State Park. The Council requests that the EA assess an alternative that includes a transmission line route and transportation corridor from Ekwok to Dillingham.*

Response: *The EA will analyze the effects of the proposed action. This analysis would include considering the potential to increase ATV and other vehicle access to remote regions along the transmission line route. If the applicant proposes a transmission line route from Ekwok to Dillingham, staff would analyze the effects of that alignment on all resources, including any unintended access; however, the EA would not consider a requirement to add a transmission line or transportation corridor from Ekwok to Dillingham unless it was part of the proposed project or a specific foreseeable action of another entity brought on because of the proposed hydropower project.*

Comment: *The Council requests that the EA assess the effects of project construction and operation, including noise, on recreation, commercial businesses, and tourism. The Council also requests an assessment of the applicant's conduct of environmental studies, including monitoring equipment, noise, and contractor presence, on these resources.*

Response: *We have modified sections 4.2.4 (recreation) and 4.2.7 (socioeconomics) to specifically include the effects of noise and other project construction and operation activities on recreation resources in the area. However, we do not conduct an analysis for pre-licensing environmental studies because issuing a license is the federal action under consideration by the Commission. The license applicant must obtain the necessary rights to conduct environmental studies to develop its license application.*

Comment: *The Council requests that the EA assess the potential for the project to cause increased access to the project area for hunting, and the effects of such increased access on hunting regulations.*

Response: *We have revised section 4.2.4 to include the effects on hunting access. However, state hunting regulations are not a matter of the Commission's jurisdiction and we do not speculate on how the state might modify its regulations due to any potential increase in hunting access as a result of the project.*

Cultural Resources

Comment: *Pat Vermillion and Corey Warnock indicate that the impacts of the project on the use of a natural portage site with historic fishing, hunting, and cultural significance should be considered in the EA.*

Response: *We have revised sections 4.2.4 and 4.2.5 to include project effects on trails, including portage routes.*

Aesthetic Resources

Comment: *Pat Vermillion requests that the EA include an analysis of project effects on aesthetic resources. Alaska DNR Parks Division requests that the EA analyze changes to the soundscape (i.e., ambient noise levels) during project construction and operation.*

Response: *Section 4.2.6 of the SD2 includes the effects of project construction and operation on aesthetic resources including ambient noise levels.*

Comment: *NMFS requests that the EA assess the effects of light pollution during project operation on aesthetic resources.*

Response: *We have revised section 4.2.6 to include this issue.*

Socioeconomic Resources

Comment: *Pat Vermillion requests that we include an analysis of the economic impact to Royal Coachman Lodge and other users of the Wood-Tikchik State Park in our EA.*

Response: *The EA will evaluate the effects of project construction, operation, and maintenance on such socioeconomic resources as recreation, tourism, governmental services, etc. Consistent with the FPA, the effects will be assessed at the broad public interest level, rather than at the individual level of economic effects on specific entities and their property.*

Comment: *UTBB asks how many people will be needed for the construction phase of the project and whether members of the local community will have hiring preference. Kay Andrews requests that the EA analyze the effects of the project on the displacement of employees of the existing diesel generation facilities.*

Response: Section 4.2.7 of the SD2 includes the effects on employment during project construction and operation. However, the number of people employed, and the source of those employees would be determined by the licensee.

Comment: UTBB asks whether other electricity needs, including the Aleknagik landfill, Float Plane Road, and Johnny Tugatuk Road, located along the transmission corridor, could benefit from the electricity generated by the project.

Response: The need for power discussion in the EA is based on the regional energy demand. Predicting whether energy needs for other specific developments located along the transmission corridor could be met by the proposed project is beyond the scope of the Commission's NEPA analysis.

Climate Change

Comment: NMFS requests that the EA analyze the effects of climate change on the timing and availability of water during the projected license term and how the project would be designed to accommodate those changes.

Response: We see no reason to include such an analysis in the EA. It is up to the applicant to decide how to design the project to help meet the energy needs of the region. This decision is based on, among other things, the regional energy demand, how the project would be used to help meet that demand, and the applicant's streamflow and generation forecasts for the Nuyakuk River over the 30- to 50-year term of a FERC license. Any future changes in any of these factors (or others) that could prompt the licensee to seek a modification to project facilities or operations during the term of a license would be more-appropriately addressed in the future through a license amendment proceeding.

3.0 PROPOSED ACTION AND ALTERNATIVES

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

3.1 NO-ACTION ALTERNATIVE

Under the no-action alternative, the proposed project would not be built (i.e., there would be no change to the existing environment). No environmental protection,

mitigation, or enhancement measures would be implemented. We use this alternative to establish baseline environmental conditions for comparison with other alternatives.

3.2 APPLICANT'S PROPOSAL

3.2.1 Proposed Project Facilities

The proposed project *as described in the PAD and updated in the applicant's November 14, 2019 Additional Information Request response*, would consist of a diversion structure, intake, powerhouse, tailrace, water conveyance system, generation, transmission lines, and appurtenant facilities. The diversion structure would *not span the river and instead would extend at about a 30-degree angle relative to the stream bank about 100 to 300 feet into the Nuyakuk River. The structure would impound an approximately 1-acre area of the river and facilitate flow diversions into* the intake. Flow from the intake would pass first through a conveyance channel and then into either one or *two* conveyance tunnels, depending on the outcome of bathymetry, sub-bottom profiling, and geotechnical investigations associated with project development. The tunnels would deliver flow to the *100-foot-long by 50-foot-wide by 30-foot-high* powerhouse which would house *two* 5-MW Kaplan-style turbine generating units. Flow would pass out of the powerhouse through a *100 to 150-foot-wide, 450-foot-long* open channel tailrace. Power generated by the project would be conveyed via a 135-mile-long system of 34.5-kVa transmission line.

The estimated average annual generation would be **62,691** megawatt-hours. The location of the facilities is shown in figure 1.

3.2.2 Proposed Project Operation

The applicant proposes to operate the project in a run-of-river mode, such that outflow from the project approximates inflow. For those months in which the total available inflow to the powerhouse is less than the project's total hydraulic capacity of 7,550 cfs, a minimum instream flow of 1,000 cfs would be provided through the bypassed reach, while the remainder of the available flow would be passed through the powerhouse. The Nuyakuk River experiences high flows between early summer and early fall.

3.2.3 Proposed Environmental Measures

Nushagak Cooperative proposes to operate the Nuyakuk River Project with the environmental protection, mitigation, and enhancement (PM&E) measures described below.

Aquatic Resources

- *Maintain a 1,000-cfs minimum flow in the bypassed reach during project operation.*

Terrestrial Resources

- Design the transmission line to incorporate the latest raptor protection guidelines, and install collision avoidance devices on the line at appropriate locations to protect migrating birds.

3.3 ALTERNATIVES TO THE PROPOSED ACTION

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

4.0 SCOPE OF CUMULATIVE EFFECTS AND SITE-SPECIFIC RESOURCE ISSUES

4.1 CUMULATIVE EFFECTS

According to the Council on Environmental Quality's regulations for implementing NEPA (50 C.F.R. 1508.7), a cumulative effect is the effect on the environment that results from the incremental effect of the action when added to other past, present and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time, including hydropower and other land and water development activities.

Based on our review of the PAD and preliminary staff analysis, we have not identified any resources that may be cumulatively affected by the proposed operation and maintenance of the Nuyakuk River project.

4.2 RESOURCE ISSUES

In this section, we present a preliminary list of environmental issues to be addressed in the EA. We identified these issues, which are listed by resource area, by reviewing the PAD and the Commission's record for the Nuyakuk River Project. This list is not intended to be exhaustive or final, but contains those issues raised to date that could have substantial effects. After the scoping process is complete, we will review the list and determine the appropriate level of analysis needed to address each issue in the EA.

We reviewed the U.S. Fish and Wildlife Service database of Information for Planning and Consultation and found no record of threatened, endangered, or candidate species or critical habitats in the proposed project location. Therefore, no effect on endangered species from project construction and operation are anticipated at this time; thus, endangered species would not be addressed in detail in the EA.

4.2.1 Geologic and Soils Resources

- Effects of project construction and maintenance activities on soil erosion and sedimentation.

4.2.2. Aquatic Resources

Water Quality

- Effects of project construction activities on water quality (e.g., turbidity and suspended sediment) in the project area.
- Effects of project operation on water temperatures *and dissolved oxygen* in the Nuyakuk River in the project area, *and corresponding effects on fish*.

Fisheries and Aquatic Habitat

- *Effects of project operation on flows through Nuyakuk Falls.*
- *Effects of project construction and operation on river ice processes in the affected reach of the Nuyakuk River (i.e., above, within, and below Nuyakuk Falls)*

- *Effects of changes in river hydraulics due to the presence of the diversion structure and reduced flows in the bypassed reach on the stream channel, stream banks, and sediment transport in the project area.*
- Effects of project construction activities, *including transmission line construction*, on *resident and anadromous* fish passage and aquatic habitat *in the Nuyakuk River and other streams* in the project area.
- *Effects of the project diversion structure, intake, powerhouse, and reduced flows in the bypassed reach during project operation on downstream migrating resident and juvenile anadromous fish, including the potential for injury and mortality from intake and turbine impingement and entrainment, passage delay, increased predation risk, or passage failure.*
- Effects of the project diversion structure, *intake, powerhouse, tailrace*, and reduced flows in the bypassed reach during project operation on *upstream migrating resident and adult anadromous* fish, *including the potential for false attraction and passage delay, injury and mortality due to turbine blade strike via the draft tubes, increased predation risk, and passage failure.*
- Effects of *the physical presence of project facilities (e.g., diversion structure, intake) and lower flows in the bypassed reach* under project operation on *fish use and fish habitat in the project area (e.g., above, within, and below Nuyakuk Falls).*
- *Effects of project construction and operation on the introduction and spread of aquatic invasive species.*
- *Beneficial effects of reduced transport of up to 1.6 million gallons of diesel fuel per year that would be displaced by project operation, and the corresponding beneficial effects on aquatic resources due to the reduced risk of hazardous fuel spills during transport.*

4.2.3 Terrestrial Resources

- *Effects of project construction and operation on wildlife habitat,*

including riparian and wetland habitat.

- Effects of habitat loss and alteration from construction of the intake/diversion, powerhouse, tailrace, airstrip, dock, access roads, maintenance and residential building, switchyard, and transmission line on *caribou (Mulchatna Herd)* and other wildlife and plant species.
- *Effects of project operation (i.e., lower flows in the falls) on birds and bears feeding at the falls due to potential changes in upstream and downstream fish migrations through the falls.*
- Effects of noise, improved access from project access roads, and increased human presence on *caribou, furbearers, and other* wildlife.
- Effects of the new substation and transmission line on the potential for raptor and other bird electrocutions and collisions.
- *Effects of the new transmission line on the potential for wildfires.*
- Effects of project construction and operation (project roads and facilities) on distribution and abundance of invasive plant species.

4.2.4 Recreation and Land Use

- Effects of project construction, operation and maintenance on recreational resources and use in the project area, *including recreation trails and portage routes and hunting access.*
- Effects of project construction, operation and maintenance on Wood-Tikchik State Park and its management objectives.
- Effects of project construction, operation, and maintenance on transportation resources, *including the potential for the transmission line corridor to be used as a transportation corridor.*

4.2.5 Cultural Resources

- Effects of project construction, operation, and maintenance on properties that are included in or eligible for inclusion in the National Register of

Historic Places.

- Effects of project construction, operation, and maintenance on subsistence activities within the project area, *including trails and portage routes used for subsistence purposes.*
- Effects of project construction, operation, and maintenance on Traditional Cultural Properties and practices within the project area.

4.2.6 Aesthetic Resources

- Effects of project construction, operation, and maintenance on aesthetic resources in the project area, *including visual resources and sound levels.*
- *Effects of light pollution during project operation.*

4.2.7 Socioeconomic Resources

- Effects of project construction, operation, and maintenance on socioeconomic resources, including housing, employment, transportation, governmental services, subsistence resources, and *local tourism.*

4.2.8 Developmental Resources

- Effects of proposed or recommended environmental measures on project generation and economics.

5.0 PROPOSED STUDIES

Depending upon the findings of studies completed by Nushagak Cooperative and the recommendations of the consulted entities, Nushagak Cooperative will consider, and may propose certain other measures to enhance environmental resources affected by the project as part of the proposed action. Nushagak Cooperative's initial study proposals are identified by resource area in table 1. Detailed information on Nushagak Cooperative's initial study proposals can be found in the PAD. Further studies may need to be added to this list based on comments provided to the Commission and Nushagak Cooperative from interested participants, including Alaskan Natives.

Table 1. Nushagak Cooperative’s initial study proposals for the Nuyakuk River Project.
(Source: PAD)

Resource Area	Proposed Study
Geologic and Soils Resources	
	Conduct an assessment of rock composition via hard rock drilling techniques to identify the viability of the substrate for supporting project infrastructure.
Water Quality and Quantity	
	Assess water quality in the Nuyakuk River at the project site.
	Collect hydrologic data via stream gaging at the project site.
	Assess and model sediment transport in the project area.
Fisheries Resources	
	Assess fish species seasonal distribution and abundance at the project site.
	Conduct bathymetric modeling of Nuyakuk Falls.
	Conduct Nuyakuk Falls fish passage evaluation and modeling.
Terrestrial Resources	
	Assess <i>wildlife presence, distribution, and migration.</i>
	<i>Assess the presence of rare, threatened and endangered species.</i>
	Assess botanical species <i>presence and distribution.</i>
	<i>Assess invasive weed presence and proliferation.</i>

Resource Area	Proposed Study
	<i>Assess wetland presence, type, and quantity.</i>
Recreation and Aesthetic Resources	
	Conduct a comprehensive visual and recreation assessment of the project area to define the extent of the recreational activities that occur in the project area and assess potential project impacts on recreational and visual resources.
Cultural Resources	
	Conduct a cultural resources assessment in the project area to include a desktop analysis and field studies in consultation with the affected Alaskan Natives and the State Historical Preservation Office.
Socioeconomic Resources	
	Conduct a desktop analysis to define the existing population and social and economic conditions in the project area and assess the impacts associated with project development and operations.

6.0 REQUEST FOR INFORMATION AND STUDIES

We are asking federal, state, and local resource agencies, Alaskan Natives, NGOs, and the public to forward to the Commission any information that will assist us in conducting an accurate and thorough analysis of the project-specific and cumulative effects associated with licensing the Nuyakuk River Project. The types of information requested include, but are not limited to:

- information, quantitative data, or professional opinions that may help define the geographic and temporal scope of the analysis (both site-specific and cumulative effects), and that helps identify significant environmental issues;

- identification of, and information from, any other EA, EIS, or similar environmental study (previous, on-going, or planned) relevant to the proposed licensing of the Nuyakuk River Project;
- existing information and any data that would help to describe the effects of the project and other developmental activities on environmental and socioeconomic resources;
- information that would help characterize the existing environmental conditions and habitats;
- the identification of any federal, state, or local resource plans, and any future project proposals in the affected resource area (e.g., proposals to construct or operate water treatment facilities, recreation areas, water diversions, timber harvest activities, or fish management programs), along with any implementation schedules);
- documentation that the proposed project would or would not contribute to cumulative adverse or beneficial effects on any resources. Documentation can include, but need not be limited to, how the project would interact with other projects in the area and other developmental activities; study results; resource management policies; and reports from federal and state agencies, local agencies, Alaskan Natives, NGOs, and the public;
- documentation showing why any resources should be excluded from further study or consideration; and
- study requests by federal and state agencies, local agencies, Alaskan Natives, NGOs, and the public that would help provide a framework for collecting pertinent information on the resource areas under consideration necessary for the Commission to prepare the EA/EIS for the project.

All requests for studies filed with the Commission must meet the criteria found in Appendix A, *Study Plan Criteria*.

The requested information, comments, and study requests should be submitted to the Commission no later than February 4, 2020. All filings must clearly identify the following on the first page: **Nuyakuk River (P-14873-001) Hydroelectric Project**. Scoping comments may be filed electronically via the Internet. See 18 C.F.R.

385.2001(a)(1)(iii) and the instructions on the Commission’s website <http://www.ferc.gov/docs-filing/efiling.asp>. Commenters can submit brief comments up to 6,000 characters, without prior registration, using the eComment system at <http://www.ferc.gov/docs-filing/ecomment.asp>. You must include your name and contact information at the end of your comments. For assistance, please contact FERC Online Support at FERCOnlineSupport@ferc.gov or toll free at 1-866-208-3676, or for TTY, (202) 502-8659. Although the Commission strongly encourages electronic filing, documents may also be paper-filed. To paper-file, please send a paper copy to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street, NE, Washington, D.C. 20426.

Register online at <http://www.ferc.gov/esubscription.asp> to be notified via email of new filings and issuances related to this or other pending projects. For assistance, please contact FERC Online Support. <mailto:ferconlinesupport@ferc.gov>.

Any questions concerning the scoping meetings, site visits, or how to file written comments with the Commission should be directed to Julia Kolberg at (202) 502-8261 or julia.kolberg@ferc.gov. Additional information about the Commission’s licensing process and the Nuyakuk River Project may be obtained from the Commission’s website, www.ferc.gov.

7.0 EA PREPARATION SCHEDULE

At this time, we anticipate the need to prepare a draft and final EA. The draft EA will be sent to all persons and entities on the Commission’s service and mailing lists for the Nuyakuk River Project. The EA will include our recommendations for operating procedures, as well as environmental protection and enhancement measures that should be part of any license issued by the Commission. All recipients will then have 30 days to review the draft EA and file comments with the Commission. All comments on the draft EA filed with the Commission will be considered in preparation of the final EA.

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

<u>Major Milestone</u>	<u>Target Date</u>
Scoping Meetings	December 2019
License Application Filed	June 2023

A copy of the process plan and schedule, which has a complete list of licensing milestones for the Nuyakuk River Project, including those for developing the license

application, is attached as Appendix B to this SD1.

8.0 PROPOSED EA OUTLINE

The preliminary outline for the EA for the Nuyakuk River Project is as follows:

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9.0 COMPREHENSIVE PLANS

Section 10(a)(2) of the FPA, 16 U.S.C. section 803(a)(2)(A), requires the Commission to consider the extent to which a project is consistent with federal and state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by a project. Commission staff has preliminarily identified and reviewed the plans listed below that may be relevant to the Nuyakuk River Project. Agencies are

requested to review this list and inform the Commission staff of any changes. If there are other comprehensive plans that should be considered for this list that are not on file with the Commission, or if there are more recent versions of the plans already listed, they can be filed for consideration with the Commission according to 18 CFR 2.19 of the Commission's regulations. Please follow the instructions for filing a plan at <http://www.ferc.gov/industries/hydropower/gen-info/licensing/complan.pdf>.

The following is a list of comprehensive plans currently on file with the Commission that may be relevant to the Nuyakuk River Project:

Alaska Administrative Code. 2012. 5 AAC § 39.222 Policy for the Management of Sustainable Salmon Fisheries. Juneau, Alaska.

Alaska Administrative Code. 2003. 5 AAC § 75.222 Policy for the Management of Sustainable Wild Trout Fisheries. Juneau, Alaska.

Alaska Department of Fish and Game. 2011. Alaska Anadromous Waters Catalog - Southwestern Region. Anchorage, Alaska. June 1, 2011.

Alaska Department of Fish and Game. U.S. Fish and Wildlife Service. 2007. Black Oystercatcher (*Haematopus bachmani*) Conservation Action Plan. Anchorage, Alaska. April 2007.

Alaska Department of Fish and Game, et al. 2012. Fishery Management Plan for the Salmon Fisheries in the EEZ off Alaska. June 2012.

Alaska Department of Natural Resources. Alaska's Outdoor Legacy: Statewide Comprehensive Outdoor Recreation Plan (SCORP): 2009-2014. Anchorage, Alaska.

Alaska Department of Natural Resources. 2002. Wood-Tikchik State Park Management Plan. Anchorage, Alaska. October 2002.

Alaska Department of Natural Resources. 2005. Bristol Bay Area Plan for State Lands. Anchorage, Alaska. April 2005.

Alaska Department of Natural Resources. 2005. Nushagak & Mulchatna Rivers Recreation Management Plan. April 19, 2005.

Bristol Bay Study Group. 1985. Bristol Bay Comprehensive Management Plan and

Final Environmental Impact Statement. April 1985.

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

Nushagak Mulchatna Watershed Council. 2001. Nushagak Mulchatna Subwatershed Prioritization Process. June 2001.

Nushagak Mulchatna Watershed Council. 2012. Nushagak River Watershed Traditional Use Area Conservation Plan. 2012.

Southwest Alaska Salmon Habitat Partnership. 2017. Strategic Conservation Action Plan for Southwest Alaska Watersheds. Anchorage, AK. 2017.

U.S. Fish and Wildlife Service, et al. 2008. Alaska Shorebird Conservation Plan. Version II. Anchorage, Alaska. November 2008.

U.S. Fish and Wildlife Service. 2009. Alaska Seabird Conservation Plan. Anchorage, Alaska. 2009.

U.S. Fish and Wildlife Service. 2005. Regional Seabird Conservation Plan. Pacific Region, Portland, Oregon. January 2005.

U.S. Fish and Wildlife Service. 2002. Steller's Eider (*Polysticta stelleri*) Recovery Plan. Fairbanks, Alaska. September 2002.

U.S. Fish and Wildlife Service. 1996. Spectacled Eider (*Somateria fischeri*) Recovery Plan. Anchorage, Alaska. August 1996.

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.

10.0 MAILING LISTS

The list below is the Commission's official mailing list for the Nuyakuk River Project included in this scoping document. If you want to receive future mailings for these proceedings and are not included in the list below, please send your request by email to efiling@ferc.gov or by mail to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street, N.E., Room 1A, Washington, DC 20426. All

written and emailed requests to be added to the mailing lists must clearly identify the following on the first page: **Nuyakuk River (P-14873-001) Hydroelectric Project**. You may use the same method if requesting removal from the mailing list below.

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

Secretary Oregon Public Utility Commission PO Box 1088 Salem, OR 97308	Ken Lord Attorney-Advisor U.S. Department of Interior 4230 University Dr. Suite 300 Anchorage, AK 99508
Susan Walker Marine Resources Specialist NOAA Fisheries Service PO Box 21668 Juneau, AK 99802	Thomas Meyer General Counsel NOAA General Counsel for Fisheries PO Box 21109 Juneau, AK 99801
Cory Warnock McMillen Jacobs Associates 5771 Applegrove Ln Ferndale, WA 98248	Governor of Alaska Alaska Office of the Governor P.O. Box 110001 Juneau, AK 99811
Governor of Oregon Oregon Office of the Governor 900 Court Street NE RM 160 Salem, OR 97301	Lisa Murkowski Senator U.S. Senate 709 Hart Senate Office Building Washington, DC 20510
Daniel Sullivan Senator U.S. Senate 702 Hart Senate Office Building Washington, DC 20510	Ron Wyden Senator U.S. Senate 221 Dirksen Senate Office Building Washington, DC 20510

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<p>Mary Leykom US Army Corps of Engineers Alaska District PO Box 6898 JBER, AK 99506</p>	<p>Karen Mouritsen Acting State Director U.S. Bureau of Land Management Alaska State Office 222 West 7th Ave., Suite 13 Anchorage, AK 99504</p>

<p>Scott Crockett, State Conservationist U.S. Department of Agriculture National Resources Conservation Service Alaska State Office 800 West Evergreen Avenue, Suite 100 Palmer, AK 99645</p>	<p>Eric Marchegiani Public Utility Specialist U.S. Department of Agriculture PO Box 771876 Eagle River, AK 99557</p>
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<p>Matthew LaCroix U.S. Environmental Protection Agency Office of Ecosystems, Tribal and Public Affairs Aquatic Resources Unit 222 West 7th Avenue, #19 Anchorage, AK 99513</p>	<p>Betsy McCracken U.S. Environmental Protection Agency Water Division/Regional Administrators Division 222 West 7th Avenue, #19 Anchorage, AK 99513</p>
<p>Greg Siekaniec Regional Director U.S. Fish & Wildlife Service Alaska Region 1011 East Tudor Road, MS 381 Anchorage, AK 99503</p>	<p>Jennifer Spegon Energy Project Coordinator U.S. Fish & Wildlife Service Anchorage Field Office 1011 East Tudor Road, Mail Stop 121 Anchorage, AK 99503</p>

<p>Franklin Dekker Hydrologist U.S. Fish & Wildlife Service Habitat Restoration 4700 BLM Road Anchorage, AK 99507</p>	<p>Debbie Steen Recreation and Fire Management Specialist 1011 East Tudor Road Anchorage, AK 99503</p>
<p>Susanna Henry Refuge Manager U.S. Fish & Wildlife Service Togiak National Wildlife Refuge PO Box 270 MS 569 Dillingham, AK 99576</p>	<p>David Schmid Acting Regional Forester U.S. Forest Service, Alaska Region 709 West 9th Street Juneau, AK 99802</p>
<p>Julie Anderson Commissioner Alaska Department of Commerce, Community and Economic Development PO Box 110803 Juneau, AK 99811</p>	<p>Amber LeBlanc Director Alaska Department of Environmental Conservation Division of Water 555 Cordova Street Anchorage, AK 99501</p>
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APPENDIX A
STUDY PLAN CRITERIA
18 CFR Section 5.9(b)

Any information or study request must contain the following:

1. Describe the goals and objectives of each study proposal and the information to be obtained;
2. If applicable, explain the relevant resource management goals of the agencies or Alaskan Natives with jurisdiction over the resource to be studied;
3. If the requester is not a resource agency, explain any relevant public interest considerations in regard to the proposed study;
4. Describe existing information concerning the subject of the study proposal, and the need for additional information;
5. Explain any nexus between project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied, and how the study results would inform the development of license requirements;
6. Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate field season(s) and the duration) is consistent with generally accepted practice in the scientific community or, as appropriate, considers relevant tribal values and knowledge; and
7. Describe considerations of level of effort and cost, as applicable, and why proposed alternative studies would not be sufficient to meet the stated information needs.

**APPENDIX B
NUYAKUK RIVER PROJECT PROCESS PLAN AND SCHEDULE**

Shaded milestones are unnecessary if there are no study disputes. If the due date falls on a weekend or holiday, the due date is the following business day. Early filings or issuances will not result in changes to these deadlines. In the preliminary schedule provided in the PAD, Nushagak Cooperative proposes to complete various milestones ahead of the schedule provided below. Based on Commission staff’s experience, their projected schedule may not be reasonable. Therefore, Commission staff modified the process plan to be consistent with the Commission’s regulations and Commission’s staff experience in implementing the ILP.

Responsible Party	Pre-Filing Milestone	Date	FERC Regulation
Nushagak Cooperative	NOI/PAD filed	10/7/19	5.5, 5.6
FERC	Tribal Meetings, if needed	TBD	5.7
FERC	Issue Notice of Commencement of Proceeding and Scoping Document 1	11/11/19	5.8
FERC	Scoping Meetings and Project Site Visit	12/11/19	5.8(b)(viii)
All Stakeholders	File Comments on PAD/Scoping Document 1 and Study Requests	2/4/20	5.9
FERC	Issue Scoping Document 2 (if necessary)	3/20/20	5.10
Nushagak Cooperative	File Proposed Study Plan	3/20/20	5.11(a)
All Stakeholders	Proposed Study Plan Meeting	4/26/20	5.11(e)
All Stakeholders	File Comments on Proposed Study Plan	6/25/20	5.12
Nushagak Cooperative	File Revised Study Plan	7/25/20	5.13(a)
All Stakeholders	File Comments on Revised Study Plan	8/9/20	5.13(b)
FERC	Issue Director's Study Plan Determination	8/24/20	5.13(c)

Responsible Party	Pre-Filing Milestone	Date	FERC Regulation
Mandatory Conditioning Agencies	File Any Study Disputes	9/13/20	5.14(a)
Dispute Panel	Select Third Dispute Resolution Panel Member	9/28/20	5.14(d)
Dispute Panel	Convene Dispute Resolution Panel	10/3/20	5.14(d)(3)
Nushagak Cooperative	File Comments on Study Disputes	10/8/20	5.14(i)
Dispute Panel	Dispute Resolution Panel Technical Conference	10/13/20	5.14(j)
Dispute Panel	Issue Dispute Resolution Panel Findings	11/2/20	5.14(k)
FERC	Issue Director's Study Dispute Determination	11/22/20	5.14(l)
Nushagak Cooperative	First Study Season		5.15(a)
Nushagak Cooperative	File Initial Study Report	8/24/21	5.15(c)(1)
All Stakeholders	Initial Study Report Meeting	9/8/21	5.15(c)(2)
Nushagak Cooperative	File Initial Study Report Meeting Summary	9/23/21	5.15(c)(3)
All Stakeholders	File Disagreements/Requests to Amend Study Plan	10/23/21	5.15(c)(4)
All Stakeholders	File Responses to Disagreements/Amendment Requests	11/22/21	5.15(c)(5)
FERC	Issue Director's Determination on Disagreements/Amendments	12/22/21	5.15(c)(6)
Nushagak Cooperative	Second Study Season		5.15(a)
Nushagak Cooperative	File Updated Study Report	8/24/22	5.15(f)
All Stakeholders	Updated Study Report Meeting	9/8/22	5.15(f)

Responsible Party	Pre-Filing Milestone	Date	FERC Regulation
Nushagak Cooperative	File Updated Study Report Meeting Summary	9/23/22	5.15(f)
All Stakeholders	File Disagreements/Requests to Amend Study Plan	10/23/22	5.15(f)
All Stakeholders	File Responses to Disagreements/Amendment Requests	11/22/22	5.15(f)
FERC	Issue Director's Determination on Disagreements/Amendments	12/22/22	5.15(f)
Nushagak Cooperative	File Preliminary Licensing Proposal (or Draft License Application)	1/31/23	5.16(a)-(c)
All Stakeholders	File Comments on Preliminary Licensing Proposal (or Draft License Application)	4/11/23	5.16(e)
Nushagak Cooperative	File Final License Application	6/30/23	5.17
Nushagak Cooperative	Issue Public Notice of Final License Application Filing	7/14/23	5.17(d)(2)