DOE/EA-2316

Environmental Assessment for Subsequent License Renewal of Edwin I. Hatch Nuclear Plant, Units 1 and 2 in Appling County, Georgia
Re-Published as DOE/EA-2316

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Title: Environmental Assessment for Subsequent License Renewal of Edwin I. Hatch Nuclear Plant, Units 1 and 2 in Appling County, Georgia, Re-published as DOE/EA-2316

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Proposed Action: The United States Department of Energy (DOE), Office of Energy Dominance Financing (EDF) (formerly the Loan Programs Office [LPO]) and Georgia Power Company (GPC) have executed a loan guarantee agreement (LGA) of a funding facility pursuant to DOE's authority under section 1706 of Title XVII of the Energy Policy Act of 2005, as amended by the Inflation Reduction Act of 2022 (42 U.S.C. 16517) and the One Big Beautiful Bill Act (Pub. L. No. 119-21, 139 Stat. 72 (July 4, 2025)) (the Energy Dominance Financing or EDF Program). EDF is considering whether to include the Hatch Nuclear Plant (HNP) Subsequent License Renewal (SLR) Project (the Project), in Appling County, Georgia, for inclusion in the funding facility. GPC may request inclusion of multiple individual projects with independent utility in the funding facility that is the subject of the DOE loan guarantee; accordingly, DOE will complete applicable and relevant environmental reviews for these projects prior to their inclusion in the funding facility that is the subject of DOE's loan guarantee.

The subject of Federal financial assistance being sought from the DOE for HNP is for subsequent license renewal (SLR) and activities associated with retooling of the facility allowing power generation until 2054 (Unit 1) and 2058 (Unit 2).

HNP Units 1 and 2 received their initial operating licenses in 1974 and 1978, respectively. The current renewed licenses expire August 6, 2034, and June 13, 2038. SNC submitted the Hatch Subsequent License Renewal Application (SLRA) to the US Nuclear Regulatory Commission, and it was accepted for docketing on June 25, 2025.

National Environmental Policy Act (NEPA) Process:

DOE conducted an environmental review under the National Environmental Policy Act (NEPA), as amended (42 U.S.C. 4321–4347), and DOE's National Environmental Policy Act Implementing Procedures, dated June 30, 2025. DOE is using the NEPA process to inform its decision whether to include the HNP SLR Project in the funding facility.

On May 15, 2025, Southern Nuclear Operating Company, Inc. (SNC, the applicant) submitted an application (SNC 2025-TN12673) to the U.S. Nuclear Regulatory Commission (NRC, the Commission) for the Edwin I. Hatch Nuclear Plant (HNP), Units 1 and 2 subsequent license renewal (SLR) of the current renewed facility operating licenses. NRC accepted the application for docketing on June 25, 2025. Title

10 of the Code of Federal Regulations (10 CFR) Part 54 (TN4878), "Requirements for Renewal of Operating Licenses for Nuclear Power Plants," allows for an option to renew operating licenses for subsequent terms each up to an additional 20 years.

Pursuant to NEPA, an *EA for Subsequent License Renewal of Edwin I. Hatch Nuclear Plant, Units 1 and 2* (March 2026) was prepared by the NRC. DOE was a cooperating agency in the preparation of the NRC *EA for Subsequent License Renewal of Edwin I. Hatch Nuclear Plant, Units 1 and 2*. This document presents an analysis that considers the environmental effects of the continued operation of HNP during the SLR term, alternatives to SLR and their environmental effects, and mitigation measures for minimizing adverse environmental impacts, as appropriate. The NRC determined that the proposed action will not have a significant effect on the quality of the human environment and concluded a Finding of No Significant Impact. The NRC *EA for Subsequent License Renewal of Edwin I. Hatch Nuclear Plant, Units 1 and 2* meets the standards for a sufficient environmental assessment under the DOE's NEPA procedures.

Required Consultations and Other Reviews

As a Federal agency, DOE must comply with regulatory agency consultations. DOE reviewed the NRC's *EA for Subsequent License Renewal of Edwin I. Hatch Nuclear Plant, Units 1 and 2* (March 2026) in accordance with the requirements of 10 CFR 1022 for floodplain and wetland assessments and determined it provides sufficient analyses to support EDF's conclusion that there are no impacts associated with the activities that are the subject of the proposed Federal financial assistance.

Section 7 of the Endangered Species Act requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened or endangered species or result in the destruction or adverse modification of the critical habitat of such species. The NRC prepared a biological evaluation, in accordance with the suggested biological assessment contents described at 50 CFR 402.12(f) and submitted it to the National Marine Fisheries Service (NMFS) and Fish and Wildlife Service (FWS).The assessment evaluated the potential impacts of the proposed SLR on the following federally threatened, endangered, proposed as threatened or endangered species and critical habitat: tricolored bat (*Perimyotis subflavus*); red-cockaded woodpecker (*Leuconotopicus borealis); eastern indigo snake (Drymarchon couperi);* southern hognose snake *(Heterodon simus);* Altamaha spinymussel (*Elliptio spinosa);* Altamaha spinymussel critical habitat; monarch butterfly *(Danaus plexippus);* Atlantic sturgeo*n (South Atlantic DPS) (Acipenser oxyrinchus);* Atlantic Sturgeon critical habitat; and shortnose sturgeon (*Acipenser brevirostrum*).

The NRC's analysis determined the proposed SLR would not affect or would not likely adversely affect any of the listed species or critical habitat and are summarized in NRC's *EA for Subsequent License Renewal of Edwin I. Hatch Nuclear Plant, Units 1 and 2* (March 2026). In letters dated January 13 and March 20, 2026, the NRC received concurrence on its determination from the FWS and NMFS, respectively. EDF concluded that the Project for federal financial assistance is within the same scope of that reviewed by NMFS and FWS with NRC. DOE determined that these same findings are applicable to EDF's action.

Pursuant to the National Historic Preservation Act, EDF reviewed the applicant's Architectural Survey Report of HNP and issued a Finding of No Historic Properties Affected, consistent with 36 CFR § 800.4(d)(1). On October 2, 2025, the Georgia State Historic Preservation Officer concurred with EDF's

finding of No Historic Properties Affected, due to the scope and location of work associated with DOE's undertaking (i.e. Federal financial assistance for subsequent license renewal at HNP).

Accordingly, DOE is relying on and re-publishing the NRC's *EA for Subsequent License Renewal of Edwin I. Hatch Nuclear Plant, Units 1 and 2* (March 2026) inclusive of the agency reviews and consultations as DOE/EA-2316.

Finding of No Significant Impact

Based on DOE/EA-2316, DOE has determined that including the **Subsequent License Renewal of Edwin I. Hatch Nuclear Plant, Units 1 and 2** in the established funding facility will not have a significant effect on the human environment. The preparation of an environmental impact statement is therefore not required, and DOE is issuing this Finding of No Significant Impact. This Finding of No Significant Impact should not be construed as a final decision about the inclusion of the Project in the funding facility.

TODD STRIBLEY

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4/8/2026

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Date

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Environmental Assessment for Subsequent License Renewal of Edwin I. Hatch Nuclear Plant, Units 1 and 2

Completed: March 2026

Office of Nuclear Material Safety and Safeguards

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ABBREVIATIONS AND ACRONYMS

°C	degree(s) Celsius
°F	degree(s) Fahrenheit
µm	micron(s)
ac	acre(s)
ACHP	Advisory Council on Historic Preservation
ADAMS	Agencywide Documents Access and Management System
AEA	Atomic Energy Act of 1954, as amended
APE	area of potential effects
B&F	Baxley Back and Forth Railroad
BCC	Birds of Conservation Concern
BMP	best management practice
CFR	*Code of Federal Regulations*
cfs	cubic foot/feet per second
cm	centimeter(s)
CST	condensate storage tank
DM/m^2	dry matter per square meter
DO	dissolved oxygen
DOE	U.S. Department of Energy
EA	environmental assessment
EDFP	Energy Dominance Financing Program
EFH	essential fish habitat
EIS	environmental impact statement
EMF	electromagnetic field
EPA	U.S. Environmental Protection Agency
ER	environmental report
ESA	Endangered Species Act of 1973, as amended
FE	federally endangered
FONSI	Finding of No Significant Impact
FPE	proposed for Federal listing as endangered

FPT	proposed for Federal listing as threatened
FR	*Federal Register*
FSAR	Final Safety Analysis Report
ft	foot/feet
FT	federally threatened
ft/s	foot/feet per second
FWS	U.S. Fish and Wildlife Service
GA EPD	Georgia Environmental Protection Division
GA WRD	Georgia Wildlife Resources Division
GHG	greenhouse gas
GPC	Georgia Power Company
gpm	gallon(s) per minute
GWL	global warming levels
GWPP	Groundwater Protection Program
ha	hectare(s)
HNP	Edwin I. Hatch Nuclear Plant
hr	hour(s)
in.	inch(es)
ISFSI	independent spent fuel storage installation
km	kilometer(s)
km^2	square kilometer(s)
kV	kilovolt(s)
L	liter(s)
Lpm	liter(s) per minute
LR	license renewal
LR GEIS	*Generic Environmental Impact Statement for License Renewal of Nuclear Plants*
m	meter(s)
m^2	square meter(s)
m^3	cubic meter(s)
m^3/s	cubic meter(s) per second
MBTA	Migratory Bird Treaty Act of 1918, as amended

MDCT	mechanical draft cooling tower
Mgd	million gallons per day
mg/L	milligram(s) per liter
mi	mile(s)
mi^2	square mile(s)
MLd	million liters per day
MSA	Magnuson-Stevens Fishery Conservation and Management Act of 1976, as amended
MSL	mean sea level
NE	no effect
NEI	Nuclear Energy Institute
NEPA	National Environmental Policy Act of 1969, as amended
NFR	non-Federal representative
NGCC	natural gas combined cycle
NHPA	National Historic Preservation Act of 1966, as amended
NLAA	not likely to adversely affect
NMFS	National Marine Fisheries Service
NMSA	National Marine Sanctuaries Act
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRC	U.S. Nuclear Regulatory Commission, the Commission
NRHP	National Register of Historic Places
NUREG	NRC technical report designation
pCi/L	picocurie(s) per liter
PNNL	Pacific Northwest National Laboratory
POANHI	Process for the Ongoing Assessment of Natural Hazard Information
PSW	plant service water
Q90	90-percent exceedance flow
RCP	representative concentration pathway
ROW	right-of-way
s	second(s)
SHPO	State Historic Preservation Office

SLR	subsequent license renewal
SNC	Southern Nuclear Operating Company, Inc., the applicant
SRM	Staff Requirements Memorandum
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey
y^3	cubic yard(s)

1 INTRODUCTION

On May 15, 2025, Southern Nuclear Operating Company, Inc. (SNC, the applicant) submitted an application (SNC 2025-TN12673) to the U.S. Nuclear Regulatory Commission (NRC, the Commission) for the Edwin I. Hatch Nuclear Plant (HNP), Units 1 and 2 subsequent license renewal (SLR) of the current renewed facility operating licenses. Title 10 of the *Code of Federal Regulations* (10 CFR) Part 54 (TN4878), "Requirements for Renewal of Operating Licenses for Nuclear Power Plants," allows for an option to renew operating licenses for subsequent terms each up to an additional 20 years.

The Atomic Energy Act of 1954, as amended (AEA) (TN663), and its implementing regulations, authorize the NRC to issue licenses for commercial nuclear power reactors. Before renewing an operating license, the NRC is required to consider the environmental impacts of the proposed action under the National Environmental Policy Act of 1969, as amended (NEPA) (TN661). On June 20, 2025, after reviewing the HNP SLR application, and the environmental report (ER) (SNC 2025-TN12548) included in that application, for sufficient information, the NRC staff published a notice of acceptance for docketing and opportunity to request a hearing in the *Federal Register* (FR) (90 FR 26331-TN12549). Acceptance of an SLR application formally begins the NRC staff's environmental review process in accordance with NEPA and the NRC's regulations implementing NEPA specified in 10 CFR Part 51 (TN10253), "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions."

To support its environmental review, the NRC staff conducted an environmental audit on August 26 and 27, 2025 (NRC 2025-TN12683). The NRC staff held meetings with SNC personnel and reviewed plant-specific documentation and photos. The findings from the audit were captured in a summary dated September 19, 2025 (NRC 2025-TN12688). SNC provided responses to the NRC staff's audit requests in a letter dated October 20, 2025 (SNC 2025-TN12618).

The NRC's environmental protection regulations that implement NEPA in 10 CFR Part 51 (TN10253) identify actions for which the NRC prepares an environmental impact statement (EIS). The renewal of nuclear power plant operating licenses is an action identified as requiring an EIS in 10 CFR 51.20(b)(2) and 51.95(c). However, based on its review of the ER submitted as part of the HNP SLR application, the NRC staff has determined that it would be prudent to first prepare this environmental assessment (EA) to determine whether the preparation of an EIS would be necessary or whether a Finding of No Significant Impact (FONSI) could be issued for HNP SLR. Factors bearing on this determination include the previously disturbed and industrialized nature of the HNP site, findings from the NRC's 2001 environmental review for the initial renewal of the HNP operating licenses, and the absence of new and significant information since the 2024 issuance of NUREG-1437, Revision 2, *Generic Environmental Impact Statement for License Renewal of Nuclear Plants*, *Final Report* (LR GEIS) (NRC 2024-TN10161), which this EA supplements.

This EA presents an analysis that considers the environmental effects of the continued operation of HNP during the SLR term, alternatives to SLR and their environmental effects, and mitigation measures for minimizing adverse environmental impacts, as appropriate. Chapter 2 describes the proposed action and alternatives to the proposed action and a comparison of the environmental impacts of the proposed action and alternatives to the proposed action. Chapter 3 contains an analysis of the potential environmental impacts from the proposed action. Chapter 4 describes the consultation and coordination with Federal, State, and local agencies and Indian Tribes. Chapter 5 presents the NRC staff's recommendation that the adverse

environmental impacts of SLR for HNP are not so great that preserving the option of SLR for energy-planning decision-makers would be unreasonable. The NRC staff based this recommendation on (1) the analysis and findings in the LR GEIS (NRC 2024-TN10161), which this EA supplements; (2) the applicant's ER (SNC 2025-TN12548); (3) the NRC staff's consultation with Federal, State, and local agencies and Indian Tribes; and (4) the NRC staff's independent environmental review. Chapter 5 also presents the NRC staff's FONSI for the proposed action.

1.1 Proposed Federal Actions

Given that the U.S. Department of Energy (DOE) has special expertise and is considering providing Federal financial support to the Georgia Power Company (GPC), DOE has requested to be a NEPA cooperating agency on the NRC's HNP SLR application environmental review consistent with a memorandum of understanding (DOE 2025-TN12674, DOE/NRC 2024-TN10597). The NRC is the lead Federal agency. DOE's Office of Energy Dominance Financing, formerly known as the Loans Program Office, is a NEPA cooperating agency on this environmental review. At the conclusion of the NRC's environmental review, DOE would publish a separate decision document, as appropriate.

NRC proposed Federal action

The current renewed facility operating licenses for HNP, Units 1 and 2 (Nos. DPR-57 and NPF-5, respectively) are set to expire at midnight on August 6, 2034, and June 13, 2038, respectively. Pursuant to SNC's submittal of an SLR application dated May 15, 2025 (NRC 2025-TN12675), the NRC's proposed Federal action is to determine whether to issue subsequent renewed facility operating licenses for HNP, Units 1 and 2 for an additional 20 years of operation. If renewed, these licenses would authorize SNC to operate HNP, Units 1 and 2 until August 6, 2054, and June 13, 2058, respectively.

DOE proposed Federal action

DOE is considering whether to issue a loan guarantee of a funding facility to GPC pursuant to its authority under the Energy Dominance Financing Program (EDFP). In its application, GPC identified the HNP Project in Appling County, Georgia, for inclusion in the funding facility that is the subject of DOE's loan guarantee. The subject of Federal financial assistance being sought from DOE for HNP are for SLR and activities associated with retooling of the facility allowing power generation until 2054 (Unit 1) and 2058 (Unit 2).

1.2 Purpose and Need for the Proposed Federal Actions

Purpose and Need for the NRC proposed Federal Action

The purpose and need for the NRC proposed Federal action (subsequent renewal of renewed facility operating licenses) is to provide an option that allows for power generation capability beyond the term of the current nuclear power plant operating licenses to meet future system generating needs. Future system generating needs may be determined by State, utility, and, where authorized, Federal decision-makers (other than the NRC). This definition of purpose and need reflects the NRC's recognition that, unless there are findings in the NRC's review that would lead the NRC to reject an SLR application, the NRC does not have a role in the energy-planning decisions as to whether a particular nuclear power plant should continue to operate (61 FR 28467) (TN4491).

If subsequently renewed licenses are issued, power plant owners, State regulators, and, in some cases, other Federal agencies would ultimately decide whether the nuclear power plant would continue to operate, based on economics, energy reliability goals, and other factors within their jurisdiction or the owners' purview. If the operating licenses are not subsequently renewed, the nuclear power plant must shut down on or before the expiration dates of the current operating licenses.

Purpose and Need for the DOE proposed Federal action

The purpose and need for the DOE proposed Federal action (loan guarantee) is to implement DOE's authority under Title XVII of the Energy Policy Act of 2005 (TN738), which was reauthorized, amended, and revised to create the EDFP (Section 1706). The purpose of the EDFP is to finance projects and facilities in the United States, as proposed by applicants, that: (1) retool, repower, repurpose, or replace energy infrastructure that has ceased operations; (2) enable operating energy infrastructure to increase capacity or output; or (3) support or enable the provision of known or forecastable electric supply at time intervals necessary to maintain or enhance grid reliability or other system adequacy needs (42 U.S.C. § 16517-TN10779 and Public Law 119-21-TN12743).

1.3 Scope of the Environmental Analysis

For an SLR application, the NRC staff simultaneously conducts a safety review and an environmental review. The findings of the safety review are documented in a safety evaluation report. The environmental review, governed by NEPA and the requirements of 10 CFR Part 51 (TN10253), evaluates the environmental impacts of, and alternatives to, the proposed action. The NRC considers the findings in both the safety and environmental reviews in its decision to either grant or deny the issuance of subsequent renewed licenses.

1.4 Generic Environmental Impact Statement

The NRC previously evaluated the potential environmental impacts from license renewal, including SLR, in the LR GEIS (NRC 2024-TN10161). The purpose of the LR GEIS is to identify and evaluate environmental issues for license renewal and determine which environmental issues could result in the same or similar impact at all nuclear power plants, or a specific subset of plants, and which issues could result in different levels of impact. The LR GEIS defines three levels of significance for potential impact findings for environmental issues: SMALL, MODERATE, and LARGE. Issues are assigned a Category 1 (generic to all or a distinct subset of plants) or a Category 2 (plant-specific) designation. The LR GEIS identifies 80 environmental issues (i.e., 59 Category 1 issues, 20 Category 2 issues, and 1 issue that remains uncategorized) that may be associated with nuclear power plant operation and refurbishment during an initial or subsequent license renewal term.

Category 1 issues do not require additional plant-specific evaluation unless new and significant information has been identified. As described in the LR GEIS, new information can be identified from many sources, including the applicant, the NRC, other agencies, or public comments. If a new issue is revealed, the NRC staff will first analyze the issue to determine whether it is within the scope of the SLR environmental evaluation. If the NRC staff determines that the new issue is within scope, the staff will then determine the significance of the issue. To merit additional review, information must be both new and significant and must bear on the proposed action or its impacts. As stated in Chapter 3, the NRC staff did not identify any new and significant information related to Category 1 issues applicable to the proposed action of HNP SLR.

Plant-specific (Category 2) issues are those that do not meet one or more of the criteria of Category 1 issues; therefore, those issues are addressed in plant-specific environmental reviews. Chapter 3 documents the NRC staff's analysis of the Category 2 issues, and the one uncategorized issue that also requires plant-specific review, in the LR GEIS that are applicable to the proposed action of HNP SLR. The NRC staff also considered whether any environmental issues exist for HNP SLR that are not covered in the LR GEIS, but did not identify any.

1.5 Regulatory Provisions, Permits, and Required Consultations

License renewal environmental reviews may require consultation with other Federal, State, regional, and local agencies and Indian Tribes. For license renewal, the NRC staff must consider the effects of its actions on ecological resources protected under Federal statutes, including the Endangered Species Act of 1973, as amended (ESA) (TN1010), and the Magnuson-Stevens Fishery Conservation and Management Act of 1976, as amended (MSA) (TN9966). Section 106 of the National Historic Preservation Act of 1966 (TN4839), as amended (NHPA), requires Federal agencies to take into account the effects of their undertakings on historic properties. See Chapter 4 for a discussion of the agencies and persons with whom the NRC staff consulted and a description of those consultations. Additionally, Chapter 7 identifies the references and sources used in this document.

1.6 Exemptions

1.6.1 Environmental Impact Statement

An exemption from 10 CFR 51.20(b)(2), 51.25, and 51.95(c) (TN10253) is required for the NRC staff to prepare this EA, which would be used to determine whether the preparation of an EIS is necessary or whether a FONSI could be issued, instead of just preparing an EIS in the first instance as is required by these regulations. In accordance with 10 CFR 51.6, "Specific exemptions," the NRC may grant exemptions from the requirements of the regulations in 10 CFR Part 51 if it is determined that the exemptions are authorized by law and are otherwise in the public interest. Based on the previously disturbed and industrialized nature of the HNP site, findings from the NRC's 2001 environmental review for the initial renewal of the HNP operating licenses, and the absence of new and significant information since the issuance of the LR GEIS in 2024, the NRC has, upon its own initiative, determined that an exemption from the requirements to prepare an EIS in the first instance for the HNP SLR environmental review is authorized by law and otherwise in the public interest. Accordingly, the NRC staff has prepared this EA instead of immediately preparing an EIS for the HNP SLR environmental review. As discussed below, this EA, as a supplement to the LR GEIS, supports that the environmental impacts would be SMALL for each potentially affected resource area and that, therefore, a FONSI for the proposed action can be issued.

1.6.2 Environmental Justice

10 CFR Part 51 (TN10253), Subpart A, Appendix B, Table B-1, "Summary of Findings on NEPA Issues for License Renewal of Nuclear Power Plants," requires an EIS for license renewal to include an analysis for the Category 2 issue of "Environmental Justice—Impacts on minority populations, low-income populations, and Indian Tribes." Executive Order 14173 (90 FR 8633-TN11607), "Ending Illegal Discrimination and Restoring Merit-Based Opportunity," issued January 21, 2025, revoked Executive Order 12898 (59 FR 7629-TN1450), "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," issued February 11, 1994, among other things. Staff Requirements Memorandum (SRM)-COMSECY-

25-0007, “Withdrawing the Environmental Justice Policy Statement and Environmental Justice Strategy,” issued April 10, 2025, approved publication of a notice in the *Federal Register* (90 FR 17887-TN11684), which explained that in response to the policies in Executive Order 12898, the NRC had made voluntary commitments on environmental justice in its Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions (Environmental Justice Policy Statement) and its Environmental Justice Strategy (69 FR 52040-TN1009). Accordingly, with the revocation of Executive Order 12898, the NRC also withdrew its Environmental Justice Policy Statement and its Environmental Justice Strategy. Based on Executive Order 14173 and SRM-COMSECY-25-0007, and pursuant to 10 CFR 51.6 (TN10253), “Specific Exemptions,” the NRC has, upon its own initiative, determined that an exemption from the requirement to address environmental justice in this EA is authorized by law and otherwise in the public interest. Accordingly, this EA does not address that issue.

1.6.3 Cumulative Effects

The NRC regulations specified in 10 CFR 51.71(d) (TN10253) require the NRC staff to conduct a cumulative effects analysis for draft EISs. In addition, the 10 CFR Part 51, Subpart A, Appendix B, Table B-1, “Summary of Findings on NEPA Issues for License Renewal of Nuclear Power Plants,” Category 2 issue “Cumulative Effects” requires the NRC staff to include the results of a plant-specific cumulative effects analysis in EISs for license renewals. Executive Order 14300, “Ordering the Reform of the Nuclear Regulatory Commission,” Section 5(c) (90 FR 22587-TN12182), issued May 23, 2025, directs the NRC, in consultation with the Council on Environmental Quality, to revise its regulations implementing NEPA, among other things. This executive order directs that the revisions be consistent with NEPA, as amended by the Fiscal Responsibility Act of 2023 (TN9775), and Executive Order 14154 (90 FR 8353-TN11916), “Unleashing American Energy,” issued January 20, 2025. Section 102 of NEPA (TN661) only requires agencies to analyze the reasonably foreseeable environmental effects of proposed agency actions and does not include the term “cumulative.” However, the regulations in 10 CFR Part 51 still require the NRC staff to conduct cumulative effects analyses in its license renewal environmental reviews. In addition, Executive Order 14154 directs the Council on Environmental Quality to revoke its NEPA implementing regulations, among other things, including eliminating the definition of “cumulative effects” and associated guidance.

Based on NEPA Section 102, Executive Orders 14154 and 14300, and pursuant to 10 CFR 51.6 (TN10253), the NRC has, upon its own initiative, determined that an exemption from the requirements to conduct a cumulative effects analysis is authorized by law and otherwise in the public interest. Accordingly, the NRC staff does not perform such an analysis for this EA. This exemption from cumulative effects analyses only pertains to requirements in the NRC’s NEPA implementing regulations in 10 CFR Part 51; it does not affect requirements in other statutes such as the Endangered Species Act of 1973, as amended (TN1010), and the National Historic Preservation Act of 1966, as amended (TN4157).

2 THE PROPOSED FEDERAL ACTION AND THE NO-ACTION ALTERNATIVE

This chapter describes HNP and its operation, the proposed Federal action (subsequent renewal of the HNP renewed facility operating licenses), alternatives to the proposed action, the no-action alternative (not implementing the proposed action), and the environmental impacts of the proposed action as compared to those of the no-action alternative.

2.1 Nuclear Power Plant Facility and Operation

The NRC staff incorporates by reference herein the information in Section 2.2 of the ER (SNC 2025-TN12548) describing the HNP facility and its operation.

HNP is located approximately 11 miles (mi) (18 kilometers [km]) north of Baxley, Georgia on the Altamaha River, in Toombs and Appling Counties. The HNP site encompasses approximately 2,244 acres (ac) (908 hectares [ha]) of property jointly owned by GPC, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and Dalton Utilities (SNC 2025-TN12548). SNC is the licensed operator of HNP.

At HNP, SNC operates two boiling-water reactors. Units 1 and 2 began commercial operations in 1975 and 1979, respectively (NRC 2001-TN12684). The current renewed facility operating licenses for HNP, Units 1 and 2 (Nos. DPR-57 and NPF-5, respectively) expire at midnight on August 6, 2034, and June 13, 2038, respectively. Unless otherwise noted, the NRC staff drew information about the HNP facility and its operation from the ER (SNC 2025-TN12548). Figure 2-1 shows the structures within the HNP site boundary.

The ER (SNC 2025-TN12548) includes a detailed HNP site description of external appearance and setting in Chapter 2. This description is incorporated by reference herein and includes the following areas: reactor and containment systems, maintenance, inspection, and refueling activities, cooling and auxiliary water systems, power transmission systems, radioactive waste management systems, and nonradioactive waste management systems.

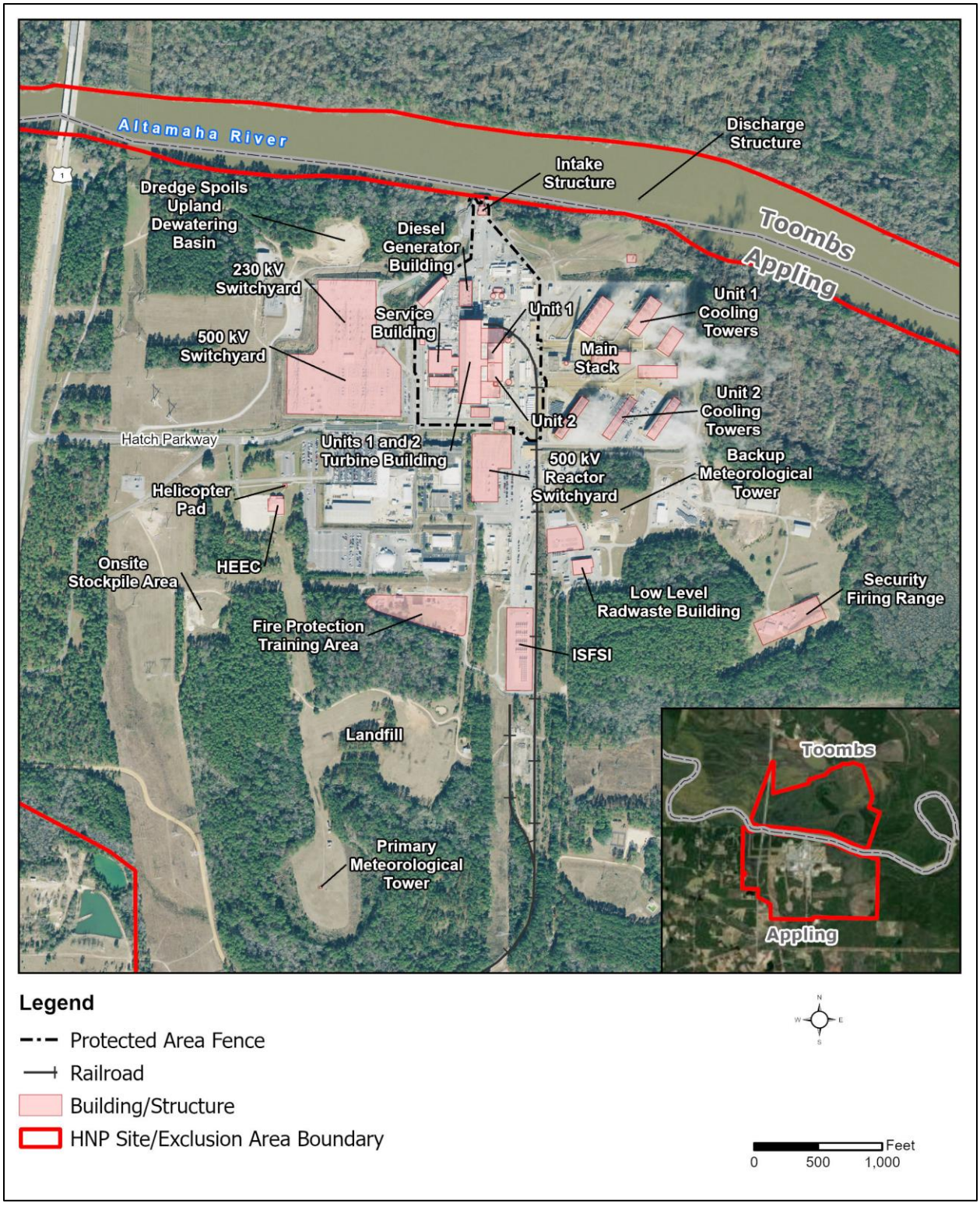

Figure 2-1 Map Showing Edwin I. Hatch Nuclear Plant, Units 1 and 2 Layout. Source: SNC 2025-TN12548.

2.2 Proposed Federal Action

As stated in Chapter 1, the NRC's proposed Federal action is to determine whether to issue subsequent renewed facility operating licenses for HNP for an additional 20 years, which would authorize SNC to operate Units 1 and 2 from August 6, 2034 and June 13, 2038, until August 6, 2054 and June 13, 2058, respectively (i.e., the SLR term).

Nuclear power plant operations during the SLR term would be the same as, or similar to, those occurring during the current license renewal term. Section 2.2 of the ER describes the general types of activities carried out during nuclear power plant operations. The ER states that there are no plans associated with SLR to modify the facility or its administrative controls other than the procedures necessary to implement the aging management programs described in the integrated plant assessment (SNC 2025-TN12548). Such programs would address structure and component aging in accordance with 10 CFR Part 54 (TN4878).

Refurbishment activities include replacement and repair of major systems, structures, and components. The major refurbishment class of activities characterized in the LR GEIS (NRC 2024-TN10161) is intended to encompass actions that typically take place only once in the life of a nuclear plant, if at all. These actions may have an impact on the environment beyond those that occur during normal plant operations and may require evaluation, depending on the type of action and the plant-specific design. In Section 2.3 of the ER (SNC 2025-TN12548), the applicant identified no SLR-related refurbishment or replacement actions that are needed to maintain the functionality of systems, structures, and components, consistent with the current licensing basis, during the proposed SLR term. Therefore, such activities are not discussed as part of the analysis of the environmental impacts of the proposed action in Chapter 3.

2.3 Alternatives

The NRC regulations at 10 CFR 51.30(a)(1)(ii) (TN10253) state that an EA shall include a brief discussion of alternatives as required by NEPA. NEPA Section 102(2)(C)(iii) requires discussion of a reasonable range of alternatives to the proposed action, including an analysis of any negative environmental impacts of not implementing the proposed action (i.e., the no-action alternative) that are technically and economically feasible and meet the purpose and need of the proposal. For license renewal, the NRC's decision-making authority is limited to deciding whether or not to issue renewed licenses for nuclear power plants; therefore, there are no alternatives to that proposed action that meet the purpose and need of the proposed action. However, as part of its analysis of the no-action alternative, the NRC staff evaluates the environmental impacts of a reasonable range of replacement power alternatives. For a replacement power alternative to be considered reasonable, it must be either (1) commercially viable on a utility scale and operational before the reactor's operating license expires, or (2) expected to become commercially viable on a utility scale and operational before the reactor's operating license expires. Comparing the environmental impacts of issuing the subsequent renewed licenses for HNP to the environmental impacts of the potential consequences of not issuing the licenses (i.e., the environmental impacts of the construction and operation of reasonable replacement power alternatives under the no-action alternative) helps inform the NRC's determination under 10 CFR 51.103(a)(5) of whether or not the adverse environmental impacts of HNP SLR are so great that preserving the option of SLR for energy-planning decision-makers would be unreasonable (TN10253). The ultimate decision about which power alternative(s) to implement, which may include the continued operation of nuclear power plants that are issued renewed licenses, falls to the power plant owners and State, utility, system, and, where authorized, Federal (other than NRC) energy-planning decision-makers.

The no-action alternative and its negative environmental impacts from the shutdown of HNP and from the construction and operation of reasonable replacement power alternatives are described in Section 2.4. For the discussion therein regarding replacement power alternatives, the NRC staff relied upon the description of replacement power sources and their environmental impacts to each resource area that would be associated with their construction and operation in Sections 2.3 and 2.4 and Appendix D of the LR GEIS (NRC 2024-TN10161) and in Sections 2.6.2 and 7.2.3 and Chapter 8 of the ER (SNC 2025-TN12548). Accordingly, that information is incorporated by reference into this EA.

2.4 No-Action Alternative

Under the no-action alternative, the NRC would not subsequently renew the HNP renewed licenses, and the reactor units would shut down on or before the current license expiration dates of August 6, 2034 and June 13, 2038, for Units 1 and 2, respectively.

After termination of reactor operations, nuclear power plant operators would initiate decommissioning in accordance with NRC regulations in 10 CFR 50.82 (TN249), “Termination of license.” The NRC’s Decommissioning GEIS (NRC 2002-TN665) describes the environmental impacts of decommissioning activities at a nuclear power plant. The analyses and findings in the Decommissioning GEIS bound the environmental impacts of most of the plant-specific decommissioning activities that would likely take place after SNC terminates reactor operations at HNP. The Decommissioning GEIS documents the evaluation of 24 environmental issues pertaining to decommissioning nuclear reactors and determined that 17 issues could be evaluated generically without plant-specific analysis. For all 17 of the issues capable of generic analysis, the Decommissioning GEIS determined that their environmental impacts would be SMALL. As part of its analysis of the negative environmental impacts of the no-action alternative, the NRC staff summarizes in Table 2-1 the “Impacts of HNP Shutdown” on each applicable resource area. The NRC staff notes that decommissioning will occur whether HNP is shut down at the end of its current renewed licenses or at the end of the SLR term 20 years later. The LR GEIS concludes that SLR would have a negligible (SMALL) effect on the impacts of terminating operations and decommissioning on all resources and that this is a Category 1 issue generic to all plants (NRC 2024-TN10161).

Termination of reactor operations would also result in the total cessation of electrical power generation at HNP. Based on the reasonable assumption that there would be a need to generate power to meet future electrical system needs, the no-action alternative (not subsequently renewing the renewed licenses) would necessitate the construction and operations of power alternatives within the GPC service territory to replace the electrical power no longer being generated by HNP. The ER identified four alternative sources of replacement power that the applicant considered, and the NRC staff agrees, to be reasonable: (1) new nuclear, (2) onsite natural gas-fired combined cycle units with carbon capture storage, (3) offsite natural gas-fired combined cycle units with carbon capture storage, and (4) a renewable combination of solar installations with battery storage and an onshore wind turbine installation (SNC 2025-TN12548). Therefore, as part of its analysis of the negative environmental impacts of the no-action alternative, in addition to the “Impacts of HNP Shutdown,” the NRC staff evaluated the “Impacts of Replacement Power Generation” related to the construction and operations of these reasonable alternative sources of replacement power and summarizes those impacts in Table 2-1.

In reaching its conclusion regarding which replacement power alternatives were reasonable and in its evaluation of the negative environmental impacts of those alternatives, the NRC staff

particularly considered the specific attributes of the replacement power alternatives as described in Sections 2.3 and 2.4 and Appendix D of the LR GEIS (NRC 2024-TN10161).

2.5 Comparison of the Environmental Impacts of the Proposed Federal Action and the No-Action Alternative

The results of the NRC staff's analysis of the environmental impacts of the proposed action and the no-action alternative are summarized in Table 2-1 and are presented so that they may be compared. As explained in the LR GEIS, the NRC generally assigns a significance level of SMALL, MODERATE, or LARGE for impacts to applicable environmental resource areas. However, for environmental resources subject to the ESA (TN1010) and the MSA (TN9966), and for historic and cultural resources subject to the NHPA (TN4839), the impact significance determination language is specific to the relevant law. The environmental impacts of the no-action alternative incorporate by reference the alternatives analysis in the ER (SNC 2025-TN12548). The NRC staff also considered the analysis and conclusions regarding the impacts associated with reasonable replacement power generation presented in Appendix D of the LR GEIS (NRC 2024-TN10161).

If the NRC does not subsequently renew the HNP renewed licenses (i.e., the no-action alternative), energy-planning decision-makers would have to choose a replacement power alternative similar to the ones evaluated in this EA. Replacement power alternatives have the potential to have greater environmental impacts in any number of the applicable resource areas. Based on the review of the proposed action and the no-action alternative, the environmentally preferred alternative is the proposed action.

Table 2-1 Comparison of Environmental Impacts of the Proposed Federal Action and the No-Action Alternative at the Edwin I. Hatch Nuclear Plant

Resource Area	Proposed Federal Action	No-Action Alternative
Land Use	SMALL	*Impacts of HNP Shutdown* SMALL. Onsite land use would remain similar to that during operations. Plant structures and other facilities would remain in place until decommissioning. Transmission lines and ROWs would remain in place after the cessation of reactor operations. *Impacts of Replacement Power Generation* SMALL to LARGE, depending on the location and type of replacement power generation. New transmission line and pipeline construction could also have potential land use impacts; use of existing infrastructure would minimize these impacts during construction.
Visual Resources	SMALL	*Impacts of HNP Shutdown* SMALL. Termination of reactor operations because the licenses are not renewed would not immediately change the visual appearance of the HNP site. The most visible structures would likely remain in place for some time during decommissioning until they are eventually dismantled. *Impacts of Replacement Power Generation* SMALL to LARGE, depending on the location and type of replacement power generation.

Resource Area	Proposed Federal Action	No-Action Alternative
Air Quality	SMALL	*Impacts of HNP Shutdown* SMALL. Permanent cessation of HNP operations would reduce overall air emissions (e.g., the SMALL air emissions from boiler, diesel generators, and vehicle traffic would be reduced). *Impacts of Replacement Power Generation* SMALL to MODERATE. Construction of replacement power generating facilities would result in temporary air quality impacts. Additionally, depending on the type of replacement power generation (i.e., fossil fuel, nuclear, renewable), air emissions from operations can be significant. New natural gas-fired combined cycle units would result in substantial new pollutant emissions. Operations of new nuclear or the combined renewable sources would have minimal emissions.
Noise	SMALL	*Impacts of HNP Shutdown* SMALL. Permanent cessation of HNP operations would result in a reduction in the otherwise SMALL noise impacts associated with cooling towers, turbines, and vehicle traffic (e.g., workers, deliveries). As site activities are reduced, the impact on ambient noise levels from the plant are expected to be lower than those from current plant operations. *Impacts of Replacement Power Generation* SMALL to MODERATE. Noise associated with replacement power generation would occur during construction. Depending on the distance between the facility site and transmission line corridor to noise-sensitive receptors, noise may be noticeable during construction. During operations of new natural gas-fired combined cycle units, noise from pipeline blowdowns could constitute a new noise source. Depending on the distance of noise-sensitive receptors to the pipeline corridor, noise from pipeline blowdowns may be noticeable. Noise from operations of new nuclear or the renewable combination would likely be SMALL. Noise associated with operations of the wind portion of the renewable combination could be noticeable and would depend on the location, layout, and proximity of wind turbines to noise-sensitive receptors.
Geologic Environment	SMALL	*Impacts of HNP Shutdown* SMALL. There would be few or no incremental impacts on site geology and soils associated with the shutdown of HNP. In this case, before beginning decommissioning activities, little or no new ground disturbance would occur at the plant site while operational activities are being reduced and eventually terminated. *Impacts of Replacement Power Generation* SMALL to MODERATE. Ground disturbance would occur during construction of replacement power generating facilities, regardless of whether the new facilities are sited on a brownfield or greenfield site and regardless of the type of facility. Depending on the location of the facilities, impacts to prime or important farmlands could occur.

Resource Area	Proposed Federal Action	No-Action Alternative
Water Resources	SMALL	*Impacts of HNP Shutdown* SMALL. Water withdrawals would greatly decrease and eventually cease. Stormwater would continue to be discharged from the site, but wastewater discharges would be reduced considerably. *Impacts of Replacement Power Generation* SMALL to LARGE. Impacts would occur associated with the construction of all types of replacement power generating facilities. Use of existing infrastructure would minimize construction impacts. Operations of new nuclear or natural gas-fired combined cycle facilities could have cooling water requirements similar to those of the existing HNP and impacts would vary depending on the location of the facilities, whereas operations of the renewable combination would have SMALL impacts. Impacts from operations would be minimized by adhering to applicable water use and discharge regulations and permit conditions, by adopting best management practices, and by following applicable guidance procedures.
Terrestrial Resources	SMALL	*Impacts of HNP Shutdown* SMALL. Much of the operational noise and human activity at HNP would cease, thereby reducing the already SMALL disturbances to wildlife in forest cover and other natural vegetation on and near the site. Reducing human activity and frequency of operational noise may constitute minor beneficial effects on wildlife inhabiting nearby natural habitats. *Impacts of Replacement Power Generation* SMALL to LARGE. Impacts would depend on the species and habitats present at the proposed site, facility footprint, and types of replacement power generation and utility corridors. Construction and operational impacts would be minimized by use of existing infrastructure, adopting best management practices, and adhering to applicable regulations and permit conditions.
Aquatic Resources	SMALL	*Impacts of HNP Shutdown* SMALL. Some withdrawal of water would continue during the shutdown period to provide cooling to spent fuel in the spent fuel pool until that fuel could be transferred to dry storage. The amount of water withdrawn for these purposes would be a small fraction of water withdrawals during operations (which are already SMALL), would decrease over time, and would likely end within the first few years following shutdown. The reduced demand for cooling water would substantially decrease the effects of impingement, entrainment, and thermal effluent on aquatic organisms, and these effects would entirely cease following the transfer of spent fuel to dry storage. *Impacts of Replacement Power Generation* SMALL to MODERATE. Impacts would depend on the location and footprint of the replacement power generating facilities and would be minimized through the use of best management practices and adherence to applicable regulations and permits.

Resource Area	Proposed Federal Action	No-Action Alternative
		Construction impacts would be further minimized through the use of existing infrastructure.
Federally Protected Ecological Resources	Varies by specific protected species and habitat[(a)]	*Impacts of HNP Shutdown* Impacts on federally protected ecological resources would depend on the specific shutdown activities, the action area of those activities, and whether any listed species or critical habitats are present in that area when the no-action alternative is implemented. *Impacts of Replacement Power Generation* Impacts on federally protected ecological resources would depend on various factors including site selection, current land uses, planned construction activities, temporary and permanent structure locations and parameters, the timeline of the replacement power generating facility, and the federally protected ecological resources present in the action area. Consultation with appropriate agencies would be conducted and would minimize impacts. Additionally, the requirements for consultation under the ESA, MSA, and NMSA would depend on whether Federal permits or authorizations are required to implement each replacement power generating facility.
Historic and Cultural Resources	No historic properties affected	*Impacts of HNP Shutdown* No effect on historic properties or historic and cultural resources. Shutdown activities would not impact such properties or resources. *Impacts of Replacement Power Generation* Impacts would depend on the presence of historic properties or historic and cultural resources on sites selected for replacement power generating facilities and would likely be less for brownfield sites. Compliance with best management practices and Section 106 of the NHPA, as applicable, would minimize these impacts.
Socioeconomics	SMALL	*Impacts of HNP Shutdown* SMALL to LARGE. The loss of jobs, income, and tax revenue would have an immediate, noticeable socioeconomic impact. As jobs are eliminated, some, but not all, workers could leave. Income from the buying and selling of goods and services needed to maintain the nuclear power plant also would be reduced. In addition, loss of tax revenue could affect the availability of public services. If workers and their families move away, increased vacancies and reduced demand for housing would likely cause property values to fall. *Impacts of Replacement Power Generation* SMALL to MODERATE. Socioeconomic impacts from the construction and operations of replacement power generating facilities would depend on the location, type, and size of the facilities and could result in added services jobs, as well as indirect impacts on taxes, housing, land use, and public services in the areas surrounding the facilities.

Resource Area	Proposed Federal Action	No-Action Alternative
Human Health	SMALL and UNCERTAIN[b]	*Impacts of HNP Shutdown* SMALL. Human health risks following nuclear power plant shutdown would be smaller than the SMALL risks during operations. The reactor units, which currently operate within regulatory limits, would emit less radioactive gaseous, liquid, and solid material to the environment. In addition, following shutdown, the variety of potential accidents at the nuclear power plant (radiological or industrial) would be reduced to a limited set associated with shutdown events and fuel handling and storage. *Impacts of Replacement Power Generation* SMALL and UNCERTAIN. Construction and operations of replacement power generating facilities could result in human health impacts. However, those impacts would be mitigated by adherence to best management practices, safety standards, and applicable regulations. Given the regulatory oversight exercised by Federal and State agencies, the NRC staff concludes that the human health impacts from construction and operations of the replacement power generating facilities would be SMALL, except for "Chronic effects of electromagnetic fields (EMFs)," for which the impacts are UNCERTAIN. Human health impacts are discussed in Section D.4.8 of the LR GEIS (NRC 2024-TN10161).
Waste Management	SMALL[c]	*Impacts of HNP Shutdown* SMALL to MODERATE. Continued at-reactor storage of spent fuel would generate much less low-level, mixed, and nonradioactive waste than an operating facility. Any replacement of the ISFSI, repackaging of spent fuel canisters, and construction, operation, and replacement of dry transfer system would generate a small fraction of the low-level waste generated during reactor decommissioning. The quantity of mixed waste generated from storage would be a small fraction of that generated during the licensed life of the reactor. Although large amounts of nonradioactive waste would be generated by any replacement of dry cask storage facilities, it would still be less than the waste generated during reactor decommissioning and would not likely have a noticeable impact on local or regional landfill capacity and operations. It is expected that sufficient low-level waste disposal capacity would be made available when needed. A relatively small quantity of mixed waste would be generated from storage, and proper management and disposal regulations would be followed. The amount of nonradioactive waste that would be generated and impacts to nonradioactive waste landfill capacity are difficult to accurately estimate for the storage timeframe. *Impacts of Replacement Power Generation* SMALL. The amount and types of waste generated would depend on the size and type of the replacement power generating facility. Impacts would be minimized by adherence to best management practices and proper onsite management and offsite disposal management.

Resource Area	Proposed Federal Action	No-Action Alternative
Greenhouse Gas Emissions	SMALL	*Impacts of HNP Shutdown* SMALL. Shutdown of HNP would result in a reduction to the otherwise SMALL GHG emissions from operations of the facility. *Impacts of Replacement Power Generation* SMALL. GHG emissions sources during construction of replacement power generating facilities would be similar to the construction of an industrial facility and include construction equipment, engine exhaust, and worker and delivery vehicles. GHG emissions from operations of the new nuclear alternative would be comparable to those from operations of HNP. GHG emissions associated with operation of the renewable combination (wind and solar) would be negligible because no direct fossil fuels are burned to generate electricity. The NGCC alternative would be equipped with carbon capture and storage that would capture 90 percent of carbon dioxide(d).

EMF = electromagnetic field; ESA = Endangered Species Act of 1973, as amended; GHG = greenhouse gas; ISFSI = independent spent fuel storage installation; LR GEIS = *Generic Environmental Impact Statement for License Renewal of Nuclear Plants*, Final Report; MSA = Magnuson-Stevens Fishery Conservation and Management Act of 1976, as amended; NGCC= natural gas combined cycle; NMSA = National Marine Sanctuaries Act; NRC = U.S. Nuclear Regulatory Commission; ROW = right-of-way; SLR = subsequent license renewal.

(a) For a full listing of effect determinations for ecological resources protected under the ESA, see Table 3-3 and Table 3-4; the proposed action has no impact on ecological resources protected under the MSA and the NMSA.

(b) The chronic effects of electromagnetic fields on human health associated with operating nuclear power and other electricity generating plants are uncertain as discussed in Section 3.8.

(c) NUREG-2157, *Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel* (NRC 2014-TN4117), discusses the environmental impacts of spent fuel storage beyond reactor operations.

(d) Consideration of GHG emissions is presented in Table 7.2-1 of the ER (SNC 2025-TN12548).

3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

This section of the EA provides a brief discussion of the environmental impacts of the proposed Federal action of determining whether to issue subsequent renewed facility operating licenses for HNP, Units 1 and 2 for an additional 20 years of operation. The LR GEIS (NRC 2024-TN10161) identifies 80 environmental issues, divided into 59 Category 1 (generic to all or a distinct subset of plants) issues, 20 Category 2 (plant-specific) issues, and 1 uncategorized issue, to be evaluated, as applicable, for the license renewal of nuclear plants. Those issues applicable to HNP SLR are discussed below, either generically or on a site-specific basis, as appropriate, and, based on that discussion, assigned an environmental impact significance level of SMALL, MODERATE, or LARGE, as defined in the NRC's regulations, or, as applicable, the appropriate resource-specific effects or impact definitions from environmental laws.

3.1.1 Category 1 Issues

For applicable Category 1 (generic to all or a distinct subset of plants) issues, the NRC staff relies on the analysis in the LR GEIS (NRC 2024-TN10161) unless new and significant information has been identified.

The NRC staff conducted an independent, confirmatory review consistent with NUREG-1555, Supplement 1, Revision 2, *Standard Review Plans for Environmental Reviews for Nuclear Power Plants: Operating License Renewal*, for identifying new and significant information (NRC 2024-TN10251), which included, but was not limited to, the following:

- review of an applicant's ER (SNC 2025-TN12548) and the process described therein for discovering and evaluating the significance of new information
- audit with the applicant
- review of environmental quality standards and regulations
- coordination with Federal, State, and local environmental protection and resource agencies and Indian Tribes
- a review of technical literature

As a result of this review, the NRC staff did not identify any new and significant information for applicable Category 1 issues. Therefore, the NRC staff concluded that no additional plant-specific evaluation was required for these issues. These issues, the related sections of the LR GEIS, and the impact findings are provided in Table 3-1. The NRC staff adopts the conclusions of the LR GEIS for these issues in this EA.

Table 3-1 Applicable Category 1 (Generic) Issues for Edwin I. Hatch Nuclear Plant

Environmental Category – Issue	LR GEIS Section	Impact Finding
Land Use – Onsite land use	4.2.1.1.1	SMALL
Land Use – Offsite land use	4.2.1.1.2	SMALL
Visual Resources – Aesthetic impacts	4.2.1.2.1	SMALL

Environmental Category – Issue	LR GEIS Section	Impact Finding
Air Quality – Air quality impacts	4.3.1.1.1	SMALL
Air Quality – Air quality effects of transmission lines	4.3.1.1.2	SMALL
Noise – Noise impacts	4.3.1.2.1	SMALL
Geologic Environment – Geology and soils	4.4.1.1	SMALL
Surface Water Resources – Surface water use and quality (non-cooling system impacts)	4.5.1.1.1	SMALL
Surface Water Resources – Altered current patterns at intake and discharge structures	4.5.1.1.2	SMALL
Surface Water Resources – Scouring caused by discharged cooling water	4.5.1.1.5	SMALL
Surface Water Resources – Discharge of metals in cooling system effluent	4.5.1.1.6	SMALL
Surface Water Resources – Discharge of biocides, sanitary wastes, and minor chemical spills	4.5.1.1.7	SMALL
Surface Water Resources – Effects of dredging on surface water quality	4.5.1.1.10	SMALL
Surface Water Resources – Temperature effects on sediment transport capacity	4.5.1.1.11	SMALL
Groundwater Resources – Groundwater contamination and use (non-cooling system impacts)	4.5.1.2.1	SMALL
Groundwater Resources – Groundwater quality degradation resulting from water withdrawals	4.5.1.2.5	SMALL
Terrestrial Resources – Exposure of terrestrial organisms to radionuclides	4.6.1.1.2	SMALL
Terrestrial Resources – Cooling tower impacts on terrestrial plants	4.6.1.1.4	SMALL
Terrestrial Resources – Bird collisions with plant structures and transmission lines	4.6.1.1.5	SMALL
Terrestrial Resources – Transmission line right-of-way (ROW) management impacts on terrestrial resources	4.6.1.1.7	SMALL
Terrestrial Resources – Electromagnetic fields effects on terrestrial plants and animals	4.6.1.1.8	SMALL
Aquatic Resources – Impingement and entrainment of aquatic organisms	4.6.1.2.2	SMALL
Aquatic Resources – Entrainment of phytoplankton and zooplankton	4.6.1.2.3	SMALL
Aquatic Resources – Effects of thermal effluents on aquatic organisms	4.6.1.2.5	SMALL
Aquatic Resources – Infrequently reported effects of thermal effluents	4.6.1.2.6	SMALL
Aquatic Resources – Effects of nonradiological contaminants on aquatic organisms	4.6.1.2.7	SMALL
Aquatic Resources – Exposure of aquatic organisms to radionuclides	4.6.1.2.8	SMALL
Aquatic Resources – Effects of dredging on aquatic resources	4.6.1.2.9	SMALL
Aquatic Resources – Non-cooling system impacts on aquatic resources	4.6.1.2.11	SMALL
Aquatic Resources – Impacts of transmission line right-of-way (ROW) management on aquatic resources	4.6.1.2.12	SMALL

Environmental Category – Issue	LR GEIS Section	Impact Finding
Socioeconomics – Employment and income, recreation, and tourism	4.8.1.1	SMALL
Socioeconomics – Tax revenue	4.8.1.2	SMALL
Socioeconomics – Community services and education	4.8.1.3	SMALL
Socioeconomics – Population and housing	4.8.1.4	SMALL
Socioeconomics – Transportation	4.8.1.5	SMALL
Human Health – Radiation exposures to plant workers	4.9.1.1.1	SMALL
Human Health – Radiation exposures to the public	4.9.1.1.1	SMALL
Human Health – Chemical hazards	4.9.1.1.2	SMALL
Human Health – Microbiological hazards to plant workers	4.9.1.1.3	SMALL
Human Health – Physical occupational hazards	4.9.4.1.5	SMALL
Postulated Accidents – Design-basis accidents	4.9.1.2.1	SMALL
Postulated Accidents – Severe accidents	4.9.1.2.1	SMALL
Waste Management – Low-level waste storage and disposal	4.11.1.1	SMALL
Waste Management – Onsite storage of spent nuclear fuel	4.11.1.2	SMALL
Waste Management – Offsite radiological impacts of spent nuclear fuel and high-level waste disposal	4.11.1.3	(a)
Waste Management – Mixed-waste storage and disposal	4.11.1.4	SMALL
Waste Management – Nonradioactive waste storage and disposal	4.11.1.5	SMALL
Greenhouse Gas Emissions and Climate Change – Greenhouse gas impacts on climate change	4.12.1	SMALL
Uranium Fuel Cycle – Offsite radiological impacts—individual impacts from other than the disposal of spent fuel and high-level waste	4.14.1.5	SMALL
Uranium Fuel Cycle – Offsite radiological impacts—collective impacts from other than the disposal of spent fuel and high-level waste	4.14.1.5	(b)
Uranium Fuel Cycle – Nonradiological impacts of the uranium fuel cycle	4.14.1.5	SMALL
Uranium Fuel Cycle – Transportation	4.14.1.5	SMALL
Termination of Nuclear Power Plant Operations and Decommissioning – Termination of plant operations and decommissioning	4.14.2.1	SMALL

CFR = *Code of Federal Regulations*; NEPA = National Environmental Policy Act of 1969, as amended; ROW = right-of-way.

(a) The ultimate disposal of spent fuel in a potential future geologic repository is a separate and independent licensing action that is outside the regulatory scope of this review. Per 10 CFR Part 51 (TN10253), Subpart A, the Commission concludes that the impacts presented in NUREG-2157 (NRC 2014-TN4117) would not be sufficiently large to require the NEPA conclusion, for any plant, that the option of extended operation under 10 CFR Part 54 (TN4878) should be eliminated. Accordingly, while the Commission has not assigned a single level of significance for the impacts of spent nuclear fuel and high-level waste disposal, this issue is considered generic to all nuclear power plants.

(b) There are no regulatory limits applicable to collective doses to the general public from fuel cycle facilities. The practice of estimating health effects on the basis of collective doses may not be meaningful. All fuel cycle facilities are designed and operated to meet the applicable regulatory limits and standards. Per 10 CFR Part 51 (TN10253), Subpart A, the Commission concludes that the collective impacts are acceptable in that these impacts would not be sufficiently large to require the NEPA conclusion, for any plant, that the option of extended operation under 10 CFR Part 54 should be eliminated.

Sources: Table B-1 in Appendix B to Subpart A of 10 CFR Part 51-TN10253; NRC 2024-TN10161.

3.1.2 Category 2 Issues

For applicable Category 2 (plant-specific) issues (see Table 3-2), which are not bound or generically dispositioned by the LR GEIS and require a plant-specific review, the NRC staff first defines the affected environment as the environment that currently exists at and around the HNP site. Because this environment is at least partially the result of past construction and nuclear power plant operations, the NRC staff's analyses considered the nature and impacts of past and ongoing actions and how, together, these actions have shaped the current environment. The effects of ongoing reactor operations at the site have become well established as environmental conditions have adjusted to the presence of the facility. Where appropriate, the NRC staff summarized referenced information (incorporated information by reference) in this EA. This allows the NRC staff to focus on new and potentially significant information identified since previous NEPA documentation (e.g., the 2001 initial license renewal supplemental EIS [NRC 2001-TN12684] and the 2014 license amendment EA/FONSI [NRC 2014-TN12700]) became available for HNP. The NRC staff also considered whether any environmental issues exist for HNP SLR that are not covered in the LR GEIS, but did not identify any. Finally, the NRC staff discusses the environmental impacts of the exemptions that the NRC granted as part of this environmental review.

Table 3-2 Applicable Category 2 (Plant-specific) Issues for Edwin I. Hatch Nuclear Plant

Environmental Category – Issue	LR GEIS Section	Impact Finding[(a)]
Surface Water Resources – Surface water use conflicts (plants with cooling ponds or cooling towers using makeup water from a river)	4.5.1.1.9	SMALL
Groundwater Resources – Groundwater use conflicts (plants that withdraw more than 100 gpm)	4.5.1.2.3	SMALL
Groundwater Resources – Groundwater use conflicts (plants with closed-cycle cooling systems that withdraw makeup water from a river)	4.5.1.2.4	SMALL
Groundwater Resources – Radionuclides released to groundwater	4.5.1.2.7	SMALL
Terrestrial Resources – Non-cooling system impacts on terrestrial resources	4.6.1.1.1	SMALL
Terrestrial Resources – Water use conflicts with terrestrial resources (plants with cooling ponds or cooling towers using makeup water from a river)	4.6.1.1.6	SMALL
Aquatic Resources – Water use conflicts with aquatic resources (plants with cooling ponds or cooling towers using makeup water from a river)	4.6.1.2.10	SMALL
Federally Protected Ecological Resources – Endangered Species Act: federally listed species and critical habitats under U.S. Fish and Wildlife Service jurisdiction[(b)]	4.6.1.3.1	See Section 3.6 of this EA
Federally Protected Ecological Resources – Endangered Species Act: federally listed species and critical habitats under National Marine Fisheries Service jurisdiction[(b)]	4.6.1.3.2	See Section 3.6 of this EA

Environmental Category – Issue	LR GEIS Section	Impact Finding[(a)]
Historic and Cultural Resources – Historic and cultural resources	4.7.1	See Section 3.7 of this EA
Human Health – Microbiological hazards to the public	4.9.1.1.3	SMALL
Human Health – Electromagnetic fields (EMFs)[(c)]	4.9.1.1.4	See Section 3.8 of this EA
Human Health – Electric shock hazards	4.9.1.1.5	SMALL
Greenhouse Gas Emissions and Climate Change – Climate change impacts on environmental resources	4.12.2	See Section 3.9 of this EA

LR GEIS = NUREG-1437, Revision 2, *Generic Environmental Impact Statement for License Renewal of Nuclear Plants*.

(a) Impact determinations for Category 2 issues based on findings described in Sections 3.2 through 3.9, as applicable, for the proposed action.

(b) No Essential Fish Habitat or National Marine Sanctuaries occur within the affected area for this proposed action; therefore, the NRC staff has determined that the proposed action would have no effect on these resources.

(c) This issue was not designated as Category 1 or Category 2 and is discussed in Section 3.8.

Sources: Table B-1 in Appendix B to Subpart A of 10 CFR Part 51-TN10253; NRC 2024-TN10161.

The NRC staff's evaluation of the reasonably foreseeable environmental impacts of the proposed Federal action (HNP SLR) includes the following:

- impacts associated with the continued operations of HNP during the SLR term
- impacts of postulated accidents (design-basis accidents and severe accidents)
- resource commitments associated with the proposed Federal action, including unavoidable adverse impacts, the relationship between short-term use and long-term productivity, and irreversible and irretrievable commitment of resources
- new and potentially significant information about environmental issues related to the impacts of continued operations during the SLR term

The NRC staff's independent evaluation of the environmental impacts associated with the applicable Category 2 issues is included in Sections 3.2 through 3.9. Where appropriate, the NRC staff has considered in its analysis of Category 2 issues reasonably foreseeable actions or projects and relevant ongoing environmental trends. NUREG-1555, Supplement 1, Revision 2 (NRC 2024-TN10251) describes the NRC staff's analysis approach in detail for the Category 2 issues. For the purposes of its Category 2 analyses, the NRC staff assumes that the baseline condition of the resource is as it occurs today.

3.1.3 Environmental Impacts of the Exemptions

The NRC staff considered the environmental impacts of the exemptions that the NRC granted as part of this environmental review. The exemptions and the need for the exemptions are discussed in Section 1.6. The NRC staff finds that there would be no environmental impacts resulting from granting these exemptions because they only have to do with how the staff conducts its environmental review. The exemptions do not increase the probability or consequences of radiological accidents. No changes will be made to the facility buildings or site property or to plant operations as a result of the exemptions. Accordingly, there are no changes in the types or amounts of effluents that may be released and no impacts to occupational or public radiation exposure from the exemptions. The exemptions do not authorize SNC to perform any land-disturbing activities that could affect land use, soils and geology, water resources, ecological resources, or historic and cultural resources. In addition, there would be

no effect on socioeconomic conditions in the region and no air quality impacts from the exemptions. The alternative to granting the exemptions would be to not grant the exemptions. Because the exemptions have to do with the NRC staff's environmental review process, the environmental impacts of the alternative of not granting them would be similar to the environmental impacts of granting them. No agencies or persons were consulted and any applicable sources are identified in Section 1.6. Based on this assessment, the NRC staff has made a FONSI, concluding that the granting of the exemptions will not have a significant effect on the quality of the human environment. Accordingly, the NRC staff has determined not to prepare an EIS regarding the granting of the exemptions.

3.2 Surface Water Resources

3.2.1 Affected Environment

HNP is located within the Atlantic Coastal Plain physiographic province, approximately 11 mi (17.7 km) north of Baxley, Georgia. As shown in Figure 2-1, HNP is located along the south bank of the Altamaha River at approximately river mile 112. The Altamaha River, and its contributory streams, the Oconee and Ocmulgee, which join to form the Altamaha approximately 20 river miles (32.2 km) upstream and west of the site, are the dominant surface hydrological features of the site region. The Altamaha River is approximately 500 feet (ft) (150 meters [m]) wide and a maximum of 30 ft (9 m) deep at HNP. The shoreline near HNP and immediately downstream for several miles is characterized by steep bluffs, floodplain forests, and sandbars (79 FR 21487-TN12689). The Altamaha River is fully contained within the boundaries of the State and discharges to the Atlantic Ocean near Darien, Georgia. The current HNP National Pollutant Discharge Elimination System (NPDES) permit fact sheet states that the designated water use for the Altamaha River in the HNP vicinity is fishing.

U.S. Geological Survey (USGS) gauge 02225000 with a contributing drainage area of 11,600 mi^2 (30,043 km^2) is located approximately 2,750 ft (838 m) upstream from the HNP intake structure (SNC 2024-TN12690, SNC 2024-TN12691, SNC 2024-TN12692). Figure 3-1 presents the average annual flow measured at this gauge station for water years 1971–2023. The mean annual discharge over this time period is approximately 11,100 cubic feet per second (cfs) (314 cubic meters per second [m^3/s]) (USGS 2026-TN12693). On average, March is the high-flow month, and September is the low-flow month at this location, with flows of 22,600 and 4,750 cfs (640 and 134 m^3/s), respectively (USGS 2026-TN12693).

HNP uses a closed-loop, mechanical draft cooling tower (MDCT) system for main condenser cooling that withdraws makeup water from and discharges to the Altamaha River via shoreline intake and offshore discharge structures. As described in the ER Section 3.6.1.2 (SNC 2025-TN12548), in addition to cooling water, industrial process wastewater, and stormwater, HNP has an underdrain system (see Figure 3-1) that collects perched groundwater from the plant area and discharges it to the Altamaha River via monitored outfalls.

As shown in ER Figure 3.6-2, the Federal Emergency Management Agency has delineated flood hazard areas in the vicinity of the HNP site. According to the Federal Emergency Management Agency analysis, HNP's active plant area is designated as Zone X (unshaded), which represents a minimal flood hazard area. This area lies outside the 500-year flood level. Areas along the Altamaha River north of the power block, areas east and northeast of the plant area, and areas along Bay Creek are located within the 100-year floodplain (Zone A).

Additional details regarding the affected environment related to surface water resources are provided in ER Section 3.6.1 (SNC 2025-TN12548).

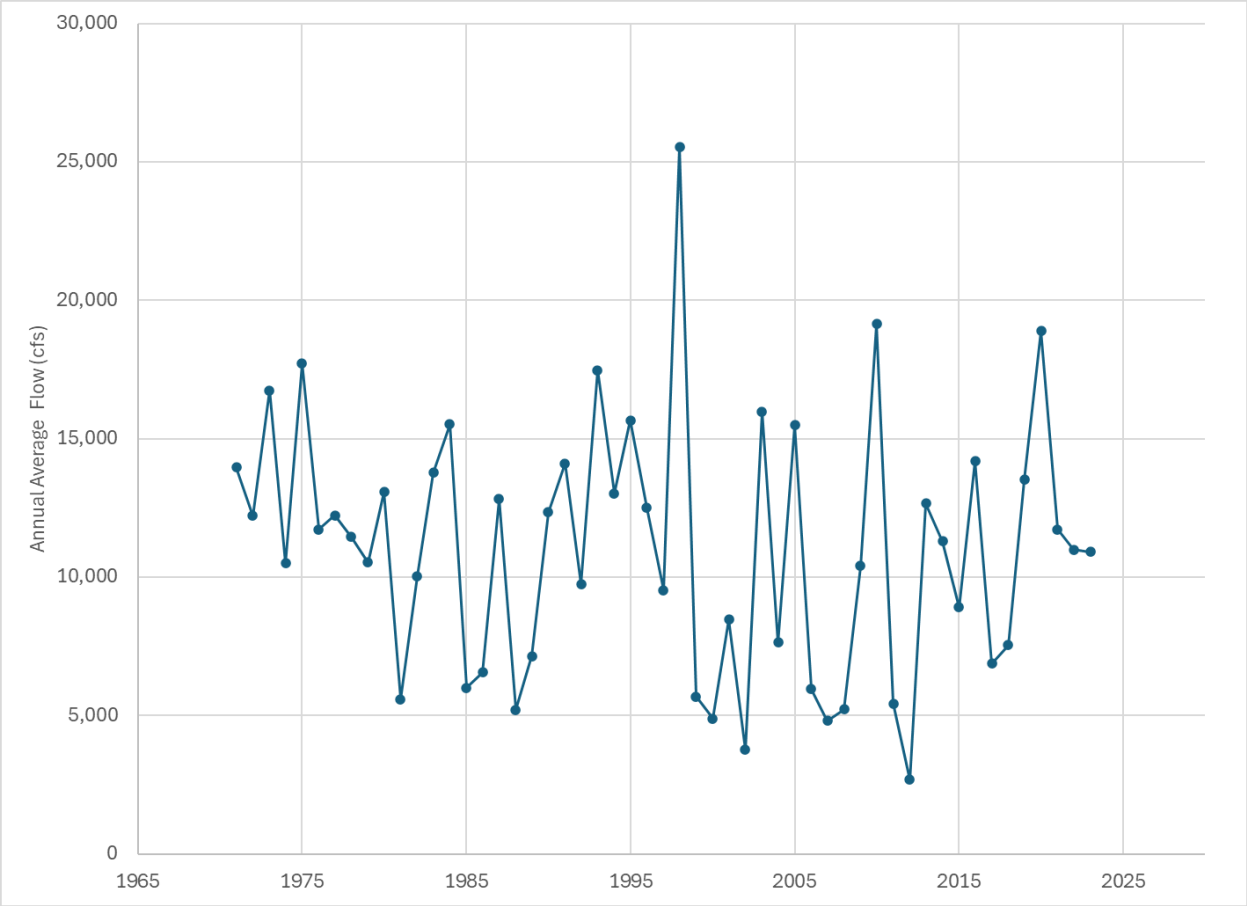

Figure 3-1 Annual Average Altamaha River Flow Near Baxley, Georgia. Source: USGS 2026-TN12693.

3.2.2 Environmental Consequences: Surface Water Use Conflicts (Plants with Cooling Ponds or Cooling Towers Using Makeup Water from a River)

Section 4.5.1.1 of the LR GEIS (NRC 2024-TN10161) provides background information for this Category 2 issue, which is incorporated herein by reference. Surface Water Withdrawal Permit No. 001-0690-01 allows SNC to withdraw water from the Altamaha River at a 24-hour maximum rate of 103.6 million gallons per day (Mgd) (393 million liters per day [MLd]) and a monthly average rate of 85.0 Mgd (322 MLd) (SNC 2025-TN12548). SNC is required to submit monthly and yearly reports to the Georgia Environmental Protection Division (GA EPD) showing daily raw water withdrawals associated with this permit. Between 2019 and 2023, HNP had an average annual withdrawal rate from the Altamaha River of approximately 62.4 Mgd (236 MLd). Surface water withdrawals primarily serve the cooling system. Groundwater wells supply site potable and sanitary water, as well as some plant process water.

The primary consumptive use of surface water at HNP is from evaporative and drift losses from the operation of its eight MDCTs. During 2022 and 2023, HNP's consumption rate averaged approximately 54 cfs (1.5 m^3/s or 35 Mgd). This consumptive use is equivalent to about 0.5 percent of the Altamaha River's average annual flow at the HNP site. The NRC staff also evaluated the impacts of continued HNP operations on low-flow conditions in the Altamaha River. The lowest annual mean flow recorded is approximately 2,700 cfs (76.4 m^3/s) (USGS

2026-TN12693) and the daily 90-percent exceedance flow (Q90) is 2,270 cfs (64.3 m^3/s) for the period of record (USGS 2026-TN12694). The Q90 flow value is one indicator of hydrologic drought as it signifies a rate of stream flow that is equaled or exceeded 90 percent of the time. Compared to these measures, HNP's current consumptive water use (i.e., 54 cfs [1.5 m^3/s]) represents 2.0 and 2.4 percent flow reductions, respectively, downstream of the HNP site. HNP's consumptive water use is not expected to increase during the SLR term (SNC 2025-TN12548*).*

The 2023 Altamaha Regional Water Plan (GWP 2023-TN12695) presents forecasted water resource needs in the Altamaha region from the years 2020 to 2060. The report states that its principal focus is to identify where and when there may be challenges in meeting the anticipated water needs of instream and offstream use. The report also discusses the results of the future conditions modeling that shows, in general, that there are sufficient surface water supplies to meet current and forecasted surface water supply needs. The report further states that while modeling analyses indicate that surface water challenges may exist in dry years within the region, the HNP site is not a forecasted challenge area.

To comply with its surface water withdrawal permit and State regulations, SNC developed and implemented water conservation and drought contingency plans. These plans trigger actions based on plant service water pump well levels. Potential contingency plan actions include coordination with regulatory agencies to release upstream water from Lake Sinclair and Lake Oconee.

In 2014, the NRC issued an EA that evaluated a proposed HNP technical specifications revision of the minimum water level in the plant service water (PSW) system pump well. This revision was requested by SNC to avoid the potential for a plant shutdown due to low river levels. Specifically, the EA evaluated the environmental impacts of revising the minimum water level in the PSW pump well from 60.7 ft (18.5 m) to 60.5 ft (18.4 m) mean sea level (MSL), which corresponds to a stream flow of 718 cfs (20.3 m^3/s). This stream flow value is well below the minimum recorded daily flow of 1,140 cfs and the Q90 flow value of approximately 2,270 cfs at USGS gauge 02225000 (USGS 2026-TN12694). The NRC concluded in its EA that the requested revision to the minimum required water level in the PSW system pump well would have no significant impact on surface water resources (79 FR 21487-TN12689).

As discussed above, HNP maintains drought and conservation plans and its consumptive use of the Altamaha River is a small percentage of historical flows, even under low-flow conditions. Moreover, no municipal, industrial, or agricultural uses of the Altamaha River have been identified downstream of HNP (SNC 2024-TN12690, SNC 2024-TN12691, SNC 2024-TN12692). Therefore, the NRC staff concludes that the potential impacts from surface water use conflicts due to HNP's continued withdrawals and consumptive water use would be SMALL and not significant during the SLR term.

3.3 Groundwater Resources

3.3.1 Affected Environment

The NRC staff reviewed Sections 3.5 and 3.6 of the ER (SNC 2025-TN12548) and Chapter 2.5 of the HNP Final Safety Analysis Report (FSAR) (SNC 2024-TN12637, SNC 2024-TN12638) and evaluated other information related to the hydrogeology of the HNP site and groundwater resources during the environmental site audit and review of other available information as cited in this EA.

Site Hydrogeology

The HNP site is in the Atlantic Coastal Plain physiographic province, a broad, relatively flat region encompassing the southern half of Georgia. Coastal plain geology consists of unconsolidated sediments, limestone, and sandstone ranging in age from late Cretaceous to Holocene. These sediments thicken from the Fall Line, about 80 mi (129 km) northwest of the HNP site, to the Atlantic Ocean, with a seaward dip of 5 ft/mi to 50 ft/mi (SNC 2025-TN12548). The coastal plain sedimentary formations lie above the Precambrian to Paleozoic crystalline bedrock that outcrops west of the Fall Line (USGS 1990-TN6648). At the HNP site, the crystalline bedrock is at a depth of more than 4,000 ft (1,219 m) and is overlain by about 3,500 ft (1,100 m) of Tertiary and Cretaceous sedimentary rocks (primarily limestone and sandstone) and about 500 ft (150 m) of Holocene to Miocene gravel, sand, silt, and clay (SNC 2025-TN12548).

A generalized hydrogeologic column at the HNP site is shown in Figure 3-2. A sequence of primarily Oligocene and Eocene-age limestone formations comprise the Floridan aquifer system, a principal source of water in the HNP region. The Floridan aquifer system in the vicinity of the HNP site is about 800 ft to 1,000 ft (245 m to 305 m) thick and is confined by more than 100 ft (30 m) of low permeability sediments of the Hawthorn Group (Williams and Kuniansky 2015-TN4577; SNC 2024-TN12638, SNC 2025-TN12548). The top of the Floridan aquifer system was locally identified at an elevation of about −105 ft (−32.0 m) MSL and includes sandy limestone and clayey sands comprising the lowest portion of the Hawthorn (SNC 2024-TN12638). Recharge to the Floridan aquifer system occurs where the formations outcrop, about 60 mi (97 km) northwest of the HNP site (SNC 2024-TN12638).

Hawthorn Group sediments at the HNP site were subdivided into six units, as shown in Figure 3-2. Most of the lowest two units directly confine the Floridan aquifer system; estimated permeability of the confining unit is about six orders of magnitude lower than the permeability of the highly transmissive underlying aquifer. A layer of moderately permeable sediments was identified within the middle units of the Hawthorn that functions as a minor confined aquifer. Recharge to this aquifer occurs locally where the units are exposed. The uppermost unit of the Hawthorn functions as the surficial (unconfined) aquifer at the HNP site. Recharge to the surficial aquifer is from the infiltration of precipitation.

Geologic units not shown in Figure 3-2 include sands and gravels of the Pleistocene/Pliocene Brandywine formation that cap the hills in the HNP site vicinity above an elevation of about 165 ft (50.3 m) MSL, including an area west of the plant. Perched groundwater may occur within the Brandywine sediments due to the occurrence of high clay content at the top of the uppermost Hawthorne unit that forms discontinuous, relatively low permeability zones. In addition, Quaternary alluvial deposits occur within the Altamaha River floodplain. These sand, gravel, and clay deposits are up to 55 ft (16.8 m) thick, generally occur below an elevation of 75 ft (22.9 m), and are hydraulically connected to the Hawthorn minor confined aquifer.

Geologic Formation/Age	Unit	Thickness (ft)	Lithologic Description	Hydrologic Unit/Function	Elevation at Top of Unit (ft MSL)	Permeability (ft/min)
Hawthorn Group (Miocene) + undifferentiated Pliocene	Unit 6	45–50	Clayey sand, sandy clay, and gravel	Unconfined (surficial) aquifer	Ground surface*	1.4×10^{-3}
	Unit 5	20–40	Fine to coarse sand and sandy clay, locally cemented	Confining unit	100–120	2×10^{-6}
	Unit 4	40–50	Clayey, fine to medium sand	Minor confined aquifer	65	3.3×10^{-4}
	Unit 3	25–35	Clayey, fine to medium sand			
	Unit 2	20	Fine to coarse sand, and silty clay	Confining unit	0	$< 1 \times 10^{-7}$
	Unit 1	115	Well-sorted fine sand and sandy clay			
Various Miocene to Eocene	Multiple	800–1000	Limestones and sandy limestones	Principal confined aquifer (Floridan Aquifer System)	−105	0.1–0.2

* except in floodplain and above about 165 ft MSL.

Figure 3-2 Generalized Hydrogeologic Column at the Edwin I. Hatch Nuclear Plant Site. Sources: SNC 2024-TN12638, SNC 2025-TN12548; Williams and Kuniansky 2015-TN4577.

HNP is located south of the Altamaha River, on Hawthorn Group sediments above the river floodplain. Plant grade is 129 ft (39.3 m) MSL, which is well above the average river elevation of about 67 ft (20.4 m) MSL (SNC 2024-TN12637, SNC 2025-TN12548). Excavation during construction generally extended into Hawthorn Unit 5, with excavations to 95 ft (29.0 m) MSL for the radioactive waste buildings, 85 ft (25.9 m) MSL for the turbine buildings, and about 73 ft (22.3 m) MSL for the reactor buildings as shown in Figure 2A-3 of the FSAR (SNC 2024-TN12638). Excavations were above the Hawthorn minor confined aquifer and no hydraulic communication between the minor confined aquifer and the surficial aquifer were observed during construction (SNC 2024-TN12638). The excavation was backfilled with compacted onsite and local offsite sandy clay, clayey sand, and silty fine sand. An underdrain system circumscribes the plant building area and is installed about 25 ft (7.6 m) below surface grade (nominal elevation 104 ft [31.7 m] MSL) to reduce groundwater levels surrounding the reactor, turbine, and diesel generator buildings (SNC 2025-TN12548). The water collected by the underdrain system is discharged to the Altamaha River or to a swamp in the river floodplain (SNC 2025-TN12548).

The regional direction of groundwater flow in the Floridan aquifer system is generally eastward and potentially influenced by the regional pumping center around Savannah (GA EPD 2017-TN12664). Groundwater flow paths in the aquifer would be locally influenced by withdrawals to support HNP operations. Current groundwater conditions in the Floridan aquifer show generally stable or increasing water levels in the central coast region (GDNR 2025-TN12685, GDNR 2025-TN12686). Sustainable yield of the upper Floridan aquifer in south-central and eastern Georgia is a priority for the State (GA EPD 2010-TN12687). Scenarios considered by the State for future increases in aquifer pumping in the HNP site vicinity showed that this pumping would not significantly affect water levels in the Floridan aquifer system at the HNP site (GA EPD 2017-TN12664). No sole source aquifers or recharge source zone for a sole source aquifer have been designated in Georgia (EPA 2025-TN6709).

Permeable beds within the Hawthorn Group occur throughout a large region of eastern Georgia and are identified as the Brunswick aquifer (Williams and Kuniansky 2015-TN4577). It is unclear whether the minor confined aquifer identified at the HNP site within the Hawthorn sediments is correlated with the regional Brunswick aquifer to the east. The extent of the minor confined aquifer in the HNP site vicinity is undefined. However, the reported permeability and thickness of the minor confined aquifer identified at the HNP site (SNC 2024-TN12638) are consistent with the lower range of transmissivities provided for the Brunswick aquifer (Williams and Kuniansky 2015-TN4577). Flow in the minor confined aquifer at the HNP site is north toward the Altamaha River with fluctuations in well water levels that correspond to fluctuations in river levels (SNC 2024-TN12638), consistent with a hydraulic connection between the aquifer and the river. Water levels in the unconfined aquifer at the HNP site reflect the local topography, with groundwater flow from higher elevations to lower elevations and discharge to the Altamaha River, its tributary streams, and the associated floodplains. Groundwater flow paths in the plant building area would be affected by building foundations and other plant infrastructure, placement of fill materials, and the underdrain system.

Information about HNP site groundwater conditions is obtained from five groundwater withdrawal wells located outside the plant building area and a network of onsite piezometers and monitoring wells within the plant building area (see Figure 3-3) and around the landfill located south of the plant. The majority of wells in the plant area are screened within the unconfined (surficial) aquifer, with several wells screened in the minor confined aquifer (SNC 2025-TN12548). Water supply wells are screened in the Floridan aquifer. Groundwater elevations in unconfined aquifer wells near the power block were between 105 ft and 116 ft

(32.0 m to 35.4 m) MSL during December 2022 (SNC 2025-TN12548). With the underdrain system at a nominal elevation of 104 ft (31.7 m) MSL, local gradients are anticipated to be toward the underdrain. Water levels in the minor confined aquifer are 67 ft to 85 ft (20.4 m to 25.9 m) MSL (SNC 2025-TN12548) indicating a potential downward component of groundwater flow between the unconfined and minor confined aquifers. Water levels in the Floridan aquifer at the HNP site were reported to be 49 ft to 60 ft (14.9 m to 18.3 m) MSL in 1968 and were more recently estimated by modeling to be 40 ft to 50 ft (12.2 to 15.2 m) (GA EPD 2017-TN12664). Hydraulic connections between the unconfined, minor confined, and Floridan aquifers are limited by the intervening low permeability confining layers.

Based on groundwater conditions described in the ER and FSAR, the general direction of groundwater flow in the unconfined and minor confined aquifers at the HNP site is toward, and discharging into, the Altamaha River. Some of the groundwater in the plant buildings area is intercepted by the underdrain system before being discharged to the river. Using estimated hydraulic conductivity, gradient, and porosity values provided in the ER, FSAR, and other sources cited above, the NRC staff estimated that horizontal groundwater velocities in the unconfined aquifer are about 100 ft/year (30 m/year) and about 5 ft/year (1.5 m/year) in the minor confined aquifer.

Groundwater Use

The Floridan aquifer system is a significant source of water throughout southeastern Georgia. Current use of the Upper Floridan aquifer in the HNP region is sustainable with significant additional groundwater use possible without exceeding the State's sustainable use criteria (GA EPD 2010-TN12687). Eighteen water supply wells were identified within a 2 mi (3.2 km) radius of HNP based on information from the State, with no information provided about well depths or aquifer use (SNC 2025-TN12548). A well survey completed in 1967 identified 33 wells within a 2 mi (3.2 km) radius of the site that obtained water from the unconfined aquifer (SNC 2024-TN12638). Reported groundwater use in Appling, Jeff Davis, Tattnall, and Toombs Counties during 2015 was 23.4 Mgd (89 MLd), with 24.5 percent used for public supply, 14.5 percent for domestic supply, and 52 percent for irrigation (Dieter et al. 2018-TN6681). All public supply withdrawals in the four counties were from groundwater sources (Dieter et al. 2018-TN6681).

Monthly average groundwater withdrawals at HNP were 141 gallons per minute (gpm) (534 L/min) during 2019 to 2024, an annual average use of 0.20 Mgd (0.8 MLd) (SNC 2025-TN12618). HNP is permitted to withdraw up to 0.55 Mgd (2.1 MLd) (annual average) of water from the Floridan aquifer for various plant purposes (SNC 2025-TN12548). Most of the groundwater withdrawals are from two wells located east and south of the plant. These wells are about 700 ft (213.4 m) deep and sealed to a depth greater than 450 ft (137.2 m). Three additional water supply wells are used for potable water to some facilities and for irrigation. The two irrigation wells are 540 ft (164.6 m) deep.

Figure 3-3 Edwin I. Hatch Nuclear Plant Site Area Monitoring Wells. Source: SNC 2025-TN12548.

Groundwater Quality

Groundwater quality in the HNP region is generally good as evidenced by its prevalent use for public supply, domestic, and irrigation uses. Saltwater intrusion is the principal water quality issue for the Floridan aquifer but does not impact the aquifer in the HNP site vicinity. No groundwater quality impacts from the onsite solid waste landfill were detected as part of the landfill groundwater monitoring program during 2019 through 2023 (SNC 2025-TN12548). No nonradiological remediation activities are being conducted at the HNP site and no reportable nonradiological spills have occurred during 2019 through 2024 (SNC 2025-TN12548, SNC 2025-TN12618).

As described in the ER, tritium has been observed in the groundwater at HNP since 1977 and the nature (source) and extent of contamination have been subject to multiple phases of investigation (SNC 2025-TN12548). Areas historically impacted by tritium in groundwater are the turbine building/off-gas recombine area, the Unit 1 and Unit 2 condensate storage tank (CST) area, and the area north of the diesel generator building. The historical maximum concentration of tritium observed in groundwater at HNP was 6,840,000 picocuries per liter (pCi/L) in September 2011 (NRC 2024-TN11047). This release has been attributed to a September 2011 leak from the liquid radioactive waste processing system; the system was ultimately replaced with aboveground piping (SNC 2025-TN12618). Since 2018, Unit 2 CST leaks occurred in December 2018 from a pipe flaw and in February 2021 from a pump seal failure, and a Unit 1 CST release occurred in May 2021 from a leak in the bottom of the tank (SNC 2025-TN12548). In addition, a tank overflow resulted in a release after power was lost to the discharge structure in February 2022 (SNC 2025-TN12548). No unplanned radiological releases or abnormal liquid releases impacting soil or groundwater have occurred during 2023 through October 2025 (SNC 2025-TN12618, SNC 2025-TN12548).

A Groundwater Protection Program (GWPP) was put in place at HNP to implement the Industry Groundwater Protection Initiative (NEI 2019-TN6775). The GWPP currently uses 33 wells to monitor the unconfined aquifer and 5 wells to monitor the minor confined aquifer. Wells are located within and around the plant buildings area to detect leaks and spills, respond to detection of radiological materials in groundwater, detect evidence of contaminants moving beyond the buildings area, and communicate events that meet applicable criteria (SNC 2025-TN12548). The majority of the wells monitoring the CST area are sampled quarterly for analysis of tritium levels. Wells monitoring the diesel generator area and wells that monitor the perimeter of the buildings area are sampled twice a year for tritium or are used for water level monitoring only (SNC 2025-TN12548). Some wells are sampled more frequently than required by the GWPP to provide timely detection of inadvertent releases. Some wells have shown “spikes” in tritium activity that would not be seen in quarterly samples but are apparent with more frequent sampling (SNC 2025-TN12618). For example, a “spike” occurred in 2021 with a maximum tritium activity of about 1,500,000 pCi/L in well T-15 as determined by the more frequent sampling, but the quarterly sampling reported in the 2021 Annual Radioactive Effluent Release Report (SNC 2022-TN12696) showed a maximum tritium activity of 215,000 pCi/L (SNC 2025-TN12618). Results of quarterly sampling and some of the more frequent sampling are reported in the Annual Radiological Effluent Release Reports and are publicly available from the NRC (e.g., NRC 2026-TN12697).

Tritium detected in groundwater at HNP since 2019 has been highest at well NW-10 located near the Unit 2 CST. Tritium levels at this location ranged from 148,000 pCi/L to 286,600 pCi/L during 2024 (NRC 2026-TN12697). Tritium was also detected above the U.S. Environmental Protection Agency’s (EPA’s) maximum contaminant level of 20,000 pCi/L at wells T-10, T-11,

and T-12 during 2024; maximum levels were 37,110, 58,660, and 99,750 pCi/L, respectively. These wells intersect the backfill within pipe trenches located south of the Unit 1 CST. Tritium activity above the maximum contaminant level was observed in samples from wells NW-10, NW-2A, T-3, T-7, T-10, T-11, T-15, NU-2, LD-2, LD-3, and LD-6 during 2019 to 2023. Most of these wells monitor the CSTs. Low levels of tritium (less than 1500 pCi/L) were observed in wells along the potential groundwater flow path toward the river (i.e., wells NW-9, GW-3, GW-1, and R-6) during 2024. Tritium levels were below detection limits in 2024 for samples from wells monitoring the minor confined aquifer.

3.3.2 Environmental Consequences: Groundwater Use Conflicts (Plants that Withdraw More than 100 gpm)

Section 4.5.1.2.3 of the LR GEIS (NRC 2024-TN10161) provides background information for this Category 2 issue, which is incorporated here by reference. This issue was included in the LR GEIS because overall site pumping rates greater than 100 gpm (378 liters per minute [Lpm]) have the potential to create conflicts with other local groundwater users if the reduction in groundwater head induced by pumping extends to offsite wells. The LR GEIS determined that impacts on groundwater use conflicts from withdrawing more than 100 gpm could be SMALL, MODERATE, or potentially LARGE depending on the magnitude of pumping, hydrogeologic factors, and the distance to other wells.

The issue of groundwater use conflicts was discussed in Section 4.1.2 of the ER (SNC 2025-TN12548). This issue is applicable to HNP because average groundwater withdrawals from the Floridan aquifer are 141 gpm (534 Lpm). As described above in this section, the Floridan aquifer system is a principal source of water for multiple purposes and HNP withdrawals are a small fraction (less than 1 percent) of the total groundwater withdrawals in the surrounding four counties. Groundwater availability assessments reviewed by the NRC staff indicate that current withdrawals from the Upper Floridan aquifer in the HNP region are less than the aquifer's sustainable yield (GA EPD 2010-TN12687, GA EPD 2017-TN12664). In addition, the unconfined aquifer is the most common source of water for the wells identified within 2 mi (3.2 km) of the site. The closest significant withdrawal from the Floridan aquifer is the Baxley municipal wellfield located about 10 mi (16 km) from HNP (SNC 2025-TN12548), which is too far away to be affected by the plant's groundwater use.

The issue of groundwater use conflicts was evaluated by the NRC staff in the HNP initial license renewal EIS (NRC 2001-TN12684). The NRC staff determined that drawdown from groundwater use at HNP would not result in any offsite effects on water levels. The information reviewed by the NRC staff for this EA would not alter the NRC staff's previous analysis. Based on the information reviewed, the NRC staff determined that groundwater pumping for HNP operations would not result in noticeable offsite drawdown in the Floridan aquifer system and no increase in groundwater use is anticipated during the SLR term. Therefore, the NRC staff concludes that impacts related to groundwater use conflicts would be SMALL and not significant during the SLR term.

3.3.3 Environmental Consequences: Groundwater Use Conflicts (Plants with Closed-Cycle Cooling Systems that Withdraw Makeup Water from a River)

Section 4.5.1.2.4 of the LR GEIS (NRC 2024-TN10161) provides background information for this Category 2 issue, which is incorporated here by reference. This issue was included in the LR GEIS because of the possibility that water withdrawals from a river could lower water levels in a connected alluvial aquifer and thereby affect groundwater use of that aquifer. The LR GEIS

determined that impacts on groundwater use conflicts from withdrawing makeup water from a river could be SMALL, MODERATE, or potentially LARGE depending on the site-specific characteristics of the surrounding area.

The issue of groundwater use conflicts from river withdrawals was discussed in Section 4.1.3 of the ER (SNC 2025-TN12548). As described above, the alluvial aquifer in the river valley at the HNP site is not used as a source of water. Although the minor confined aquifer is described as connected to the alluvium in the river floodplain, the minor confined aquifer is not identified as a significant source of water in the HNP vicinity and would be only indirectly affected by changes in river level resulting from the use of the river for cooling HNP. Therefore, the NRC staff concludes that impacts related to groundwater use conflicts from river withdrawals for makeup would be SMALL and not significant during the SLR term.

3.3.4 Environmental Consequences: Radionuclides Released to Groundwater

Section 4.5.1.2.7 of the LR GEIS (NRC 2024-TN10161) provides background information for this Category 2 issue, which is incorporated here by reference. This issue was included in the LR GEIS because of the accidental releases of liquids containing radioactive material into the groundwater at many nuclear power reactor sites (NRC 2024-TN11047). The LR GEIS determined that impacts on groundwater quality from the release of radionuclides could be SMALL or MODERATE depending on magnitude of the leak, radionuclides involved, hydrogeologic factors, distance to receptors, and response time of plant personnel to identify and stop the leak.

The issue of radionuclides released to groundwater was discussed in Section 4.1.4 of the ER SNC 2025-TN12548). SNC monitors groundwater at HNP as part of its GWPP, which is implemented to conform with Nuclear Energy Institute (NEI) 07-07 (NEI 2019-TN6775) and satisfy the requirements of 10 CFR 20.1501 (TN283). Section 3.6.4.2 of the ER describes the historical detection of tritium in the unconfined aquifer at monitoring wells located in the turbine and diesel buildings area and in the area of the CSTs. Tritium in groundwater is attributed to historical leaks from plant infrastructure (SNC 2025-TN12548, SNC 2025-TN12618). Based on information provided in the ER, the annual radiological effluent release and environmental operating reports, and information reviewed by the NRC staff during the environmental site audit, tritium in HNP site groundwater during 2019 to 2024 has been above 20,000 pCi/L every year in 1 or more wells in both the Unit 1 and Unit 2 CST areas and has been observed above this level in the turbine building area during the majority of these 6 years. The highest values (in well NW-10 near the Unit 2 CST) have been decreasing over time. Modeling of the February 2021 leak from the Unit 2 CST transfer pump indicates that the tritium activity at well NW-10 would decrease from a peak value of 2,100,000 pCi/L to 100,000 pCi/L in late 2024 to 10,000 pCi/L in 2028 (SNC 2025-TN12548). The observed average activity of tritium in the fourth quarter of 2024 was 160,000 pCi/L at well NW-10, which is higher than the predicted value but indicates that the predicted trends are consistent with the observations. Tritium activity at the downgradient well NW-2A was predicted by the model to increase above 10,000 pCi/L in 2023 (SNC 2025-TN12548). The observed maximum at well NW-2A was about 38,000 pCi/L in the fourth quarter of 2023 with an average tritium activity of 8,600 pCi/L in the fourth quarter of 2024. These results also indicate that the trends predicted by the model are consistent with the observations. Tritium activity from the February 2021 release was predicted by the model to not exceed 1,000 pCi/L more than 40 ft (12.2 m) beyond downgradient well NW-2B (see Figure 3-3 for well locations). Tritium activity at well NW-2B was below the detection limit during 2024 (NRC 2026-TN12697).

The available observations indicate a persistent presence of elevated tritium in the plant area unconfined aquifer during the last decade due to the occurrence of inadvertent releases but there is no evidence that the tritium has moved beyond the plant area. The underdrain system that circumscribes the plant buildings functions to lower the water table in the plant buildings area and to intercept groundwater in the unconfined aquifer that has been impacted by the releases. As described in the ER, water collected by the underdrain system is discharged to the Altamaha River. The maximum tritium activity measured at the outfall was 70,670 pCi/L during 2019 to 2023 (SNC 2025-TN12548). Water from the underdrain is diluted by the plant discharge and the river flows.

Based on the information reviewed, the NRC staff determined that tritium occurs in the unconfined aquifer at HNP at levels exceeding the drinking water standard (20,000 pCi/L) but these elevated levels have not been observed beyond the underdrain system. Modeling indicates that tritium from past inadvertent releases would not be transported offsite at noticeable levels. In addition, tritium has not been detected in the minor confined aquifer. SNC has implemented a GWPP to identify potential sources of inadvertent releases to groundwater and procedures to respond to any leaks or spills that occur. Groundwater collected by the underdrain system is monitored for radiological materials and is significantly diluted upon discharge to the river. Therefore, the NRC staff concludes that groundwater resources impacts due to the release of radionuclides to groundwater would be SMALL and not significant during the SLR term.

3.4 Terrestrial Resources

3.4.1 Affected Environment

The HNP terrestrial environment is described in Section 2.2.6 of the supplemental EIS for the initial license renewal (NRC 2001-TN12684) and in Section 3.7.1 of the applicant's ER (SNC 2025-TN12548). Those descriptions are incorporated here by reference. Supplemental information describing the HNP terrestrial environment can be found in Appendix A.

3.4.2 Environmental Consequences: Non-Cooling System Impacts on Terrestrial Resources

Section 4.6.1.1.1 of the LR GEIS (NRC 2024-TN10161) provides background information for this Category 2 issue of non-cooling system impacts on terrestrial resources, which is incorporated here by reference. According to the LR GEIS (NRC 2024-TN10161), non-cooling system impacts on terrestrial resources can include impacts that result from site and landscape maintenance activities, stormwater management, elevated noise levels, and other ongoing operations and maintenance activities that would occur during the SLR term on and near a plant site. The NRC staff based its analysis in this section on information derived from the applicant's ER (SNC 2025-TN12548) unless otherwise cited. SNC has not identified any refurbishment activities during the proposed SLR term (SNC 2025-TN12548). No further analysis of potential impacts from refurbishment activities is therefore necessary.

Landscape maintenance and operational activities conducted during the SLR term would remain similar to current practices and would be conducted within the developed portions of the HNP protected area (SNC 2025-TN12548). These developed land cover types comprise about 13 percent of the HNP site (308 ac [125 ha]) (SNC 2025-TN12548). Landscape maintenance and operational activities include mowing, weed removal, herbicide application, tree trimming, brush removal, debris removal, and the maintenance and repair of plant infrastructure such as

roadways, piping installations, fencing, and security-related structures. Typically, only trees and shrubs that pose a safety or security threat are removed from natural areas. Herbicide and pesticide use onsite will be targeted and utilized for aesthetic and safety purposes; no herbicides or pesticides are anticipated to be used within forested portions of the site. Mowing associated with HNP operations occurs within the grass-maintained portions of the HNP site boundary.

Approximately 1,983 ac (803 ha) of the HNP site (87 percent) remains as natural areas (SNC 2025-TN12548). Within the SNC owned land surrounding HNP, numerous land management activities are conducted including selective tree thinning, prescribed fire activities, and food plot planting (SNC 2025-TN12618). These land management activities occur for the purpose of timber production and beneficial wildlife habitat management. Forest management activities are conducted in partnership with the Georgia Department of Natural Resources (DNR) and are designed to maintain and improve existing gopher tortoise habitat onsite. Additionally, an informal agreement between SNC and the Boy Scouts of America allows for scouting groups to utilize the 100 ac (40.5 ha) Boy Scout camp area onsite located west of US-1 (SNC 2025-TN12618). These activities are not associated with HNP operations and are expected to continue whether or not the HNP licenses are subsequently renewed. Therefore, these activities are considered part of the baseline terrestrial environment onsite and are not associated with the proposed action (HNP SLR).

SNC has a Wildlife Habitat Council silver certification, which recognizes voluntary wildlife habitat management and environmental stewardship. SNC has a Biodiversity Initiative Plan to promote conservation and enhance biodiversity.

Section 9.5 of the ER states that SNC has administrative controls in place at HNP to ensure that it reviews operational changes or construction activities and minizines environmental impacts through best management practices (BMPs), permit modifications, or new permits as needed. Section 9.3 of the ER discusses relevant compliance, monitoring, and reporting. SNC submits required monitoring and sampling results to the appropriate agencies as specified in permit and regulation requirements. Relevant permits are presented in ER Table 9.1-1 (SNC 2025-TN12548) and in Enclosure 1 of the applicant's environmental audit response (SNC 2025-TN12618). Among these are a migratory bird special purpose utility permit (MB745135) from the U.S. Fish and Wildlife Service (FWS), a Section 404 permit from the U.S. Army Corps of Engineers (USACE) authorizing maintenance dredging of the Altamaha River by the intake structure (USACE permit no. SAS-1994-03873), and NPDES permits issued by the State of Georgia (GA0004120 and GAR050000). Relevant SNC plans include the HNP spill prevention, control, and countermeasure plan, stormwater pollution prevention plan, Avian Protection Plan, Biodiversity Initiatives Plan, Timber Management Plan, Natural Resources-Wildlife Guidance, and the Excavation, Trenching, and Shoring Plan (SNC 2025-TN12548). The NRC staff expects that physical disturbances would be limited to paved or disturbed areas or to areas of mowed grass or early successional vegetation and would not encroach into wetlands or into the remaining areas of forest. The NRC staff concludes that continued adherence to environmental management practices, BMPs, and management plans already established for HNP would continue to protect terrestrial resources during the proposed SLR term.

Additionally, on the HNP site a 21.2 ac (8.6 ha) Class C/D landfill operates under Solid Waste Permit No. 001-004D(I)(I) and a hazardous waste generator ID issued by the GA EPD. Nonradiological asbestos and construction and demolition debris are placed in the onsite landfill. All other hazardous, nonhazardous, and recyclable waste is transferred offsite for disposal. Stormwater runoff from the landfill runs to a topographically low area from which there

are no point discharges. HNP implements a landfill groundwater and surface water monitoring program. As a part of this monitoring, surface water is collected from the sedimentation pond if it is present. During sampling events conducted from June 2019 through December 2023, there was surface water present once during the June 2021 sampling event. Sample analysis detected barium at 0.02 milligrams per liter (mg/L), which is below the GA EPD groundwater protection standard of 2 mg/L. Terrestrial wildlife may be exposed to contaminants through the standing water within the sedimentation pond. However, as evidenced by the low frequency of standing water being present during semiannual sampling, standing water does not persist within the sedimentation pond for extended periods of time. Additionally, surface water testing did not detect any volatile organic compounds, 1,2-dibromo-3-chloropropane, dibromoethane, or metals other than barium, which was only detected in low concentrations. Therefore, it is unlikely that wildlife exposure to contaminants via runoff from the landfill will represent a significant impact.

HNP maintains a Section 404 permit from the USACE that authorizes maintenance dredging of the Altamaha River by the intake structure (USACE permit no. SAS-1994-03873). HNP is authorized to remove up to 45,000 cubic yards (y^3) of dredged material (primarily sand with a small percentage of gravel) on an annual basis using BMPs to minimize total suspended solids levels downstream. The dredged material is piped to an upland dewatering basin before the dried material is either transported offsite for beneficial reuse or is stored within an onsite stockpile. The upland dewatering basin is unlined and composed of a sand-clay mixture surrounded by compacted berms. Effluent is discharged to the Altamaha River through a 24-in. outflow pipe with stop logs on the basin side of the pipe. The stockpile area is approximately 1.9 ac (0.8 ha) large consisting of depressed, unbermed land with a hard clay bottom. There are no water discharges from this area (SNC 2025-TN12548).

There is potential for wildlife to be exposed to contaminants through standing water while the dredged material is dewatering within the dewatering basin or through runoff from the stockpile area. However, a tier 1 evaluation was conducted in 2015 to test the dredged sediment for constituents of concern. This study concluded that the dredging and placement of dredged sediment does not present a potential risk to receptors in the Altamaha River, the upland dewatering basin, or the stockpile area. Additionally, due to the sandy and gravelly nature of the sediment, there is very low probability of the material retaining any constituents of concern after dewatering and the dewatering basin only has standing water for 2 to 3 weeks per year during the annual dredging. Due to the limited temporal scale of this potential for exposure in combination with the low likelihood of the presence of contaminants within the dredged material, the potential for wildlife exposure through standing water does not represent a likely or significant level of impact.

Elevated noise levels from transformers and other equipment, including MDCTs, could disrupt wildlife behavioral patterns or cause animals to avoid such areas. The primary contributors of noise at HNP include the turbine building and the MDCTs. Operational noise from the HNP site facilities extends into the remaining natural areas on the site. However, HNP has exposed these habitats to similar operational noise levels since it began operations in 1974. The NRC staff therefore expects that extending the same level of operational noise levels during the 20-year SLR term is therefore unlikely to noticeably change the patterns of wildlife movement and habitat use.

Based on its independent review, the NRC staff concludes that the landscape maintenance activities, stormwater management, elevated noise levels, and other ongoing operations and maintenance activities that SNC might undertake during the SLR term would primarily be

confined to already disturbed areas of the HNP site. These activities would neither have noticeable effects on terrestrial resources nor would they destabilize any important attribute of the terrestrial resources on or in the vicinity of the site. The NRC staff expects that SNC would continue to comply with the applicable requirements of Federal and State regulatory programs and obtain any needed permits. Accordingly, the NRC staff concludes that non-cooling system impacts on terrestrial resources during the SLR term would be SMALL and not significant.

3.4.3 Environmental Consequences: Water Use Conflicts with Terrestrial Resources (Plants with Cooling Ponds or Cooling Towers Using Makeup Water from a River)

Section 4.6.1.1.6 of the LR GEIS (NRC 2024-TN10161) provides background information for this Category 2 issue, which is incorporated here by reference. Water use conflicts occur when the amount of water needed to support riparian communities is diminished because of demands from other users, decreased water availability due to droughts, or a combination of these factors.

In the 2001 supplemental EIS for the HNP initial license renewal (NRC 2001-TN12684), the NRC staff reviewed the available information, including the rate of evaporative water loss associated with the plant's operations, maintenance of minimum flow conditions of the Altamaha River, and past operation information, and concluded that surface water use impacts were SMALL for HNP initial license renewal. In 2013, the NRC issued Revision 1 of the LR GEIS (NRC 2013-TN2654), which separated terrestrial ecological impacts from surface water impacts, expanded the issue to include cooling towers, and titled the issue "Water Use Conflicts with Terrestrial Resources (Plants with Cooling Ponds or Cooling Towers Using Makeup Water from a River)." For most nuclear power plants, water use conflicts with terrestrial resources would be SMALL, but a plant-specific review is required because impacts may be MODERATE at some plants. The separation of these issues was continued in the 2024 Revision 2 of the LR GEIS (NRC 2024-TN10161). Below, the NRC staff analyzes this plant-specific issue for the proposed HNP SLR term in the context of terrestrial resources.

In 2012, SNC requested a license amendment from the NRC to revise the minimum water level to operate from 60.7 ft (18.5 m) to 60.5 ft (18.4 m) MSL, equivalent to a river low flow of 718 cfs (SNC 2012-TN12699). In 2014, the NRC issued an environmental assessment for that request in which the NRC determined that the license amendment would not affect terrestrial species or habitats (NRC 2014-TN12700).

ER Sections 2.2.3 and 3.6.3.1, which describe HNP cooling systems and water use, are incorporated here by reference (SNC 2025-TN12548). HNP utilizes a closed-loop cooling tower system that withdraws makeup water from the Altamaha River. Heated water is pumped to the MDCTs for cooling. HNP discharges effluent back into the Altamaha River downstream of the intake through two 42 inch (in.) (106.7 centimeter [cm]) long pipes buried in the riverbed with 7 ft (2.1 m) of pipe raised above the bed. The main consumptive use of surface water at HNP is from evaporative and drift losses from the MDCTs.

In its analysis of surface water use conflicts (Section 3.2.2), the NRC staff determined that the potential impacts from HNP's continued withdrawals and consumptive water use for these resources during the SLR term would be SMALL. Consumptive use at HNP was equivalent to approximately 0.5 percent of the Altamaha River's average annual flows and up to 2 percent during the lowest annual mean flows at the HNP site. Existing water withdrawals are within permitted limits (Surface Water Withdrawal Permit No. 001-0690-01). HNP's consumptive water use is not expected to increase during the SLR term. SNC has a water conservation plan

(implemented daily) and a drought contingency plan (implemented based on river levels and other criteria) (SNC 2025-TN12548). Since entering the initial license renewal term, HNP has not had to release water from an upstream lake in response to drought contingency plan (SW-2).

The shoreline of the Altamaha River in the vicinity of HNP and immediately downstream for several miles is characterized by steep bluffs, floodplain forests, and sandbars (NRC 2014-TN12700). This coastal plain river has a broad flood plain consisting of wide swampy regions. Terrestrial riparian resources onsite and downstream that could be impacted by surface water withdrawals include the deciduous flood plain forests and wetlands described in Section 3.7.1.2 of the ER (SNC 2025-TN12548) and Section A.1.1 of this EA.

Water levels within the Altamaha River fluctuate seasonally, based on the 1999–2024 gauge height data from the USGS Baxley gauge (USGS 2026-TN12701), located approximately 2,750 ft (838 m) upstream of the HNP intake. The average annual gauge height is 6.5 ft (2.0 m). Average monthly minimum gauge height is from October (3.5 ft or 1.1 m), and the average monthly maximum gauge height is from March (10.5 ft or 3.2 m). Given these substantial, natural annual fluctuations in river stage, the maximum potential reduction of 0.84 in. (2.1 cm) associated with HNP's consumptive use of 2 percent of flow during low flow periods is unlikely to measurably affect terrestrial resources onsite or downstream.

The flow regime in this system has been influenced by HNP in a consistent manner since the last power uprate was authorized in 2003 and the revised minimum water level was authorized in 2014. Therefore, the downstream riparian community has been adapting to this altered hydrology since that time and, while there is no available data to evaluate the changes to downstream ecology, it is anticipated that any impacts have likely stabilized and that the terrestrial riparian species composition has adjusted to fit the hydroperiod.

The proposed SLR for HNP would involve continuing current operating conditions and environmental stressors rather than introducing wholly new impacts. Therefore, the impacts of current operations and SLR operations on terrestrial resources would be similar. For the reasons explained above, water use conflicts with terrestrial resources from SLR either would not occur or would be so minor that the effects on terrestrial resources would be undetectable. Therefore, the NRC staff concludes that water use conflicts with terrestrial resources during the SLR term would be SMALL and not significant.

3.5 Aquatic Resources

3.5.1 Affected Environment

For the purposes of the following analysis, the NRC staff assumes that the baseline condition of the resource is as it occurs today, which is further described in Appendix A. While species richness, evenness, and diversity within the community may change or shift between now and when the proposed SLR term would begin, the NRC staff finds the present aquatic community to be a reasonable surrogate in the absence of fishery and species-specific projections.

3.5.2 Environmental Consequences: Water Use Conflicts with Aquatic Resources (Plants with Cooling Ponds or Cooling Towers Using Makeup Water from a River)

Section 4.6.1.2.10 of the LR GEIS (NRC 2024-TN10161) provides background information for this Category 2 issue, which is incorporated here by reference. Water use conflicts occur when

the amount of water needed to support aquatic resources is diminished from demand for agricultural, municipal, or industrial use, decreased water availability due to droughts, or a combination of these factors. Section 3.2 provides additional information regarding water use conflicts and flow data under the surface water use conflicts issue.

In the 2001 supplemental EIS for the HNP initial license renewal (NRC 2001-TN12684), the NRC staff evaluated "Water Use Conflicts (Plants with Cooling Ponds or Cooling Towers Using Makeup Water from a Small River with Low Flow)" as a surface water quantity issue and included impacts on ecological resources, including aquatic communities. The NRC staff determined that impacts of water use conflicts would be SMALL during the initial license renewal term. In 2013, the NRC issued Revision 1 of the LR GEIS (NRC 2013-TN2654) and separated out ecological impacts from surface water, expanded the issue to include cooling towers, and titled the issue "Water Use Conflicts with Aquatic Resources (Plants with Cooling Ponds or Cooling Towers Using Makeup Water from a River)." The separation of these issues was continued in the 2024 Revision 2 of the LR GEIS (NRC 2024-TN10161). This section of the EA evaluates water use conflicts as they apply to continued operation of HNP during the proposed SLR term.

Section 3.2.1 describes surface water use conflicts that also apply to aquatic resources. HNP's consumptive water use influences aquatic organisms in the Altamaha River primarily through water withdrawals needed to support its closed-loop cooling system. Although the plant recirculates most cooling water through MDCTs, it withdraws makeup water from the river to replace evaporative losses (SNC 2025-TN12548). In 2022, evaporative losses totaled 13,563.8 million gallons or 35 Mgd (54 cfs). At full power, each HNP unit withdraws approximately 23,520 gpm (47,040 gpm for both units), with an intake velocity of about 0.31 feet per second (ft/s), well within the intake velocity limit in 40 CFR 125.94(c) (TN254). HNP operates under GA EPD Surface Water Withdrawal Permit No. 001-0690-01, which caps withdrawals at 103.6 Mgd on a 24-hour basis and 85 Mgd daily average for the month. Actual withdrawals remain below these limits; the plant averaged 58.55 Mgd in 2023 and 62.38 Mgd between 2019 and 2023 (SNC 2025-TN12548).

The long-term USGS record at the Baxley gauge (USGS 2026-TN12701), located approximately 2,750 ft (838 m) upstream of the HNP intake, shows a minimum recorded daily mean flow of 1,140 cfs (736.4 Mgd) in September 2011 (USGS 2026-TN12701). From 1971–2023, the mean annual flow averaged approximately 11,100 cfs (7,171.6 Mgd). September is typically the lowest flow month, with an average flow of about 4,750 cfs (3,069 Mgd). During the 2011 minimum flow event (1,140 cfs), if HNP had been withdrawing its maximum permitted amount (103.6 Mgd), it would have removed about 14 percent of the river's flow and would have lowered the river level by approximately 1.28 in. (3.25 cm) downstream of the intake. However, because HNP returns most of the withdrawn water, minus evaporative losses of about 35 Mgd (54 cfs), the net loss to the river under these extreme conditions would be about 4.75 percent or 0.43 in. (2.15 cm).

Since 1999, the average monthly minimum gauge height has been 3.5 ft (1 m) in October, and the average monthly maximum gauge height has been 10.5 ft (3.2 m) in March, with an average height of 6.5 ft (2 m). Given these substantial, natural annual fluctuations in river stage, the maximum potential reduction of 0.85 in. (1.09 cm) associated with HNP's consumptive water use is unlikely to measurably affect aquatic species downstream.

The Altamaha Regional Water Plan is a comprehensive strategy for managing water resources in 16 counties along the Altamaha River (GWP 2023-TN12695). The plan, first completed in

2011 and updated in 2017 and 2023, addresses both near-term and long-term water supply and water quality needs through 2060. Its goal is to sustainably manage and protect the region's water resources to enhance public health, support the economy (including energy), and protect natural resources. Water use projections indicate a 15-percent increase in total water withdrawals across all sectors by 2060, with surface water from the Altamaha basin expected to supply 38 percent of that growth and groundwater supplying the remainder. One challenge identified in the plan is the limited availability of surface water during drought periods and drier years. This issue is addressed through HNP's surface water withdrawal permit and Rules and Regulations of the State of Georgia Rule 391-3-6-.07, which includes a water conservation plan that is implemented daily and a drought contingency plan that is implemented based on river levels and other criteria (SNC 2025-TN12548). For additional information, see Section 3.2.2.

Based on the review of the ER, available data, and site-specific information (Appendix A), no significant water use conflicts on aquatic resources were identified. The NRC staff determined that impacts from SLR would result in no more than minor, localized impacts on aquatic resources. Existing water withdrawals are within permitted limits as directed by Surface Water Withdrawal Permit No. 001-0690-01 and do not indicate measurable degradation of aquatic habitat or flow regimes. Therefore, the NRC staff concludes that for aquatic resources water use conflicts, the impacts during the SLR term would be SMALL and not significant.

3.6 Federally Protected Ecological Resources

The NRC staff must consider the effects of its actions on ecological resources protected under several Federal statutes and must consult with the FWS and the National Marine Fisheries Service (NMFS) or the National Oceanic and Atmospheric Administration (NOAA) prior to acting in cases where an agency action may affect those resources. These statutes include the following:

- Endangered Species Act of 1973 (TN1010)
- Magnuson-Stevens Fishery Conservation and Management Act (TN9966)
- National Marine Sanctuaries Act (NMSA) (TN7197)

Sections 3.6.3 and 4.6.1.3 of the LR GEIS (NRC 2024-TN10161) provide background information for this Category 2 issue, which is incorporated here by reference. In the following sections, the NRC staff summarizes its findings with respect to federally protected ecological resources protected under these statutes and the outcome of the related consultations with the FWS, NMFS, and NOAA, as appropriate. Additional information, including the biological evaluation, concerning these resources can be found in Appendix A.

3.6.1 Endangered Species Act: Federally Listed Species and Critical Habitats under U.S. Fish and Wildlife Service Jurisdiction

In accordance with 50 CFR 402.08 (TN4312), Federal agencies may designate a non-Federal representative (NFR) to conduct informal consultation under the ESA. By letter dated July 8, 2025, the NRC notified the FWS of the NRC's designation of SNC as its NFR for the HNP SLR proposed action (NRC 2025-TN12708). In support of ESA consultation, SNC prepared a biological evaluation to evaluate the potential impacts of the proposed HNP SLR on federally listed species and critical habitats under the FWS' jurisdiction. The biological evaluation is incorporated by reference into this EA (SNC 2026-TN12711). Table 3-3 identifies the ESA effect determination for each species and lists the date of the FWS' concurrence, as applicable.

Table 3-3 Effect Determinations for Federally Listed Species and Critical Habitats Under U.S. Fish and Wildlife Service Jurisdiction for the Edwin I. Hatch Nuclear Plant Subsequent License Renewal

Species or Critical Habitat	Federal Status[a]	Potentially Present in the Action Area?	ESA Effect Determination[b]	FWS Concurrence Date[c]
tricolored bat (*Perimyotus subflavus*)	FPE	Yes	NLAA	N/A
red-cockaded woodpecker (*Dryobates borealis*)	FT	Yes	NLAA	January 13, 2026
eastern indigo snake (*Drymarchon couperi*)	FT	Yes	NLAA	January 13, 2026
southern hognose snake (*Heterodon simus*)	FPT	Yes	NLAA	N/A
Altamaha spinymussel (*Elliptio spinosa*)	FE	Yes	NLAA	January 13, 2026
Altamaha spinymussel critical habitat	FD	No	NE	N/A
monarch butterfly (*Danaus plexippus*)	FPT	Yes	NLAA	N/A

ESA = Endangered Species Act; FD = federally designated critical habitat; FE = federally endangered; FPE = proposed for Federal listing as endangered; FPT = proposed for Federal listing as threatened; FT = federally threatened; FWS = U.S. Fish and Wildlife Service; N/A = not applicable; NE = no effect; NLAA = may affect but is not likely to adversely affect; NRC = U.S. Nuclear Regulatory Commission.

(a) Indicates protection status under the Endangered Species Act.

(b) The NRC staff makes its effect determinations for federally listed species in accordance with the language and definitions specified in the FWS and NMFS Endangered Species Consultation Handbook (FWS and NMFS 1998-TN1031).

(c) The ESA does not require Federal agencies to seek FWS concurrence for "no effect" determinations or for NLAA determinations for candidate and proposed species.

3.6.2 Endangered Species Act: Federally Listed Species and Critical Habitats under National Marine Fisheries Service Jurisdiction

In accordance with 50 CFR 402.08 (TN4312), Federal agencies may designate an NFR to conduct informal consultation under the ESA. By letter dated July 8, 2025, the NRC notified the NMFS of the NRC's designation of SNC as its NFR for the HNP SLR proposed action (NRC 2025-TN12708). In support of ESA consultation, SNC prepared a biological evaluation to evaluate the potential impacts of the proposed HNP SLR on federally listed species and critical habitats under the NMFS' jurisdiction. The biological evaluation is incorporated by reference into this EA (SNC 2026-TN12711). Table 3-4 identifies the ESA effect determination for each species and lists the date of the NMFS' concurrence, as applicable.

Table 3-4 Effect Determinations for Federally Listed Species and Critical Habitats Under National Marine Fisheries Service Jurisdiction for the Edwin I. Hatch Nuclear Plant Subsequent License Renewal

Species or Critical Habitat	Federal Status[a]	ESA Effect Determination[b]	NMFS Concurrence Date
Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*), South Atlantic Distinct Population Segment	FE	NLAA	March 20, 2026
Atlantic sturgeon critical habitat	FD	NLAA	March 20, 2026
shortnose sturgeon (*Acipenser brevirostrum*)	FE	NLAA	March 20, 2026

ESA = Endangered Species Act; FD = federally designated critical habitat; FE = federally endangered; NMFS = National Marine Fisheries Service; NLAA = may affect but is not likely to adversely affect; NRC = U.S. Nuclear Regulatory Commission.

(a) Indicates protection status under the Endangered Species Act.

(b) The NRC staff makes its effect determinations for federally listed species in accordance with the language and definitions specified in the FWS and NMFS Endangered Species Consultation Handbook (FWS and NMFS 1998-TN1031).

3.6.3 Magnuson-Stevens Act: Essential Fish Habitat

Under the provisions of the Magnuson-Stevens Act (TN9966), the Fishery Management Councils and NMFS have designated essential fish habitat (EFH) for certain federally managed species. EFH is defined as the waters and substrate necessary for fish spawning, breeding, feeding, or growth to maturity (16 U.S.C. 1802(10)) (TN12474). For each federally managed species, the Fishery Management Councils and NMFS designate and describe EFH by life stage (i.e., egg, larva, juvenile, and adult). There is no EFH within the affected area. Because no EFH occurs within the affected area, the NRC staff concludes that the proposed action would have no effect on EFH.

3.6.4 National Marine Sanctuaries Act: Sanctuary Resources

Congress enacted the NMSA (TN7197) in 1972 to protect areas of the marine environment that have special national significance. The NMSA authorizes the Secretary of Commerce to establish the National Marine Sanctuary System and designate sanctuaries within that system, which includes 15 sanctuaries and 2 marine national monuments, encompassing more than 600,000 mi^2 (1,550,000 km^2) of marine and Great Lakes waters from Washington State to the Florida Keys and from Lake Huron to American Samoa. Within these areas, sanctuary resources include any living or non-living resource of a national marine sanctuary that contributes to the conservation, recreational, ecological, historical, educational, cultural, archaeological, scientific, or aesthetic value of the sanctuary. No national marine sanctuaries occur within the affected area for this proposed action. Because no national marine sanctuaries occur within the affected area, the NRC staff concludes that the proposed action would have no effect on sanctuary resources.

3.7 Historic and Cultural Resources

3.7.1 Affected Environment

NEPA (TN661) requires Federal agencies to consider the potential effects of their actions on the affected human environment, which includes aesthetic, historic, and cultural resources as these terms are commonly understood, including such resources as sacred sites. Section 106 of the NHPA (TN4839) requires Federal agencies to consider the effects of their undertakings on historic properties. While the NHPA emphasizes impacts on historic properties, for NEPA compliance, impacts on cultural resources that are not eligible for or listed in the National Register of Historic Places (NRHP) would also need to be considered. In accordance with 36 CFR 800.8(c) (TN513), the NRC complies with NHPA Section 106 through its NEPA process.

Historic and cultural resources are the remains of past human activities and include precontact (i.e., prehistoric) and historic era archaeological sites, districts, buildings, structures, and objects. Historic properties are defined as resources listed on or eligible for listing in the NRHP. The NRHP is the Nation's official list of recognized buildings, structures, objects, sites, and districts of national, State, or local historical significance that merit preservation. The criteria for eligibility are listed in 36 CFR 60.4 (TN1682) and include (a) association with significant events in history; (b) association with the lives of persons significant in the past; (c) embodiment of distinctive characteristics of type, period, or construction; and (d) sites or places that have yielded, or are likely to yield, important information.

In the context of NEPA, the proposed action (i.e., undertaking) is HNP SLR, which would authorize an additional 20 years of operations. The direct area of potential effects (APE) consists of lands within the approximately 2,244 ac (908 ha) HNP site, including the transmission lines up to the first substation, that may be directly or indirectly affected by land-disturbing or other operational activities associated with continued operations and maintenance and/or refurbishment activities. The indirect APE is a 6 mi (10 km) radius based off the HNP center point, located equidistant between HNP, Units 1 and 2. These APEs are consistent with those identified in the applicant's ER (SNC 2025-TN12548).

This section describes the cultural background and the historic and cultural resources found at the HNP site and surrounding area. The chronology of the area is divided into the following periods: Paleoindian (prior to 8000 B.C.), Archaic (8000–1000 B.C.), Woodland (1000 B.C.–A.D. 1000), Mississippian (A.D. 1000–1600), Post-Contact (A.D. 1540–1732), Colonial Georgia and Early Statehood (A.D. 1732–1838), and Post-Cession Historic (A.D. 1838–present). The applicable cultural history background information described in the applicant's ER, Section 3.8.2.7 in Appendix E (SNC 2025-TN12548), remains accurate and is incorporated herein by reference.

The HNP initial license renewal supplemental EIS, Section 2.2.9 (NRC 2001-TN12684) and the applicant's ER (SNC 2025-TN12548) describe historic and cultural resources at the HNP site and surrounding area, based on historic and archaeological site file searches and field investigations. In addition to its independent review, the NRC staff used this information to support its NHPA Section 106 and NEPA obligations and that information is incorporated herein by reference.

For the HNP initial license renewal supplemental EIS (NRC 2001-TN12684), a literature review was conducted through the Georgia Historic Preservation Division, University of Georgia State Archaeological Site Files, the National Park Service's National Register Information System, and National Archaeological Database. In addition, sources at the University of Hargrett Rare Book and Manuscript Library, the Map Library at the University of Georgia Science Library, the Vidalia Public Library, and Appling County Heritage Center were examined for applicable maps and literature. For the ER (SNC 2025-TN12548), a literature review was conducted through Georgia's Natural, Archaeological, and Historic Resources Geographic Information System (GNAHRGIS). These reviews identified no previously recorded archaeological sites or historic structures or architectural resources within the HNP site.

The NRC staff conducted a confirmatory literature review through GNAHRGIS and the Georgia Department of Transportation cemeteries list to verify the information provided in the ER (SNC 2025-TN12548). This review covered the 2,244 ac (908 ha) HNP site and the 6 mi (10 km) indirect APE.

Thirty-seven previously recorded archaeological sites were identified within the 6 mi (10 km) radius, which are 2 NRHP-eligible sites, 8 NRHP-ineligible sites, and 27 sites of undetermined eligibility; no historic structures or architectural resources were identified within the review radius. Sixty-six cemeteries are located within the review radius, one of which occurs on the HNP site: Bell Cemetery. Furthermore, monitoring has been conducted for projects near the cemetery, and no findings related to the cemetery have been identified outside of the cemetery fence line (SNC 2025-TN12618). The Bell Cemetery is located south of the fenced area containing HNP, Units 1 and 2, adjacent to a former recreation area. Calvary Cemetery, although located adjacent to, is outside of the western boundary of the HNP site.

Thirteen cultural resources surveys have been previously conducted within the 6 mi (10 km) radius of the HNP center point, 4 of which were conducted on the HNP site. Of those four cultural resources surveys, only one (SNC 2025-TN12548 [conducted for the burial of a fiber optic line at HNP]) recommended one site within the HNP site as NRHP-eligible: two segments of a Baxley Back and Forth railroad spur. These segments were subsequently recommended as ineligible by Brockington's 2024 survey (see below). The other three previous surveys within the HNP site were conducted for the proposed widening of Highway 1 (Gresham 1996-TN12710), a proposed fiber optic line from Charlton County to Fulton County (Thomas et al. 2000-TN12712), and a proposed satellite dish and access road (Peltier and Capirci 2021-TN12713).

During the week of March 24, 2024, Brockington (SNC 2026-TN12749) performed a field investigation conducted as part of the SLR application process to identify and evaluate structures associated with HNP, Units 1 and 2 that could be NRHP-eligible. Of the 2,244 ac (908 ha) total HNP site, the architectural investigation evaluated a 1,169 ac (473 ha) parcel south of the Altamaha River and east of Highway 1 where the plant and associated structures are located. Fifty-eight properties were identified that were constructed between 1968 and 1979 (two additional properties, the Bell Cemetery and the Cork and Hook Building, pre-date HNP), 52 of which are within the fenced area of HNP (Table 3-5). In addition, there are 117 buildings that were constructed after 1979. All properties were evaluated for their individual NRHP-eligibility and for those within the fenced area, their NRHP-eligibility as part of a potential district was also evaluated. Brockington recommended that no buildings or structures were NRHP-eligible, either individually or as contributors to a potential district. The Bell Cemetery has an undetermined NRHP-eligibility and will continue to be completely avoided during the SLR term. The applicant submitted the architectural inventory report to the Georgia State Historic Preservation Office (SHPO) in July 2024. By letter dated December 17, 2025, the Georgia

SHPO (GDCA 2025-TN12702) concurred that the evaluated buildings and structures were neither individually NRHP-eligible nor eligible as contributors to a potential district, and that the NRHP-eligibility of the Bell Cemetery is currently unknown.

Table 3-5 Architectural Resources Surveyed in the Area of Potential Effects Built Prior to 1980

Building Index No.	Building/Structure Name	Location	Year Built	Individually NRHP Eligible	District Contributing
11	Turbine Building Cooling Tower A	Inside Fenced HNP Complex	1974	No	No
15	Switchyard Support Building	Inside Fenced HNP Complex	1973–1974	No	No
19	Intake Structure	Inside Fenced HNP Complex	1972	No	No
20	Diesel Generator Building	Inside Fenced HNP Complex	1974	No	No
21	Off-Gas Recombiner Building	Inside Fenced HNP Complex	1974	No	No
22	Service Building	Inside Fenced HNP Complex	1973	No	No
24	Unit 1 Turbine Building	Inside Fenced HNP Complex	1973	No	No
26	Unit 1 Radwaste Building	Inside Fenced HNP Complex	1974	No	No
29	Unit 1 Reactor Building	Inside Fenced HNP Complex	1973	No	No
30	Unit 2 Reactor Building	Inside Fenced HNP Complex	1974	No	No
31	Unit 2 HPCI Pump Room	Inside Fenced HNP Complex	ca 1975	No	No
34-A	Water Treatment Plant	Inside Fenced HNP Complex	1971	No	No
34-B	Water Treatment Plant Tank	Inside Fenced HNP Complex	1972	No	No
34-C	Water Treatment Plant Tank	Inside Fenced HNP Complex	1972	No	No
35	Fire Pump House	Inside Fenced HNP Complex	1971	No	No
37	Retrofit (outage) Support Building	Inside Fenced HNP Complex	1974, large ca 1980 addition	No	No
45	Unit 1 Circulation Water Pump	Inside Fenced HNP Complex	1973	No	No
46	Waste Gas Treatment Center	Inside Fenced HNP Complex	1974	No	No
47	Unit 2 Circulation Water Pump	Inside Fenced HNP Complex	1974	No	No

Building Index No.	Building/Structure Name	Location	Year Built	Individually NRHP Eligible	District Contributing
48	Hot Machine Shop	Inside Fenced HNP Complex	ca 1975	No	No
49-A	Cooling Tower Support Building	Inside Fenced HNP Complex	1974	No	No
49-B	Cooling Tower Support Building	Inside Fenced HNP Complex	1974	No	No
49-C	Cooling Tower Support Building	Inside Fenced HNP Complex	1974	No	No
49-D	Cooling Tower Support Building	Inside Fenced HNP Complex	1972	No	No
49-E	Cooling Tower Support Building	Inside Fenced HNP Complex	1972	No	No
49-F	Cooling Tower Support Building	Inside Fenced HNP Complex	1972	No	No
50	Discharge Structure	Inside Fenced HNP Complex	1972	No	No
51	Reactor Unloading Dock	Inside Fenced HNP Complex	ca 1972	No-Demolished	No-Demolished
52	Auxiliary Boilers	Inside Fenced HNP Complex	ca 1973	No	No
54	Off-Gas Stack	Inside Fenced HNP Complex	1973	No	No
56-A	Fire Protection Tank	Inside Fenced HNP Complex	1972	No	No
56-B	Fire Protection Tank	Inside Fenced HNP Complex	1972	No	No
57-A	Condensate Storage Tank	Inside Fenced HNP Complex	1974	No	No
57-B	Condensate Storage Tank	Inside Fenced HNP Complex	1974	No	No
58-A	Unit 1 Cooling Tower	Inside Fenced HNP Complex	1972–1973 Upgraded ca 2005	No	No
58-B	Unit 1 Cooling Tower	Inside Fenced HNP Complex	1972–1973 Upgraded ca 2005	No	No
58-C	Unit 1 Cooling Tower	Inside Fenced HNP Complex	1972–1973 Upgraded ca 2005	No	No
59-A	Unit 2 Cooling Tower	Inside Fenced HNP Complex	1974 Upgraded ca 2023	No	No
59-B	Unit 2 Cooling Tower	Inside Fenced HNP Complex	1974 Upgraded	No	No

Building Index No.	Building/Structure Name	Location	Year Built	Individually NRHP Eligible	District Contributing
			ca 2022		
59-C	Unit 2 Cooling Tower	Inside Fenced HNP Complex	1974 Upgraded ca 2020	No	No
60	NOAA Weather Control House	Inside Fenced HNP Complex	1974	No-Demolished	No-Demolished
70	Unit 2 Turbine Building	Inside Fenced HNP Complex	1974	No	No
71	Unit 1 Control Building	Inside Fenced HNP Complex	1973	No	No
72	Unit 2 Control Building	Inside Fenced HNP Complex	1974	No	No
78	Central Alarm System Building	Inside Fenced HNP Complex	ca 1974	No	No
98	Unit 1 Liquid Nitrogen Storage	Inside Fenced HNP Complex	ca 1975	No	No
99	Unit 2 Liquid Nitrogen Storage	Inside Fenced HNP Complex	ca 1975	No	No
114	Chlorine Building	Inside Fenced HNP Complex	1973	No	No
115	Sanitary Water Tank	Inside Fenced HNP Complex	1972	No	No
116	Boiler	Inside Fenced HNP Complex	ca 1973	No	No
118	Neutralization Tank	Inside Fenced HNP Complex	1972	No	No
N/A	500 kV Switchyard	Inside Fenced HNP Complex	1973–1974	No	No
N/A	230 kV Switchyard	Inside Fenced HNP Complex	1973–1974	No	No
N/A	Cooling Tower Channels	Inside Fenced HNP Complex	1971–1974	No	No
5	Warehouse No. 3	Outside Fenced HNP Complex	1971	No	N/A
6	Warehouse No. 2	Outside Fenced HNP Complex	1971	No	N/A
7	Warehouse No. 1	Outside Fenced HNP Complex	1970	No	N/A
41	Backup Meteorological Tower	Outside Fenced HNP Complex	1974	No	N/A

Building Index No.	Building/Structure Name	Location	Year Built	Individually NRHP Eligible	District Contributing
Baxley B&F Railroad (Spurs)	Three Remaining Railroad Spurs	Outside Fenced HNP Complex	1969	No	No
SFR-1	Restrooms and Storage	Outside Fenced HNP Complex	ca 1970	No	N/A
79	Cork and Hook Building (now Staff Development Building)	Outside Fenced HNP Complex	ca 1940	No	N/A
N/A	Bell Family Cemetery	Outside Fenced HNP Complex	Mid-Nineteenth to Early Twentieth Century	Unknown Under Criterion D	N/A

B&F = Baxley Back and Forth Railroad; ca = circa; HNP = Edwin I. Hatch Nuclear Plant; HPCI = High Pressure Coolant Injection; N/A = not available; NRHP = National Register of Historic Places.

The NRC staff reviewed the applicant's policies and procedures as part of its confirmatory review. Procedures addressing historic and cultural resources at HNP include annual cultural resources sensitivity training for timber harvesting staff and maintenance and construction staff, as appropriate. If any ground disturbance is planned at HNP, applicable procedures are followed to review the proposed activity on a project-by-project basis, and Environmental Affairs for GPC is contacted, if appropriate. Furthermore, HNP operates under the Georgia Power Company Unanticipated Discoveries Policy, which addresses unanticipated discoveries of archaeological sites and unanticipated discoveries of human remains. If there is a discovery situation involving human remains, appropriate parties, including federally recognized Indian Tribes, will be notified in compliance with applicable Federal, State, and local regulations. GPC employs a professional archaeologist that has stop work authority and is responsible for contacting Indian Tribes, as appropriate (SNC 2025-TN12618).

By letters dated July 22, 2025, the NRC initiated NHPA Section 106 consultation by sending letters to the Advisory Council on Historic Preservation and the Georgia SHPO (NRC 2025-TN12715), 9 federally recognized Indian Tribes (NRC 2025-TN12716), and one State-recognized Indian Tribe (NRC 2025-TN12717). In these letters, the NRC provided information about the proposed action, defined the APE, and indicated that the NRC would use the process specified in 36 CFR 800.8(c) (TN513) to satisfy NHPA Section 106 requirements. The historic and cultural resources sections of this EA were made available to the aforementioned parties for review and comment (NRC 2026-TN12876). Responses were received from the Advisory Council on Historic Preservation and the Georgia SHPO (see Appendix B).

3.7.2 Environmental Consequences: Historic and Cultural Resources

Section 3.7 of the LR GEIS (NRC 2024-TN10161) provides background information for this Category 2 issue, which is incorporated herein by reference. No new construction or modifications are anticipated during the SLR term. Any facility operations and maintenance activities necessary to support continued operation would be limited to previously disturbed areas and would be expected to be similar to current operations. Additionally, SNC's

environmental protocols and procedures would be followed to identify and protect historic and cultural resources (SNC 2025-TN12618). Since no sites, buildings, or structures have been determined NRHP-eligible at HNP, activities associated with operations and maintenance during the SLR term would have no impact on historic and cultural resources. Based on the above, the NRC staff concludes that the proposed action will result in No Historic Properties Affected as defined in 36 CFR 800.4(d)(1) (TN513). The Georgia SHPO concurred with this determination by letter dated March 3, 2026 (GDCA 2026-TN12887) (see Appendix B of this EA). Additionally, under NEPA, the impacts to historic and cultural resources during the SLR term would be not significant.

3.8 Human Health

3.8.1 Affected Environment

Sections 3.10.1 and 3.10.2 of the ER (SNC 2025-TN12548) provide HNP affected environment information pertaining to microbiological hazards (e.g., thermophilic pathogens or etiological agents) and electric shock hazards. The description of these hazards in the ER addresses the conditions likely to contribute to the occurrence of pathogenic thermophilic microbiological organisms and methodology and procedures designed to meet the regulatory requirements and standards for limiting potential induced current hazards arising from energized in-scope transmission lines. That information is incorporated here by reference.

3.8.2 Environmental Consequences: Microbiological Hazards to the Public

Section 3.9.2.2 of the LR GEIS (NRC 2024-TN10161) provides background information for this Category 2 issue, which is incorporated here by reference.

Microbiological hazards occur when workers or members of the public come into contact with disease-causing microorganisms, also known as etiological agents. Thermal effluents associated with nuclear power plants that discharge water to a river or lake have the potential to promote the growth of certain thermophilic microorganisms linked to adverse human health effects. Microorganisms of particular concern include several types of bacteria and the free-living amoeba *Naegleria fowleri* (*N. fowleri*). The optimum growth temperatures and infection pathways for the microorganisms of concern are further discussed in the LR GEIS (NRC 2024-TN10161). The thermophilic organisms discussed in the LR GEIS are typically not present in waters below 95 degrees Fahrenheit (°F) (35 degrees Celsius [°C]).

The HNP cooling water system discharges into the Altamaha River under NPDES Permit No. GA0004120. The Altamaha River adjacent to HNP is part of a Georgia waterway and also is used for recreation (e.g., fishing, boating, etc.). The NPDES permit sets as a limit that the discharge temperature not exceed 90°F (32°C) more than 10 percent of the time and never exceed 95°F (35°C). This limit was never exceeded at this site (SNC 2025-TN12548).

The public can be exposed to thermophilic microorganisms during swimming, boating, or other recreational uses of freshwater. If these organisms are naturally occurring and a nuclear power plant's thermal effluent enhances their growth, the public could experience an elevated risk of infection when recreating in the affected waters. No waterborne illness outbreaks have been reported from the Altamaha River since the initial license renewal of the plant. Public exposure to *Legionella* spp. from nuclear power plant operation is generally not a concern because exposure risk is confined to cooling towers and related components and equipment, which are typically within the protected area of the site and, therefore, not accessible to the public.

Nuclear plant workers can be exposed to thermophilic microorganisms when performing cooling system maintenance through inhalation of cooling tower vapors because these vapors often are within the optimum temperature range for *Legionella* spp. growth. Plant personnel most likely to come in contact with aerosolized *Legionella* spp. are workers who clean and maintain cooling towers and condenser tubes. SNC has a comprehensive health and safety program with procedures that implement industrial hygiene practices, including personal protective equipment, as appropriate, for hazards and entry into confined spaces to minimize the potential for station worker exposure to microbiological hazards. In addition, HNP injects a biocide into the cooling water system to maintain a concentration sufficient to kill most microbial organisms and algae.

The NRC staff determined that the thermal discharge from HNP would not result in any significant onsite or offsite effects from thermophilic organisms. No waterborne illness outbreaks have been reported in the surrounding area since the initial license renewal of the plant, and HNP has maintained the terms of its NPDES permit. Based on the information reviewed, the NRC staff determined that the public and plant workers are not at risk of waterborne illness. Therefore, the NRC staff concludes that impacts related to microbiological hazards to the public during the SLR term would be SMALL and not significant.

3.8.3 Environmental Consequences: Electromagnetic Fields

Section 3.9.2.3 of the LR GEIS (NRC 2024-TN10161) provides background information for this Category 2 issue. As discussed in LR GEIS Section 3.9.2.3 and Section 4.9.1.1.4 (NRC 2024-TN10161), electric fields and magnetic fields, collectively referred to as electromagnetic fields (EMFs), are produced by any electrical equipment, including operating transmission lines. The information provided in these two LR GEIS sections is incorporated herein by reference. Transmission lines that are within the scope of the NRC's SLR environmental review are limited to (1) those transmission lines that connect the nuclear plant to the substation where electricity is fed into the regional distribution, and (2) those transmission lines that supply power to the nuclear plant from the grid (NRC 2024-TN10161). The LR GEIS (NRC 2024-TN10161) summarizes general information regarding NRC-accepted studies on the health effects of EMFs. There are no U.S. Federal standards limiting residential or occupational exposure to EMFs from transmission power lines, but some States have set electric field and magnetic field standards for transmission lines (NIEHS 2002-TN6560). A voluntary occupational standard has been set for EMFs by the International Commission on Non-Ionizing Radiation Protection (ICNIRP 1998-TN6591). The National Institute for Occupational Safety and Health does not consider EMFs to be a proven health hazard (NIOSH 1996-TN6766).

The circumstances specific to HNP are that the HNP transmission lines that are within the scope of the proposed action have limited plant worker access and are only accessible by plant workers who have undergone appropriate electrical safety training and the HNP transmission lines must meet the National Electric Safety Code (NESC) clearance requirements. Further, HNP has been generating electricity since 1975, and operations during the SLR term would be similar to current operations. Therefore, despite the uncertainty surrounding the health effects of EMFs in general, the NRC staff has determined that with respect to the specific circumstances of the proposed action, there will not be a significant effect on the quality of the human environment related to EMFs.

3.8.4 Environmental Consequences: Electric Shock Hazards

Section 3.9.2.4.1 of the LR GEIS (NRC 2024-TN10161) provides background information for this Category 2 issue, which is incorporated here by reference. Based on its evaluation in the LR GEIS (NRC 2024-TN10161), the NRC staff has not found electric shock resulting from direct access to energized conductors or from induced charges in metallic structures to be a problem at most operating nuclear power plants. Generally, the NRC staff also does not expect electric shock from such sources to be a human health hazard during the SLR term. However, a plant-specific review is required to determine the significance of the electric shock potential along the portions of the transmission lines that are within the scope of this environmental analysis. Transmission lines that are within the scope of the NRC's SLR environmental review are limited to: (1) those transmission lines that connect the nuclear power plant to the substation where electricity is fed into the regional distribution system, and (2) those transmission lines that supply power to the nuclear power plant from the grid (NRC 2024-TN10161). The transmission lines that are in scope for the HNP SLR environmental review are located onsite between the nuclear power block and the 345 kilovolts (kV) switchyard that connects the generating units to the regional grid.

HNP uses and follows Occupational Safety and Health Administration standards for electric power generation, transmission, and distribution (TN654). Work on and near the in-scope transmission lines is governed by station procedure and HNP's comprehensive health and safety program. In addition, all in-scope transmission lines are compliant with the 2023 NESC. The in-scope transmission lines are within the owner-controlled area of HNP and do not present an electric shock hazard to the public.

The NRC staff determined that there is no significant risk of electric shock from HNP's in-scope transmission lines. The information reviewed by the NRC staff for this EA would not alter the NRC staff's previous analysis. Therefore, the NRC staff concludes that the impacts related to electric shock hazards during the SLR term would be SMALL and not significant.

3.9 Greenhouse Gas Emissions and Climate Change

3.9.1 Affected Environment

Climate change is the decades or longer change in climate measurements (e.g., temperature and precipitation) that has been observed on a global, national, and regional level (IPCC 2007-TN7421; EPA 2016-TN7561; USGCRP 2014-TN3472). Global surface temperature has increased faster since 1970 than in any other 50-year period over at least the last 2,000 years (IPCC 2023-TN8557). From 2011 through 2020, the global surface temperature was 2°F (1.1°C) warmer than that in the preindustrial period (1850–1900) (IPCC 2023-TN8557). From 1901 to 2023, global precipitation has increased at an average rate of 0.03 in. (0.08 cm) per decade (EPA 2024-TN10205). From 1901 to 2023, average surface temperature across the contiguous United States has increased by 0.17°F (0.09°C) per decade (EPA 2024-TN10205). From 1901 to 2023, total annual precipitation in the contiguous United States has increased at a rate of 0.18 in. (0.4 cm) per decade (EPA 2024-TN10205).

Climate change and its impacts can vary regionally and seasonally, depending on local, regional, and global factors. Observed climate changes and impacts have not been uniform across the United States. Annual average temperature data in the Southeast (where HNP is located) varies between 2002–2021 (relative to 1901–1960), with Georgia exhibiting an increase of 0.5–2.0°F (0.28–1.1°C) (USGCRP 2023-TN9762). The number of hot days (days at or above

95°F [35°C]) has decreased by 9.7 days, the number of cold days (days at or below 32°F [0°C]) has increased by 3.0 days, and the number of warm nights (nights at or above 70°F [21°C]) has increased by 7.9 nights in the Southeast from 2002–2021 relative to 1901–1960 (USGCRP 2023-TN9762). Average annual precipitation from 2002–2021 (relative to the 1901–1960 average) for the Southeast exhibits increases and decreases, with some portions of Georgia exhibiting a 0–5 percent decrease and others exhibiting an increase of 0–10 percent (USGCRP 2023-TN9762). The Southeast has experienced a 37-percent increase in the number of extreme precipitation days (defined as the top 1 percent of heaviest precipitation events) from 1958–2021 (USGCRP 2023-TN9762). The NRC staff used the NOAA "Climate at a Glance" tool to analyze temperature and precipitation trends for the 1895–2024 period in Appling County. A trend analysis shows that the average annual temperature has increased at a rate of 0.1°F (0.05°C) per decade and that the average annual precipitation has increased at a rate of 0.03 in. (0.08 cm) per decade (NOAA NCEI 2025-TN12705).

3.9.2 Environmental Consequences: Climate Change Impacts on Environmental Resources

Section 4.12.2 of the LR GEIS (NRC 2024-TN10161) provides background information for this Category 2 issue, "Climate Change Impacts on Environmental Resources Areas," which is incorporated herein by reference. According to the LR GEIS, the impacts of climate change on environmental resources during the SLR term are location-specific and cannot be generically evaluated. Changes in climate can have broad implications for certain resource areas. Climate change may alter the affected environment in a manner that may result in changed impacts from the proposed action. This subsection documents the NRC staff's assessment of the potential effects of climate change on environmental resource areas that may also be directly affected by continued operations during the SLR term.

The effects of climate change on HNP structures, systems, and components are outside the scope of the NRC staff's SLR environmental review. The environmental review documents the potential effects from continued nuclear power plant operations on the environment. Plant-specific environmental conditions are considered when siting nuclear power plants. This includes the consideration of meteorological and hydrologic siting criteria as set forth in 10 CFR Part 100 (TN282), "Reactor Site Criteria." The NRC regulations require that plant structures, systems, and components important to safety be designed to withstand the effects of natural phenomena, such as flooding, without loss of capability to perform safety functions. Further, nuclear power plants are required to operate within technical safety specifications in accordance with the plants' NRC operating license, including coping with natural phenomena hazards. The NRC staff conducts safety reviews before allowing licensees to make operational changes due to changing environmental conditions. Additionally, the NRC staff evaluates nuclear power plant operating conditions and physical infrastructure to ensure safe operation under the plant's initial and renewed operating licenses through the NRC's Reactor Oversight Program. If new information about changing environmental conditions that threaten safe operating conditions or challenge compliance with the plant's technical specifications becomes available, the NRC staff will evaluate that information to determine whether any safety-related changes are needed at licensed nuclear power plants. The NRC has also implemented the Process for the Ongoing Assessment of Natural Hazard Information (POANHI) into nuclear power plant oversight, recognizing that historical data may not fully reflect potential future impacts. Through the POANHI framework, the NRC staff is continually reviewing new natural hazard information for the purpose of identifying any potential gaps relevant to the NRC's licensing and oversight processes related to changing natural hazard conditions. Information on the POANHI is available on the NRC's website at https://www.nrc.gov/reactors/operating/ops-

experience/poanhi.html. These are separate and distinct processes from the NRC staff's SLR environmental review conducted in accordance with NEPA (TN661).

The NRC staff considered the best available climate change information from the Fourth and Fifth National Climate Assessment (USGCRP 2017-TN5848, USGCRP 2023-TN9762) as part of its assessment of potential change in climate indicators during the HNP SLR term (2034–2054). The Fourth National Climate Assessment (USGCRP 2017-TN5848) primarily relies on representative concentration pathways (RCPs) to describe future climate scenarios. RCPs outline future climate trajectories based on greenhouse gas (GHG) emissions. In contrast, the Fifth National Climate Assessment (USGCRP 2023-TN9762) uses shared socioeconomic pathways (SSP) and global warming levels (GWLs) as its primary framework for assessing potential climate impacts. The five socioeconomic pathway scenarios (SSP1-1.9, SSP1-2.6, SSP2-4.5, SSP3-7.0, and SSP5-8.5) cover a range of GHG pathways and climate change mitigation. GWLs quantify changes based on specific global temperature increases relative to preindustrial conditions (e.g., 2.7°F or 1.5°C), providing a more direct measure of the effects of global temperature shifts (USGCRP 2023-TN9762). The timing of when a GWL is reached will depend on future GHG emissions.

Regional projections for annual mean temperature are available from the Fourth National Climate Assessment based on the RCP 4.5 and RCP 8.5 scenarios for the mid-century (2036–2065) as compared to the average for 1976–2005. The modeling predicts increases of 3.4°F–4.3°F (1.9°C–2.4°C) across the southeast region by mid-century (USGCRP 2017-TN5848). Under the RCP 8.5 scenario, the coldest and warmest daily temperatures of the year are expected to increase by 4.97°F and 5.79°F (2.76°C and 3.22°C), respectively, in the Southeast by midcentury (USGCRP 2017-TN5848). For the portion encompassing Georgia, the Fifth National Climate Assessment projects annual temperature increases from 1.0°F–4.0°F (0.56°C–2.2°C) under the 2.7°F (1.5°C) GWL and 7.0°F–8.0°F (3.9°C– 4.4°C) under the 7.2°F (4.0°C) GWL scenario (USGCRP 2023-TN9762), compared to the period 1851–1900.

Climate model simulations suggest spatial differences in annual mean precipitation change across the Southeast with some areas experiencing an increase and others a decrease in precipitation. Based on the intermediate (RCP 4.5) emission scenarios for the mid-century (2036–2065), annual mean precipitation is projected to increase up to 2 in. (5.1 cm) relative to 1991–2020 in Georgia (USGCRP 2023-TN9762). Average annual precipitation in Georgia is projected to increase by 0–5 percent compared with the period 1851–1900 for the 2.7°F (1.5°C) and 3.6°F (2°C) GWLs, increase by 0–10 percent for the 5.4°F (3°C), and increase by 5–10 percent for the 7.2°F (4°C) GWLs (USGCRP 2023-TN9762).

The Fifth National Climate Assessment projections include continued increases in the frequency and intensity of heavy or extreme precipitation events across the United States, including across the southeast region (USGCRP 2014-TN3472, USGCRP 2017-TN5848, USGCRP 2018-TN5847, USGCRP 2023-TN9762). For the Southeast region, models predict up to a 15-percent increase in the total precipitation on the heaviest 1 percent of days, at the 3.6°F (2°C) GWL in the Southeast (USGCRP 2023-TN9762).

Climate change may impact the affected environment in a way that alters the environmental resources that are impacted by the proposed action. For there to be a climate change impact on an environmental resource, the proposed action must have an incremental new, additive, or increased physical effect or impact on the resource or environmental condition. Below, the NRC staff discusses climate change projections and the effects of climate change on environmental resource areas that may also be directly affected by continued operations during the SLR term.

Air Quality: Climate change can impact air quality as a result of changes in meteorological conditions. Air pollutant concentrations are sensitive to winds, temperature, humidity, and precipitation. Ozone levels and particulate matter have been found to be particularly sensitive to climate change influences. Ozone is formed by the chemical reaction of nitrogen oxides and volatile organic compounds in the presence of heat and sunlight. The emission of ozone precursors also depends on the temperature, wind, and solar radiation (NRC 2020-TN7241). Warmer temperatures, air stagnation, droughts, and wildfires are favorable conditions for higher levels of ozone and particulate matter less than 2.5 microns (μm) (USGCRP 2023-TN9762). Studies indicate that the position of the Bermuda High in the summer influences surface ozone in the eastern part of the United States (Zhang and Wang 2016-TN10554). HNP is located in Appling County, which is designated in attainment for all criteria pollutants (40 CFR 81.311) (TN7226). The U.S. Global Change Research Program reports that there is medium confidence that climate change is projected to worsen air quality in many U.S. regions (USGCRP 2023-TN9762). This is due to the uncertainty in how meteorology will respond to climate change and how these meteorological conditions will in turn change air pollutant concentrations. East et al. (2024-TN10550) conducted model simulations using GHG emission scenarios and three climate sensitivities (the change in global average surface temperature for a doubling in atmospheric carbon dioxide). Under the RCP 4.5 emission scenario, the average number of days per year with ozone levels of 70 parts per billion or higher for 8 hours or longer in Georgia increase as climate sensitivity increases; under a climate sensitivity of 4.5℃ (40°F), the average number of days per year with ozone levels of 70 parts per billion or higher for 8 hours increases by at least 4 times a year. The findings of East et al. (2024-TN10550) suggest that increasing the frequency of high ozone concentrations can increase the risk of not meeting National Ambient Air Quality Standards by mid-century in areas currently attaining them. However, criteria pollutant emissions from HNP are minor, well below 100 tons/year (SNC 2025-TN12548). The NRC staff concludes that any climate change-related deterioration in air quality in Appling County would not exacerbate the minor air quality impacts associated with HNP operations during the SLR term. Therefore, the NRC staff concludes that climate change would not alter the conclusion made in this EA with respect to air quality.

Surface Water Resources: Observational data and climate model projections both indicate changes in precipitation, runoff, and air temperature in Georgia and the southeast region that could influence surface water availability and water quality. As discussed above, observations of precipitation and air temperature in Georgia over the last 2 decades (2002–2021) compared to the 1901–1960 period show an increase in average annual temperature of 0.5°F–2.0°F (0.28°C–1.1°C) and changes in average annual precipitation exhibiting a 0–5 percent decrease in some areas of the State and others exhibiting an increase of 0 to 10 percent (USGCRP 2023-TN9762). Another relevant trend across the broader southeast region has been a 37 percent increase in extreme precipitation events (top 1 percent of heaviest precipitation events) over 1958–2021 (USGCRP 2023-TN9762), and the frequency and severity of extreme precipitation events are projected to continue to increase across the Southeast, including Georgia (USGCRP 2023-TN9762). Increases in annual precipitation and heavy precipitation can increase runoff and increase the potential for riverine flooding. Increased runoff and high-flow events can result in the transport of a higher sediment load and other contaminants to surface waters with potential degradation of ambient water quality.

The USGCRP does not identify aridification as a major concern for the Southeast (USGCRP 2023-TN9762). However, changes in the amount and timing of precipitation and seasonal evapotranspiration could alter the seasonal balance of surface water supply and demand (USGCRP 2023-TN9762). Precipitation projections for mid-century (2036–2065) under the

intermediate emission scenarios (RCP 4.5) on an average show up to a 2 in. (5.08 cm) increase in annual precipitation in Georgia compared to 1991–2020 (USGCRP 2023-TN9762).

Projections for runoff exhibit a decrease of up to 0.1 in. (0.25 cm) for the central and southwestern portion of Georgia while the rest of the State exhibit an increase of 0–0.5 in. (0–1.27 cm) over the mid-century period for the RCP 4.5 scenarios (USGCRP 2023-TN9762). Climate change is also expected to increase the number of hot days (≥95°F [≥35°C]) and the number of warm nights (≥70°F [≥21°C]) (USGCRP 2023-TN9762), both of which could increase surface water temperatures and evaporation. However, it should be noted that observations show a 9.7 day reduction in the number of hot days (days at or above 95°F [35°C]) in the Southeast for 2002–2021 compared to 1901–1960 (USGCRP 2023-TN9762). Continuous long-term (20+ years) water temperature data in the vicinity of HNP's water intake structure are not available (SNC 2025-TN12548 and SNC 2025-TN12618) and therefore conclusions regarding potential trends cannot be made.

As described in Section 3.2.2, HNP's cooling towers consume a small fraction of Altamaha River flow, even under low-flow conditions. Additionally, no downstream municipal, industrial, or agricultural uses have been identified such that a water use conflict could arise. The 2023 Altamaha Regional Water Plan (GWP 2023-TN12695) presents forecasted water resource needs in the Altamaha Region for the years from 2020 to 2060. The report states that while modeling analyses indicate surface water challenges may exist in dry years within the region, the HNP site is not a forecasted challenge area. Moreover, the NRC staff expects that HNP would continue to operate such that liquid effluent concentrations are within permitted limits. Therefore, the NRC staff concludes that the impacts to water availability and quality from the continued operation of HNP during the SLR term would not be exacerbated by the projected changes in climate.

Ecological Resources: Changes in water temperature can alter the balance of aquatic ecosystems. Water temperature is an essential physical property of all aquatic environments that aquatic resources rely on. As discussed above, the Southeast is projected to experience an increase in annual mean air temperature and an increase in the number of warm nights. Higher ambient air temperatures can increase surface water temperatures (USGCRP 2023-TN9762). Increased water temperatures could lead to increased volumetric water withdrawal requirements and related increases in heated discharge. This in turn can lead to a proportional increase in the number of aquatic organisms impinged and entrained and may result in a larger area where aquatic organisms could experience elevated temperatures resulting from HNP's thermal effluent discharge. As noted in Section 3.1.1, the thermal effluent impacts on aquatic organisms and the impacts of impingement and entrainment of aquatic resources from the continued operations of HNP during the SLR term are SMALL and not significant. Adherence to permit requirements including the NPDES permit, which limits the temperature of the thermal discharge, and the Surface Water Withdrawal Permit would minimize and not exacerbate climate change-related impacts on the aquatic environment. Therefore, the NRC staff concludes that climate change would not alter the conclusion made in this EA with respect to aquatic resources.

4 CONSULTATION AND COORDINATION

4.1 Endangered Species Act Section 7 Consultation

See Appendix A for information on the Endangered Species Act Section 7 consultation.

4.2 National Historic Preservation Act Section 106 Consultation

See Appendix B for information on the National Historic Preservation Act Section 106 consultation.

4.3 Clean Water Act Section 401 Certification

In accordance with 40 CFR 121.12, the NRC staff notified EPA Region IV that SNC submitted an SLR application and water quality certification determination for HNP. EPA Region IV determined that it would not issue a “may affect” determination for the proposed action of HNP SLR, thereby concluding the neighboring jurisdiction process as described in 40 CFR Part 121 (EPA 2025-TN12718).

4.4 State Review

On January 30, 2026, the NRC provided a draft of this EA to the GA DNR, Environmental Protection Division (GA EPD) for their review and comment (NRC 2026-TN12911). The GA EPD responded on February 19, 2026, that they had reviewed and had no comment on the EA (GA EPD 2026-TN12886).

5 CONCLUSION AND RECOMMENDATION

The NRC staff prepared this EA as part of its review of the SLR application for HNP, which is located in Baxley, Georgia. If that application were to be approved, SNC would be authorized to operate HNP for an additional 20 years. The LR GEIS (NRC 2024-TN10161) generically analyzes the potential environmental impacts of SLR for Category 1 issues and the NRC staff relies on that analysis unless new and significant information has been identified. During its review of the HNP SLR application, the NRC staff did not identify any new and significant information for Category 1 issues applicable to HNP. Therefore, the NRC staff concluded that no additional plant-specific evaluation was required for these issues and adopted and incorporated by reference the conclusions of the LR GEIS for these issues in this EA. The LR GEIS also identifies Category 2 issues, which are not bound or generically dispositioned by the LR GEIS and require a plant-specific review. As such, the NRC staff evaluated the environmental impacts associated with the Category 2 issues applicable to HNP, with the affected environment and the environmental consequences to that affected environment for each issue discussed in this EA. The NRC staff considered mitigation measures for each Category 2 issue, as applicable, and concluded that no additional mitigation measures are warranted. Finally, the NRC staff considered whether any environmental issues exist for HNP SLR that are not covered in the LR GEIS, but did not identify any. The NRC staff integrated the conclusions in the LR GEIS for applicable Category 1 issues, considering any new and significant information, with the information developed for applicable Category 2 issues and any applicable non-categorized issues. In this manner, the NRC staff determined with this EA that the impacts of HNP SLR would be SMALL for each potentially affected environmental resource.

In this EA, the NRC staff also documents its analysis of the environmental impacts of the no-action alternative, which consists of the impacts of HNP shutdown and the impacts of replacement power generation, and compares those impacts to the impacts of the proposed action. The NRC staff determined that the no-action alternative would have environmental impacts greater than the proposed action. Based on this review, the NRC staff concludes that the environmentally preferred alternative is the proposed action.

Based on the above, the NRC staff's recommendation is that the adverse environmental impacts of SLR for HNP are not so great that preserving the option of SLR for energy-planning decision-makers would be unreasonable. The NRC staff based this recommendation on (1) the analysis and findings in the LR GEIS (NRC 2024-TN10161), which this EA supplements; (2) the applicant's ER (SNC 2025-TN12548); (3) the NRC staff's consultation with Federal, State, and local agencies and Indian Tribes; and (4) the NRC staff's independent environmental review.

Finding of No Significant Impact

On the basis of its EA, incorporated by reference in this finding, and its determination that the environmental impacts would be SMALL for each potentially affected resource area, the NRC staff concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC staff has determined not to prepare an EIS for the proposed action. This FONSI and the related environmental documents referenced throughout the EA are available for public inspection as discussed in the EA.

6 LIST OF PREPARERS

Table 6-1 List of Preparers

Name	Education and Experience
Mitchell Dehmer, NRC	PSM Environmental Science Graduate Certificate in Environmental Management Graduate Certificate in Energy Policy BS Biology 12 years of combined academic and government experience
Lloyd Desotell, NRC	MS Civil Engineering MS Water Resources Management BA Environmental Studies Over 20 years of experience conducting surface and subsurface hydrologic analyses
Beau Goldstein, NRC	MA Anthropology BA Anthropology Registered Professional Archaeologist 27 years of relevant experience
Shannon Healy, NRC	MS Environmental Science BS Biology 10 years combined academic and professional experience
Nancy Martinez, NRC	BS Earth and Environmental Science AM Earth and Planetary Science 13 years of experience in environmental impact analysis
Don Palmrose, NRC	PhD Nuclear Engineering MS Nuclear Engineering BS Nuclear Engineering 39 years of experience including operations on U.S. Navy nuclear powered surface ships, NEPA analyses, nuclear safety and material reviews, U.S. Department of Energy nuclear authorization basis support, and NRC project management
William Rautzen, NRC	MS Health Physics BS Health Physics BS Industrial Hygiene 21 years of government experience including 15 years of environmental impact analysis
Gerry Stirewalt, NRC	PhD Structural Geology BA Geology and Mathematics Registered Professional Geologist (PG) and Certified Engineering Geologist Over 50 years of experience in Environmental and Engineering Geology with academia, industry, and the Federal government including university teaching; evaluation of high-level radioactive waste disposal sites; characterization of nuclear power sites; 3-D geospatial modeling of subsurface stratigraphy, tectonic faults, and groundwater contaminant plumes; and preparation of EIS sections covering geologic environment and groundwater resources
Ashley Waldron, NRC	BS Biology and Environmental Science 17 years of project management and NEPA experience

Name	Education and Experience
Teresa Carlon, PNNL	BS Information Technology 30+ years of experience as SharePoint administrator, project coordinator, and databases
Caitlin Condon, PNNL	PhD Radiation Health Physics BS Environmental Health 7 years of experience including health physics, project management, NEPA environmental impact assessments, waste management, radionuclide dispersion and dosimetry modeling
Kirsten Chojnicki, PNNL	PhD Geological Sciences MS Geological Sciences BS Earth and Space Science 9 years management experience, 10+ years of experience in geology, 5 years of experience in environmental impact analysis.
Philip Meyer, PNNL	PhD Civil Engineering MS Civil Engineering BA Physics 30+ years relevant experience in subsurface hydrology and contaminant transport, including 15+ years of experience in groundwater resource assessment and environmental impacts analysis
Dan Nally, PNNL	MA Urban and Environmental Policy and Planning BS Biology 13 years of experience in preparation and review of NEPA documents, related regulatory compliance, and conducting public outreach and engagement
Tracy Fuentes, PNNL	PhD Urban Design and Planning MS Plant Biology BS Botany 15+ years of experience, including NEPA planning; environmental impact analysis, environmental resource monitoring, data analysis, and research
Mike Parker, PNNL	BA English Literature 25 years of experience copyediting, document design, and formatting and 20 years of experience in technical editing
Lindsey Renaud, PNNL	MA Anthropology BA Anthropology 15 years in cultural resource management, Section 106 and 110 compliance, and NEPA environmental impact assessments. Secretary of the Interior-qualified Registered Professional Archaeologist. Experience in Tribal engagement and Native American Graves Protection and Repatriation Act compliance
Caitlin Wessel, PNNL	PhD Marine Science MS Coastal, Marine, and Wetland Science BS Biology 13 years of relevant experience in environmental impact assessment and aquatic ecology

AM or MA = Master of Arts; BA = Bachelor of Arts; BS = Bachelor of Science; DoD = U.S. Department of Defense; DOE = U.S. Department of Energy; DOI = U.S. Department of Interior; MBA = Master of Business Administration; MRP = Master of Regional Planning; MS = Master of Science; NEPA = National Environmental Policy Act of 1969; NNSA = National Nuclear Security Administration; NOAA = National Oceanic and Atmospheric Administration; NRC = U.S. Nuclear Regulatory Commission; PG = Professional Geologist; PhD = Doctor of Philosophy; PNNL = Pacific Northwest National Laboratory; PSM = Professional Science Masters; PWS = Professional Wetland Scientist.

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APPENDIX A

ECOLOGICAL CONSULTATIONS

This appendix outlines the ecological consultations conducted to inform the supporting resource analysis for the U.S. Nuclear Regulatory Commission (NRC, the Commission) environmental review under the National Environmental Policy Act of 1969, as amended (NEPA) (TN661). It includes documentation of compliance with the Endangered Species Act (ESA) (TN1010), the Magnuson-Stevens Fishery Conservation and Management Act (MSA) (TN9966), and the National Marine Sanctuaries Act (NMSA) (TN7197). These consultations assess the potential effects of the proposed action on federally listed species, designated critical habitats, essential fish habitats, and marine sanctuary resources.

To inform these consultations and the broader NEPA analysis, this appendix begins with information on terrestrial and aquatic ecological resources within the project area. This integrated ecological context provides the scientific basis for evaluating potential environmental impacts of the proposed action, ensuring consistency with applicable Federal statues, and supporting a comprehensive understanding of the affected environment.

A.1 Terrestrial Resources

A.1.1 Terrestrial Environment

The Edwin I. Hatch Nuclear Plant (HNP), Units 1 and 2 site lies within the Southeastern Plains ecoregion (EPA Level III Ecoregion 65) and both the Southeastern Floodplains and Low Terrace ecoregion subdivision (EPA Level IV Ecoregion 65p) and the Atlantic Southern Loam Plains ecoregion subdivision (EPA Level IV Ecoregion 65l) (EPA 2013-TN10909). The Southeastern Plains ecoregion is characterized by irregular plains with a mosaic of cropland, pasture, woodland, and forest. Natural vegetation consists of predominantly longleaf pine, with smaller areas of oak-hickory-pine and Southern mixed forest (EPA 2013-TN8737). The Southeastern Floodplains and Low Terrace ecoregion is a riverine dominated ecoregion characterized by large sluggish alluvial rivers and backwaters with vegetation consisting of bald cypress, water tupelo river swamp forests, and oak-dominated bottomland hardwood forests. The Atlantic Southern Loam Plains ecoregion is characterized by low, gently rolling irregular topography with a mix of agriculturally important Tifton soils and sloping or flat, poorly drained forested areas. Along some major streams in this ecoregion are excessively drained, dunal sand ridges with vegetation consisting of longleaf pine and turkey oak forests (Griffith et al. 2001-TN12740).

The HNP site encompasses approximately 2,244 ac (908 ha) of land in northwestern Appling and southwestern Toombs Counties. The Altamaha River runs through the HNP site with the HNP plant and associated facilities located on the southern shore of the river within Appling County. Approximately 52 percent of the HNP site consists of woody wetlands, followed by evergreen forests (22 percent of the site) and developed areas (13 percent). The other 9 land use categories make up the remaining 13 percent of the site. (SNC 2025-TN12548)

The U.S. Army Corps of Engineers defines wetlands as areas either inundated or saturated by surface or groundwater at a frequency and duration sufficient to support (and that under normal circumstances do support) a prevalence of vegetation typically adapted for life in saturated soil conditions (TN10912). The National Wetland Inventory features within a 6 mi (9.7 km) radius of HNP are presented in Table A-1.

According to ER Section 3.7.1.2.4, the HNP site boundaries contain a total of 1,051.9 ac (425.7 ha) of wetlands, ponds, and riverine waters (SNC 2025-TN12548). Table A-1 summarizes the area and percentage of wetlands and surface water features on the HNP site.

Table A-1 Wetlands and Surface Water Features on the Edwin I. Hatch Nuclear Plant Site and within a 6 mi Radius

Wetland or Water Feature	Acres within 6 mi Radius	Percent within 6 mi Radius	Acres Onsite at HNP	Percent of Wetland Habitat Onsite at HNP
Freshwater emergent wetlands	309.60	1.95	18.90	1.80
Freshwater ponds	620.20	3.91	15.50	1.47
Freshwater forested/scrub wetlands	13,528.20	85.38	879.00	83.56
Riverine	1,385.90	8.75	138.50	13.17
Total	**15,843.90**	-	**1,051.90**	-

HNP = Edwin I. Hatch Nuclear Plant.
Source: SNC 2025-TN12548.

Table 3.7-1 in the Southern Nuclear Operating Company, Inc. (SNC) ER presents a list of the terrestrial wildlife and vegetative species likely to occur within the vicinity of the HNP site and is incorporated here by reference (SNC 2025-TN12548). Wildlife species occurring on the HNP site consist of those species typically found in Georgia riparian areas, forests, developed areas, and croplands.

A.1.2 State-Listed Terrestrial Species

The NRC staff independently analyzed the potential for State-protected species to occur on the HNP site. The NRC staff incorporates by reference SNC's analysis of the potential occurrence of 30 State-listed terrestrial species that are known to occur in Appling, Jeff Davis, and Toombs Counties in ER Section 3.7.1.2.6, Section 3.7.1.3.1, and Table 3.7.2, respectively (SNC 2025-TN12548). No surveys or studies for threatened or endangered species have been conducted at the HNP site since 1998–1999. The NRC staff also reviewed the State-listed species lists for these three counties directly from the Georgia biodiversity portal (GDNT 2026-TN12719) and a letter from the Georgia Department of Natural Resources (DNR) dated August 8, 2024, that is provided in ER Appendix B.

Table A-2 summarizes the results of the NRC staff's analysis for the 34 State-listed terrestrial species with potential to occur on the HNP site. Section A.3 discusses three of the terrestrial State-listed species that are also federally listed and potentially occur on the HNP site: red-cockaded woodpecker (*Picoides borealis*), eastern indigo snake (*Drymarchon couperi*), and southern hognose snake (*Heterodon simus*). Although frosted flatwoods salamander (*Ambystoma cingulatum*) has been reported to occur within Jeff Davis County, it is not expected to occur on the HNP site, based on FWS IPAC data (FWS 2025-TN12720) and is, therefore, not discussed in Section A.3.

Table A-2 State-Listed Terrestrial Species Potentially Occurring in the Vicinity of the Edwin I. Hatch Nuclear Plant Site

Common Name (Scientific Name)	Group	State Status[a]	Federal Status[b]	Habitat
Frosted Flatwoods Salamander (*Ambystoma cingulatum*)	Amphibians	ST	LT	Pine flatwoods; moist savannas; isolated cypress/gum ponds
Bachman's Sparrow (*Peucaea aestivalis*)	Birds	SR	MBTA, BCC	Open pine or oak woods; old fields; brushy areas, young large grassy pine regeneration areas
Bald Eagle (*Haliaeetus leucocephalus*)	Birds	ST	MBTA, BGEPA	Edges of lakes and large rivers; seacoasts
Henslow's Sparrow (*Centronyx henslowii*)	Birds	SR	MBTA, BCC	Grassy areas, especially wet grasslands, pitcher plant bogs, pine flatwoods, power line corridors. Requires open vegetation at ground level with grass canopy above
Least Tern (*Sternula antillarum*)	Birds	SR	MBTA	Sandy beaches; sandbars, dredge islands
Red-cockaded Woodpecker (*Dryobates borealis*)	Birds	SE	LE, MBTA	Open pine woods; pine savannas
Swallow-tailed Kite (*Elanoides forficatus*)	Birds	SR	MBTA, BCC	River swamps; marshes, open pine and bottomland forest with super canopy pines.
Say's Spiketail (*Cordulegaster say*i)	Insects	ST	-	Trickling hillside seepages in deciduous forest with scrub-oak sandhills nearby
Rafinesque's Big-eared Bat (*Corynorhinus rafinesquii*)	Mammals	SR	-	Pine forests; hardwood forests; caves; abandoned buildings; bridges; bottomland hardwood forests and cypress-gum swamps
Eastern Indigo Snake (*Drymarchon couperi*)	Reptiles	ST	LT	Sandhills; pine flatwoods; dry hammocks; summer habitat includes wetlands
Florida Pine Snake (*Pituophis melanoleucus mugitus)*	Reptiles	SOC	-	Sandhills; scrub; pine savannah; old fields
Gopher Tortoise (*Gopherus polyphemus*)	Reptiles	ST	-	Sandhills; dry hammocks; longleaf pine-turkey oak woods; old fields
Southern Hog-nosed Snake (*Heterodon simus*)	Reptiles	ST	PT	Sandhills; fallow fields; longleaf pine-turkey oak
Spotted Turtle (*Clemmys guttata*)	Reptiles	SU	-	Heavily vegetated swamps, marshes, bogs, small ponds, and tidally influence freshwater wetlands; nest and possibly hibernate in surrounding uplands

Common Name (Scientific Name)	Group	State Status[a]	Federal Status[b]	Habitat
Bluff White Oak (*Quercus austrina)*	Plants	SOC	-	Bluff forests, often in circumneutral soils; floodplain hammocks; edges of Altamaha Grit outcrops
Creeping Morning-glory (*Evolvulus sericeus* var. *sericeus*)	Plants	SE	-	Altamaha Grit outcrops; open calcareous uplands
Dissected Beardtongue (*Penstemon dissectus*)	Plants	SR	-	Altamaha Grit outcrops and adjacent pine savannas; rarely sand ridges
Georgia Indigo-bush (*Amorpha georgiana*)	Plants	SE	-	Longleaf pine flatwoods; stream terraces
Georgia Plume (*Elliottia racemosa*)	Plants	ST	-	Scrub forests; Altamaha Grit outcrops; open forests over ultramafic rock
Greenfly Orchid (*Epidendrum magnoliae*)	Plants	SU	-	Epiphytic on limbs of evergreen hardwoods; also in crevices of Altamaha Grit outcrops
Hooded Pitcherplant (*Sarracenia minor* var. *minor*)	Plants	SU	-	Wet savannas, pitcherplant bogs
Ohoopee Bumelia (*Sideroxylon macrocarpum*)	Plants	SR	-	Dry longleaf pine woods with oak understory; often hidden in wiregrass
Parrot Pitcherplant (*Sarracenia psittacina*)	Plants	ST	-	Wet savannas, pitcherplant bogs
Pickering's Morning-glory (*Stylisma pickeringii* var. *pickeringii*)	Plants	ST	-	Open, dry, oak scrub of sandhills
Purple Honeycomb-head (*Balduina atropurpurea*)	Plants	SR	-	Wet savannas, pitcherplant bogs
Rosemary (*Ceratiola ericoides*)	Plants	ST	-	Ohoopee Dunes; deep sandridges
Smooth Buttonweed (*Spermacoce glabra*)	Plants	SOC	-	Alluvial woods; margins of sloughs and oxbow lakes
Southern Barbara's-buttons (*Marshallia ramosa*)	Plants	SR	-	Altamaha Grit outcrops; open forests over ultramafic rock
Southern Purple Pitcherplant (*Sarracenia purpurea* var. *venosa*)	Plants	SE	-	Seepage bogs
Sweet Pitcherplant (*Sarracenia rubra* ssp. *rubra*)	Plants	SE	-	Seepage bogs, Atlantic Coastal Plain
Velvet Sedge (*Carex dasycarpa*)	Plants	SR	-	Evergreen hammocks; mesic hardwood forests
Yellow Pitcherplant (*Sarracenia flava*)	Plants	SU	-	Wet savannas, pitcherplant bogs
Sandhill Bean (*Phaseolus sinuatus*)	Plants	SOC	-	Sandhills; dry pinelands and hammocks

Common Name (Scientific Name)	Group	State Status[(a)]	Federal Status[(b)]	Habitat
Trailing Milkvine (*Matelea pubiflora*)	Plants	SR	-	Exposed sandy soils; sandridges

(a) Georgia status codes (GA 391-4-10-TN12721): SE = State endangered; ST = State threatened; SR = State rare (any resident species although not presently endangered or threatened that should be protected because of its scarcity); SU = State unusual (any resident species which exhibits special or unique features and because of these features deserves special consideration in its continued survival in the State); SOC = species of concern (locations of these species should be tracked until enough information is gathered to determine if they should be added to the State list or if their populations do not warrant tracking).

(b) Federal Status: LE = listed as endangered under the ESA; LT = listed as threatened under the ESA; PT = proposed for listing as threatened under the ESA; BCC = listed as bird of conservation concern; BGEPA = eagle protected under Bald and Golden Eagle Protection Act; MBTA = protected under Migratory Bird Treaty Act.

Sources: Georgia Biodiversity Portal element occurrences for Appling, Jeff Davis, and Toombs Counties, environmental report (ER) Table 3.7.2, ER Sections 3.7.1.2.6 and 3.7.1.3.1, and ER Appendix B (SNC 2025-TN12548).

The following eight State-listed terrestrial species are known to occur on the site or its immediate vicinity: bald eagle (*Haliaeetus leucocephalus*), gopher tortoise (*Gopherus polyphemus*), Florida pine snake (*Pituophis melanoleucus mugitus*), bluff white oak (*Quercus austrina*), Ohoopee bumelia (*Sideroxylon macrocarpum*), sandhill bean (*Phaseolus sinuatus*), smooth buttonweed (*Spermacoce glabra*), and yellow pitcherplant (*Sarracenia flava*).

In Sections 3.7.1.2.7, 3.7.1.5, and 9.5 of its ER (SNC 2025-TN12548), SNC describes the regulatory controls and plans that are protective of State-listed species. The NRC staff has reviewed these plans and processes (SNC 2025-TN12618).

A.1.3 Eagles and Migratory Birds

The Bald and Golden Eagle Protection Act (BGEPA) (TN1447) extends regulatory protections to the bald eagle and the golden eagle (*Aquila chrysaetos*). The Act prohibits anyone without a permit from the Secretary of the Interior from "taking" bald eagles (or golden eagles), including their parts, nests, or eggs. The State-sensitive bald eagle is known to occur onsite (Section A.1.2 above) and has nested within 3 mi (4.8 km) of the proposed site (SNC 2025-TN12618). No golden eagles are known from the site or vicinity.

The Migratory Bird Treaty Act of 1918, as amended (MBTA) (TN3331), makes it illegal for anyone to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid permit issued pursuant to Federal regulations. The U.S. Fish and Wildlife Service (FWS) designates certain migratory bird species as Birds of Conservation Concern (FWS 2021-TN8740), to represent their highest conservation priorities for those birds that are not already designated as federally threatened or endangered.

Table 3.7-1 of the ER contains a list of birds known to occur within the vicinity of the HNP site. Nearly all of these are protected under the MBTA. Thirteen Birds of Conservation Concern species have the potential to occur on the HNP site (FWS 2025-TN12722): American kestrel (*Falcosparverius paulus*), Bachman's sparrow (*Peucaea aestivalis*), brown-headed nuthatch (*Sitta pusilla*), chimney swift (*Chaetura pelagica*), Chuck-will's-widow (*Antrostomus carolinensis*), grasshopper sparrow (*Ammodramus perpallidus*), Henslow's Sparrow (*Centronyx henslowii*), Kentucky Warbler (Geothlypis formosa), prairie warbler

(*Setophaga discolor*), prothonotary warbler (*Protonotaria citrea*), red-headed woodpecker (*Melanerpes erythrocephalus*), swallow-tailed kite (*Elanoides forficatus*), and wood thrush (*Hylocichla mustelina*). Of the Birds of Conservation Concern species, twelve may breed in the area in the spring and summer months. Bachman's sparrow, Henslow's sparrow, and swallow-tailed kite are also State-listed as rare (Table A-2).

Tall structures and buildings can pose a collision hazard to migratory birds. SNC has 8 structures onsite that are greater than 100 ft (30 m) above ground level (AGL): the main stack, the MET tower, the backup MET tower, the Unit 1 and Unit 2 turbine buildings, the Unit 1 and Unit 2 reactor buildings, and the microwave tower (SNC 2025-TN12618). The backup MET tower is a guyed tower, and the microwave tower is freestanding.

SNC maintains a Migratory Bird Special Purpose Utility Permit (No. MB745135). To ensure compliance with requirements of all bird protection regulations and laws promulgated to reduce avian mortality, including the BGEPA, the MBTA, and the Endangered Species Act, SNC implements an Avian Protection Procedure, as described in Section 3.7.1.4.1 of the ER. This procedure contains measures, precautions, and guidance to handle the discovery of dead or injured birds and to handle bird nests within a work zone.

There have been no bird mortalities or injuries associated with HNP operations from 2015 to August 2025 (SNC 2025-TN12618). The three suspected vulture electrocutions described in Section 3.7.1.2.7 of the ER (SNC 2025-TN12548) occurred more than 10 mi (16 km) from HNP and were not associated with HNP operations (SNC 2025-TN12618).

A.1.4 Terrestrial Invasive Species

Invasive species are defined as nonnative organisms whose introduction causes or is likely to cause economic or environmental harm, or harm to human, animal, or plant health (81 FR 88609-TN8375). Executive Order 13112 directs Federal agencies to not authorize, fund, or carry out actions likely to cause or promote the introduction or spread of invasive species unless they determine that the benefits of the action clearly outweigh the harm from invasive species and that all feasible and prudent measures to minimize risk of harm are taken (64 FR 6183-TN4477).

Table 3.7-4 of the ER lists six terrestrial invasive species known from the vicinity of the HNP site. Of these, three invasive plants have been documented at the site: Japanese honeysuckle (*Lonicera japonica*) and two lespedeza species (*Lespedeza bicolora* and *L. cuneata*). Species descriptions in Section 3.7.1.2.8 of the ER (SNC 2025-TN12548) are incorporated here by reference.

A.1.5 Important Terrestrial Habitats

Important habitats include any wildlife sanctuaries, refuges, preserves, or habitats identified by Federal or State agencies as unique, rare, or of priority for protection; wetlands and floodplains; and land areas identified as critical habitat for species listed by the FWS as threatened or endangered. No critical habitat for federally protected terrestrial species occurs within the HNP site (FWS 2025-TN12720). The important terrestrial habitats, described in Section 3.7.1.2.4, Section 3.7.1.2.9, and Appendix B of the ER are incorporated here by reference and include the wetlands onsite and in the vicinity described in Table A-1 as well as Bullard Creek and Moody Forest wildlife management areas (SNC 2025-TN12548).

In addition, the Georgia DNR in Appendix B of the ER (SNC 2025-TN12548) noted that the Moody Forest Preserve, managed by The Nature Conservancy of Georgia, occurs in the vicinity of the site and that Cobb-Creek-Altamaha River (0307010601) and Altamaha River 4 (0307010602) are State Wildlife Action Plan High Priority Watersheds.

A.2 Aquatic Resources

This section describes the aquatic environment at the HNP site, as well as relevant ecological studies and surveys conducted at HNP and within the surrounding area. This information supplements and supports the NRC staff's analyses of potential impacts that the aquatic environment may experience as a result of the proposed HNP subsequent license renewal, which are presented in Section 3.5.2 of this environmental assessment.

HNP lies on the southern bank of the Altamaha River in Appling County. The plant uses a closed-loop circulating water system and mechanical draft cooling towers with drift eliminators as a heat sink (SNC 2025-TN12548). HNP withdraws makeup water, at a rate of 47,040 gpm, from the Altamaha River for cooling and discharges heated effluent back into the river with a thermal discharge limit of a 5°F (2.8°C) change or 90°F (32.2°C) in the summer. This section describes the aquatic resources of the Altamaha River.

The NRC staff previously characterized these resources in Section 2.2.5 of the supplemental EIS for the HNP initial license renewal (NRC 2001-TN12684). Sections 3.7.2 and 3.7.3 of the ER (SNC 2025-TN12548) also describe aquatic resources. This information is incorporated here by reference, with key, new, and updated information summarized below in the following subsections.

A.2.1 Freshwater Environment

A.2.1.1 Altamaha River

The Altamaha River is Georgia's largest river, spanning 300–1,000 ft (91–305 m) wide and 10–25 ft (3–7.6 m) deep. It is formed by the confluence of the Ocmulgee and Oconee rivers and flows roughly 137 mi (220 km) to the Atlantic Ocean, draining a watershed that covers more than a quarter of the State (GR 2025-TN12723). The river flows through a largely undeveloped corridor of bottomland hardwood forests, cypress swamps, and expansive floodplains that support high biodiversity. Its watershed provides habitat for numerous fish, birds, and rare species, including State and federally protected plants, fish, and mussels. The Altamaha is one of the last undammed rivers in the southeastern United States. Where the Altamaha flows past the HNP, it is broad, slow-moving, and largely undeveloped, bordered by extensive bottomland hardwood forests and wide floodplain wetlands. The channel in this reach tends to be wide and gently meandering, with sandy bars, backwater sloughs, and cypress-tupelo swamps filling the low-lying areas on both sides. HNP's intake and discharge structures are both located on the Altamaha (see Section 3.2.1).

The USGS and Georgia Environmental Protection Division (Georgia EPD) conduct limited monitoring of the Altamaha basin near HNP. The data from Georgia EPD's Altamaha basin total maximum daily load which supports 305(b) and 303(d) assessments, reports the most recent dissolved oxygen (DO) daily average to be 5.0 mg/L and no less than 4.0 mg/L for the basin. Historically, data from the 1990s showed that DO impairments occurred mainly in small, low-flow, or intermittent tributaries. The USGS gauge (USGS 2026-TN12701) closest to HNP on the Altamaha River near Baxley, Georgia with data from 1970 to 2000 reported minimum DO levels

of 2.3 mg/L, maximum DO levels of 12.7 mg/L, and an average DO of 7.55 mg/L (USGS 2026-TN12701). There is more recent temperature data from that location and from 1971–1976 and 2016–2025, wherein over that sampling period the daily average low temperature was 50.16°F (10.09°C) and the daily average high temperature was 85.33°F (29.63°C) (USGS 2026-TN12701).

As part of the Georgia Water Planning, a regional water plan was created for the Altamaha in 2011 and most recently updated in 2023 (GWP 2023-TN12695). The plan outlines strategies to manage water use and maintain water quality over the next 40 years, including strategies to address surface water challenges during drier years/drought periods and water quality challenges related to low DO in some portions of the region.

A.2.2 Aquatic Biological Communities

The trophic structure of the HNP aquatic environment includes primary producers (plankton, macrophytes, and periphyton), primary consumers (zooplankton and benthic macroinvertebrates), and bottom feeding, planktivorous, and piscivorous fish that serve as secondary and tertiary consumers. Primary producers are organisms that capture the sun's energy and synthesize organic compounds from inorganic chemicals. They form the trophic structure's foundation by producing the organic nutrients and energy used by consumers. Primary producers in river systems include phytoplankton, aquatic macrophytes, and periphyton. Of the three, phytoplankton and periphyton are the major producers in river systems.

A.2.2.1 Primary Producers

This section characterizes important HNP aquatic environment primary producers, which include phytoplankton, periphyton, and macrophytes.

Phytoplankton and Periphyton

Plankton are small and often microscopic organisms that drift or float in the water column. Phytoplankton are single-celled plant plankton and include diatoms (single-celled, yellow algae) and dinoflagellates (single-celled organism with two flagella). Phytoplankton live suspended in the water column and occur in the limnetic (open water) zone of a water body. Periphyton consist of single-celled or filamentous species of algae that attach to benthic or macrophytic surfaces. Periphyton occur in the littoral (nearshore and shallow) zone. They tend to be highly productive because they have more access to nutrients through their roots than do phytoplankton. The phytoplankton community in the Altamaha is not regularly sampled but common phytoplankton and periphyton found in the HNP freshwater environment include Chlorophyceae (green algae), Myxophycae (blue-green algae), Bacillariophyceae (diatoms), and cyanobacteria (UGA SIO 2017-TN12724, 75 FR 61664-TN12725).

Macrophytes

Aquatic macrophytes are large plants, both emergent and submerged, that inhabit shallow water areas. Macrophytes occur in the littoral (nearshore and shallow) zone. They tend to be highly productive because they have more access to nutrients through their roots than do phytoplankton. Aquatic vegetation in the Altamaha River includes species adapted to both submerges conditions and periodically exposed areas like channel bars. Shallow nearshore waters commonly support submerges plants such as water hyssop (*Bacopa monnieri*) and

slender bladderwort (*Utricularia subulate*)(SNC 2025-TN12548). Exposed areas within the river channel, including sandbars, are typically vegetated by a variety of grasses and sedges, including annual sedge (*Cyperus compressus*), bearded flatsedge (*Cyperus squarrosus*), tropical flatsedge (*Cyperus surinamensis*), green flatsedge (*Cyperus virens*), Virginia wildrye (*Elymus virginicus*), Vahl's fimbry (*Fimbristylis vahlii*), willow primrose (*Ludwigia decurrens*), green carpetweed (*Mollugo verticillata*), and Baldwin's nailwort (*Paronychia baldwinii*), all of which are adapted to periodically exposed riverine habitats (Luber 2002-TN12726).

A.2.2.2 Primary Consumers

This section summarizes important HNP aquatic environment primary consumers, which include zooplankton and benthic invertebrates.

Zooplankton

Zooplankton are tiny invertebrates that provide essential food for larval fish and other small aquatic organisms. The zooplankton community in the Altamaha River likely includes copepods, rotifers, protozoans, and cladocerans like *Daphnia*, which are common in freshwater, warmwater systems. No zooplankton sampling has been conducted in the vicinity of HNP.

Benthos (insects, mussels, crayfish, snails)

Researchers have documented 12 species of freshwater mussels and the invasive Asian clam (*Corbicula fluminea*) in the vicinity of HNP (SNC 2025-TN12548). Six of these mussel species are endemic to the Altamaha Basin, including the Altamaha slabshell (*Elliptio hopetonensis*), Georgia elephantear (*Elliptio dariensis*), Altamaha lance (*Elliptio shepardiana*), Altamaha pocketbook (*Lampsilis dolobraeformis*), inflated floater (*Anodonta [Pyganodon] gibbosa*), and Altamaha spinymussel (*Elliptio spinosa*). Mussels depend on host fish for completing their larval stage (glochidia). The host fish for the endemic species of mussel in HNP include blue gill (*Lepomis macrochirus*), fathead minnow (*Pimephales promelas*), largemouth bass (*Micropterus salmoides*), brown and yellow bullhead (*Ameiurus nebulosus* and *Ameiurus natalis*), and robust redhorse (*Moxostoma robustum*) (Johnson et al. 20112-TN12727).

In 2017, GPC entered into a Candidate Conservation Agreement (CCA) with FWS and GA Wildlife Resources Division to implement conservation measures for the delicate spike, Altamaha arcmussel, inflated floater, Savannah lilliput, and reverse pebblesnail through cooperative work to conserve existing populations of these species within GPC's project areas in the Altamaha River Basin, including HNP (FWS 2017-TN12728). During 2021 and 2023, Georgia Wildlife Resources Division (GA WRD) surveyed mussels in the vicinity of HNP and recorded observations of 10 species including Altamaha arcmussel, Altamaha slabshell, variable spike (*Elliptio icterina*), Altamaha lance, Altamaha pocketbook, inflated floater, rayed pink fatmucket (*Lampsilis splendida*), Eastern creekshell (*Villosa delumbis*), paper pondshell (*Utterbackia imbecillis*), and Georgia elephantear (SNC 2025-TN12548). Currently, the Altamaha spinymussel is listed as federally endangered and the Altamaha arcmussel is listed as State threatened.

There have been no other benthic invertebrate surveys conducted at HNP although some have been conducted up or downstream of the plant. A study completed in 2007 sampled invertebrate communities along the Altamaha with site 7 located just upstream of HNP and site 8 located just downstream (Reese and Batzer 2007-TN12729). Invertebrate density averaged

18,348 individuals per square meter, with a standing biomass of 2,136 mg of dry matter per square meter (DM/square meters [m^2]). Dominant taxa included Dytiscidae (diving beetles) and Asellidae (aquatic isopods), which were prominent in both abundance and biomass. Other abundant groups included Chirocephalidae (fairy shrimp), Cladocera, Cyclopoida, and Ostracoda, while Crangonyctidae contributed primarily to biomass. Unique taxa at these sites included terrestrial myriapods (Scolopendromorpha and Polydesmida), hydrophilid beetles, and fairy shrimp. Diving beetles were the only taxa dominant in both abundance and biomass, whereas Planorbidae (freshwater snails) dominated biomass alone.

A.2.2.3 Secondary and Tertiary Consumers

This section characterizes important aquatic environment secondary and tertiary consumers, which include ichthyoplankton, juvenile, and adult fish.

Ichthyoplankton

As part of Clean Water Act of 1972 Section 316(b) compliance, entrainment studies were conducted in 1974, 1975, 1976, 1979, and 1980 that sampled ichthyoplankton in front of the HNP intake structure and across the river and this information is incorporated here by reference (SNC 2025-TN12548). Over the course of the 1980 entrainment study at HNP, researchers collected a total of 25 fish eggs and 442 fish (including larval juveniles and adults) in the 8-month long survey. Most specimens, including 24 eggs and 380 fish, were collected at night. American shad (*Alosa sapidissima*) dominated the collection, accounting for 44 percent of all eggs recorded. Other ichthyoplankton included early life stages of Cyprinidae (forage minnows such as silvery minnow and coastal shiner), Ictaluridae (channel catfish), and Centrarchidae (redbreast sunfish, largemouth bass, and crappie). Most larvae were juveniles in early developmental stages, reflecting local spawning and recruitment activity. The assemblage shows that ichthyoplankton in this reach of the Altamaha River is composed of both forage species and recreationally important gamefish, with American shad contributing the largest proportion of eggs.

Juvenile and Adult Fish

The Altamaha River and its tributaries support a diverse warmwater fish community that includes many recreational and commercially valuable species (see Table A-3). Based on GA WRD aquatic surveys commercial and recreationally important species in the Altamaha include gamefish species like sunfishes, catfishes, chain pickerel, yellow perch, American eel, bass, and the commercially important American shad (GDNR 2020-TN12730). Anglers commonly target largemouth bass, sunfish, crappie, other panfish, and catfish species (GDNR 2026-TN12731). The river also serves as an important spring spawning corridor for migratory fishes such as American shad, hickory shad, and blueback herring and it sustains Georgia's largest commercial shad fishery (GR 2025-TN12723). Most commercial activity occurs in the lower 37 mi (60 km) of the river, far downstream from HNP (SNC 2025-TN12548). Of the fish species documented in the Altamaha in the vicinity of HNP sunfish are the most abundant followed by minnows, catfish, and suckers (SNC 2025-TN12548). Other fish species of note in the area include gizzard shad, spotted sucker, silver redhorse, longnose gar, silvery minnow, American shad, and hogchoker.

Table A-3 Freshwater Fish Species Present in Altamaha River

Common Name	Scientific Name	GPC[a]	NRC[b]	GA WRD[c]
mud sunfish	*Acantharchus pomotis*	1978	-	-
shortnose sturgeon	*Acipenser brevirostrum*	1978	-	2024
Atlantic sturgeon	*Acipenser oxyrinchus oxyrinchus*	1978	-	2024
blueback herring	*Alosa aestivalis*	1978	2001	X
hickory shad	*Alosa mediocris*	1978	-	X
American shad	*Alosa sapidissima*	1978	2001	X
yellow bullhead	*Ameiurus natalis*	1978	-	2004
bowfin	*Amia calva*	1978	-	2003
American eel	*Anguilla rostrata*	1978	-	2019
pirate perch	*Aphredoderus sayanus*	1978	2001	2004
flier	*Centrarchus macropterus*	1978	-	2005
Ocmulqee shiner	*Cvorinella callisema*	1978	-	-
common carp	*Cvprinus carpio*	1978	-	-
gizzard shad	*Dorosoma cepedianum*	1978	-	X
threadfin shad	*Dorosoma petenense*	1978	-	-
Everglades pygmy sunfish	*Elassoma evergladei*	1978	-	-
banded pygmy sunfish	*Elassoma zonatum*	1978	-	2004
bluespotted sunfish	*Enneacanthus aloriosus*	1978	-	-
banded sunfish	*Enneacanthus obesus*	1978	-	-
creek chubsucker	*Erimvzon oblonaus*	1978	-	-
redfin pickerel	*Esox americanus americanus*	1978	2001	2004
chain pickerel	*Esox niger*	1978	-	2003
swamp darter	*Etheostoma fusiforme*	-	-	2004
Christmas darter	*Etheostoma hopkinsi*	1978	-	2003
tessellated darter	*Etheostoma olmstedi*	1978	-	-
lined topminnow	*Fundulus lineolatus*	-	-	2005
starhead topminnow	*Fundulus notti*	1978	-	-
eastern mosquitofish	*Gambusia holbrooki*	1978	-	2004
least killfish	*Heterandria Formosa*	1978	-	-
silvery minnow	*Hybognathus nuchalis*	1978	2001	X
snail bullhead	*Ictalurus brunneus*	1978	2001	-
brook silverside	*Labidesthes sicculus*	1978	2001	-
white catfish	*Ictalurus catus*	1978	-	1996
blue catfish	*Ictalurus furcatus*	-	-	2025
brown bullhead	*Ictalurus nebulosus*	1978	2001	-
flat bullhead	*Ictalurus platvcephalus*	1978	-	-
channel catfish	*Ictalurus punctatus*	1978	2001	2025
longnose gar	*Lepisosteus osseus*	1978	-	X
Florida gar	*Lepisosteus platyrhincus*	1978	-	2003
redbreast sunfish	*Lepomis auritus*	1978	2001	2004
warmouth	*Lepomis gulosus*	1978	-	2005
bluegill	*Lepomis macrochirus*	1978	-	2025

Common Name	Scientific Name	GPC[(a)]	NRC[(b)]	GA WRD[(c)]
dollar sunfish	*Lepomis marginatus*	1978	-	2005
longear sunfish	*Lepomis megalotis*	-	-	X
redear sunfish	*Lepomis microlophus*	1978	-	2004
spotted sunfish	*Lepomis punctatus*	1978	-	2004
hybrid sunfish	*Lepomis* sp. x *Lepomis* sp.	-	-	X
pygmy killifish	*Leptolucania omnata*	1978	-	-
white bass	*Marone chrysops*	1978	-	-
striped bass	*Marone saxatilis*	1978	-	-
hybrid striped bass	*Marone saxatilis* x *M. chrysops*	-	-	X
shoal bass	*Micropterus cataractae*	-	-	X
largemouth bass	*Micropterus salmoides*	1978	2001	2004
spotted sucker	*Minytrema melanops*	1978	2001	X
silver redhorse	*Moxostoma anisurum*	1978	2001	X
robust redhorse	*Moxostoma robustum*	-	-	2002
smallfin redhorse	*Moxostoma robustum*	1978	-	-
striped mullet	*Mugil cephalus*	1978	-	-
golden shiner	*Notemigonus crysoleucas*	1978	-	2005
ironcolor shiner	*Notropis chalvbaeus*	-	2001	-
dusky shiner	*Notropis cummingsae*	1978	-	-
spottail shiner	*Notropis hudsonius*	1978	-	-
longnose shiner	*Notropis longirostris*	1978	-	-
taillight shiner	*Notropis maculatus*	1978	-	2004
coastal shiner	*Notropis petersoni*	1978	2001	-
tadpole madtom	*Noturus gyrinus*	1978	2001	2004
speckled madtom	*Noturus leptacanthus*	1978	-	-
Southern flounder	*Paralichthvs lethostiqma*	1978	-	-
blackbanded darter	*Percina nigrofasciata*	1978	-	2003
yellow perch	*Perea flavescens*	1978	2001	X
fathead (bluntnose) minnow	*Pimephales promelas*	1978	-	-
flathead catfish	*Polvdictus olivaris*	-	-	2025
black crappie	*Pomoxis niaromaculatus*	1978	2001	X
Atlantic needlefish	*Stronavlura marina*	1978	2001	-
hogchoker	*Trinectes maculatus*	1978	2001	X
eastern mudminnow	*Umbra pygmaea*	1978	-	-
TOTAL SPECIES	**-**	**66**	**20**	**46**

GA WRD = Georgia Wildlife Resources Division; GPC = Georgia Power Company; HNP = Edwin I. Hatch Nuclear Plant; NRC = U.S. Nuclear Regulatory Commission.

"-" denotes no content in table cell.

(a) HNP preconstruction surveys (1968) and impingement and entrainment sampling studies (1978) conducted by GPC.

(b) NUREG-1437 (NRC 2024-TN10161).

(c) Year last observed in Appling, Jeff Davis, or Toombs County by GA WRD; X = present but year unknown.

Sources: GDNR 2026-TN12707; SNC 2025-TN12618, SNC 2025-TN12548.

Important Species

Invasive aquatic species have been observed in Altamaha River. Blue and flathead catfish (*Ictalurus furcatus* and *Pylodictis olivaris*) appeared in the Altamaha in the early 1980s and were later confirmed in GA WRD creel surveys in 2005 and 2006 (SNC 2025-TN12548). Their expanding populations stress native fish communities and have contributed to documented declines in native gamefish and bullhead catfish. The invasive Asian clam also occurs near the HNP intake system and appears in the diets of blue catfish and other fishes raising concerns the blue catfish could also be consuming the federally listed Altamaha spinymussel and other native mussel species. Other invasive fish species found near HNP include hybrid striped bass (*Morone saxatilis* x *Morone chrysops*), hybrid sunfish (*Lepomis* sp. x *Lepomis* sp.), and yellow perch (*Perca flavascens*) (SNC 2025-TN12548).

There are seven State-listed aquatic species listed in Appling, Jeff Davis, and Toombs Counties that could be present in the aquatic action area (See Table A-4). There have been no surveys or studies conducted at the HNP site for aquatic species since 1999 although GA WRD and UGA have conducted studies upstream and downstream of the plant. Based on habitat preferences and lack of observation in the last 20+ years in or around HNP it is unlikely that the delicate spike or robust redhorse are actually present. Shortnose sturgeon, Atlantic sturgeon, and the Altamaha spinymussel are also federally listed and they are discussed in detail in Section A.3.2.

Table A-4 State-listed Aquatic Species in Appling, Jeff Davis, and Toombs Counties

Common Name	Scientific Name	Protected Status	Year Last Observed
shortnose sturgeon	*Acipenser brevirostrum*	SE	2024
Atlantic sturgeon	*Acipenser oxyrinchus oxyrinchus*	SE	2024
Altamaha arcmussel	*Alasmidonta arcula*	ST	2023
delicate spike	*Elliptio arctata*	SE	1993
Altamaha spinymussel	*Elliptio spinosa*	SE	2007
robust redhorse	*Moxostoma robustum*	SE	2002
Savannah lilliput	*Toxolasma pullus*	ST	2022

ST = State threatened; SE = State endangered.
Sources: GDNR 2026-TN12732, GDNR 2026-TN12733, GDNR 2026-TN12734, GDNR 2026-TN12735, GDNR 2026-TN12736.

The Altamaha arcmussel occupies slow-water habitats such as sloughs, oxbows, and depositional areas in large creeks and rivers, most often settling in fine sand but also occurring in mud silt, and occasionally coarser substrates (GDNR 2018-TN12737). Its diet likely consists of algae and bacteria. Although its life history is poorly understood, spawning appears to be seasonal between late May and October and glochidia (larvae) may use robust redhorse, striped jumprock, and suckers as host fish (Johnson et al. 20112-TN12727). Once thought to be limited to the lower Altamaha basin, the species is now known to extend upstream into the Oconee and Ocmulee river systems and also occur in the Savannah and Ogeechee river basins. Major threats to the Atlamaha arcmussel include excess sedimentation that buries suitable habitat, pollution, agricultural and forestry effluents, dams and water use, and predation and competition from introduced blue and flathead catfish (GDNR 2018-TN12737).

The Savannah lilliput inhabits shallow, slow-moving waters along the banks of streams, rivers, ponds, and lakes, where it settles into soft substrates such as mud or sand (GDNR 2018-

TN12738). Although little is known about the Savannah lilliput, it is likely that it feeds on algae and bacteria like other unionid mussels. Spawning occurs from late April to early August, and the species uses hybrid sunfish and likely other species of sunfish as a host. Its range extends from the Neuse River in North Carolina to the Altamaha River in Georgia, with populations documented in the Savannah, Ogeechee, and Altamaha systems. Major threats include reservoir operations that can result in low flow exposing mussel beds, hybridization with introduced species, excess sedimentation, and predation and competition from introduced blue and flathead catfish (GDNR 2018-TN12738).

In keeping with the CCA for mollusks of the Altamaha River Basin, the State of Georgia protects five mussel species including the Altamaha arcmussel and the Savannah lilliput (FWS 2017-TN12728). The CCA is authorized under the ESA to implement conservation measures for at-risk species, in this case State-listed but not yet federally listed species. As part of the agreement, GPC agreed to conduct surveys to increase the understanding of the species range, habitat requirements, taxonomy, and life history and to implement conservation measures to conserve existing mussel populations.

A.3 Endangered Species Act Section 7 Consultation

As a Federal agency, the NRC must comply with the ESA (TN1010), as part of any action authorized, funded, or carried out by the agency. In this case, the proposed agency action is whether to issue subsequent renewed licenses for the continued operation of HNP. The proposed action would authorize SNC to operate HNP for an additional 20 years beyond the terms of the current renewed operating licenses. Under Section 7 of the ESA, the NRC must consult with the FWS and the National Marine Fisheries Service (NMFS) ("the Services" [collectively] or "Service" [individually]), as appropriate, to ensure that the proposed action is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat.

A.3.1 Federal Agency Obligations under Section 7 of the Endangered Species Act

The ESA (TN1010) and the regulations that implement ESA Section 7 at Title 50 of the *Code of Federal Regulations* (50 CFR) Part 402 (TN4312) describe the consultation process that Federal agencies must follow in support of agency actions. As part of this process, the Federal agency shall either request that the Services (1) provide a list of any listed or proposed species or designated or proposed critical habitats that may be present in the action area, or (2) request that the Services concur with a list of species and critical habitats that the Federal agency has created (50 CFR 402.12(c)). If any such species or critical habitats may be present, the Federal agency prepares a biological assessment to evaluate the potential effects of the action and determine whether the species or critical habitats are likely to be adversely affected by the action (50 CFR 402.12(a); 16 U.S.C. 1536(c) [TN4459]).

Biological assessments are required for any agency action that is a "major construction activity" (50 CFR 402.12(b)) (TN4312). A major construction activity is a construction project or other undertaking having construction-type impacts that is a major Federal action significantly affecting the quality of the human environment under NEPA (TN661) (51 FR 19926-TN7600). Federal agencies may fulfill their obligations to consult with the Services under ESA Section 7 and to prepare a biological assessment, if required, in conjunction with the interagency cooperation procedures required by other statutes, including NEPA (50 CFR 402.06(a)). In such cases, the Federal agency should include the results of ESA Section 7 consultation(s) in the NEPA document (50 CFR 402.06(b)).

A.3.2 Biological Evaluation

Subsequent license renewal (SLR) does not require the preparation of a biological assessment because it is not a major construction activity. Nonetheless, the NRC staff must consider the impacts of its actions on federally listed species and designated critical habitats. For cases in which the NRC staff finds that license renewal "may affect" ESA-protected species or habitats, ESA Section 7 requires the NRC to consult with the relevant Service(s).

In accordance with 50 CFR 402.08 (TN4312), Federal agencies may designate a non-Federal representative (NFR) to conduct informal consultation. By letters dated July 8, 2025, the NRC notified the FWS and the NMFS of its designation of SNC as its NFR for the HNP SLR application (NRC 2025-TN12708, NRC 2025-TN12709). In support of the consultation, SNC prepared a biological evaluation, in accordance with the Services' suggested biological assessment contents described at 50 CFR 402.12(f) (TN4312), to evaluate the potential impacts of the proposed SLR (SNC 2026-TN12711, SNC 2026-TN12739). The results of the analysis are summarized in Table A-5.

Table A-5 Effect Determinations for Federally Listed Species and Designated Critical Habitats for the Edwin I. Hatch Nuclear Plant Subsequent License Renewal

Species or Critical Habitat	Federal Status[a]	Potentially Present in the Action Area?	Service Jurisdiction	ESA Effect Determination[b]	Service Concurrence Date[c]
tricolored bat	FPE	Yes	FWS	NLAA	N/A
red-cockaded woodpecker	FT	Yes	FWS	NLAA	January 13, 2026
eastern indigo snake	FT	Yes	FWS	NLAA	January 13, 2026
southern hognose snake	FPT	Yes	FWS	NLAA	N/A
Altamaha spinymussel	FE	Yes	FWS	NLAA	January 13, 2026
Altamaha spinymussel critical habitat	FD	No	FWS	NE	N/A
monarch butterfly	FPT	Yes	FWS	NLAA	N/A
Atlantic sturgeon (South Atlantic DPS)	FE	Yes	NMFS	NLAA	March 20, 2026
shortnose sturgeon	FE	Yes	NMFS	NLAA	March 20, 2026
Atlantic Sturgeon critical habitat	FD	Yes	NMFS	NLAA	March 20, 2026

ESA = Endangered Species Act; FD = federally designated critical habitat; FE = federally endangered; FPE = proposed for Federal listing as endangered; FPT = proposed for Federal listing as threatened; FT = federally threatened; FWS = U.S. Fish and Wildlife Service; N/A = not applicable; NE = no effect; NLAA = may affect but is not likely to adversely affect; NMFS = National Marine Fisheries Service; NRC = U.S. Nuclear Regulatory Commission.

(a) Indicates protection status under the Endangered Species Act.

(b) The NRC staff makes its effect determinations for federally listed species in accordance with the language and definitions specified in the FWS and NMFS Endangered Species Consultation Handbook (FWS and NMFS 1998-TN1031).

(c) The ESA does not require Federal agencies to seek Service concurrence for "no effect" determinations or for NLAA determinations for candidate and proposed species.

A.3.3 Chronology of Endangered Species Act Section 7 Consultation

SNC, as the designated NFR, sought concurrence from the Services for the species for which the proposed action of HNP SLR may affect but is not likely to adversely affect (see Table A-1) in accordance with 50 CFR 402.13(c) (TN4312). Table A-6 lists the correspondence relevant to the ESA Section 7 consultation.

Table A-6 Endangered Species Act Section 7 Consultation Correspondence with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service for the Subsequent License Renewal of the Edwin I. Hatch Nuclear Plant

Date	Description	ADAMS Accession No.[(a)]
July 8, 2025	J. Rikhoff (NRC) to Georgia Ecological Services Field Office (FWS), Designation of Southern Nuclear Operation Co. Inc as the non-Federal representative for the proposed HNP subsequent license renewal	ML25169A254
July 8, 2025	J. Rikhoff (NRC) to Southeast Regional Office (NMFS), Designation of Southern Nuclear Operation Co. Inc as the non-Federal representative for the proposed HNP subsequent license renewal	ML25182A171
December 23, 2025	Georgia Field Office (FWS) to S. Healy (NRC), Official species list for the proposed HNP subsequent license renewal	ML25357A068
January 5, 2026	SNC to NMFS, Request for concurrence with Endangered Species Act determinations for HNP Units 1 and 2, proposed subsequent license renewal in Appling County, Georgia (IPAC Project Code: 2026-0023260)	ML26006A060
January 6, 2026	SNC to FWS, Request for concurrence with Endangered Species Act determinations for HNP Units 1 and 2, proposed subsequent license renewal in Appling County, Georgia (IPAC Project Code: 2026-0023060)	ML26006A164
January 13, 2026	FWS to SNC, Concurrence with Endangered Species Act determinations for HNP Units 1 and 2, proposed subsequent license renewal in Appling County, Georgia (IPAC Project Code: 2026-0023060)	ML26020A042
March 20, 2026	NMFS to SNC, Concurrence with Endangered Species Act determinations for HNP Units 1 and 2, proposed subsequent license renewal in Appling County, Georgia	ML26079A287

ADAMS = Agencywide Documents Access and Management System; FWS = U.S. Fish and Wildlife Service; HNP = Edwin I. Hatch Nuclear Plant; NRC = U.S. Nuclear Regulatory Commission, NMFS = National Marine Fisheries Service.
(a) Access these documents through the NRC's ADAMS at https://adams.nrc.gov/wba/.

A.4 Magnuson-Stevens Act Essential Fish Habitat Consultation

The NRC must comply with the MSA (TN9966) for any actions authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken that may adversely affect any essential fish habitat (EFH) identified under the MSA. In Section 3.6, the NRC staff concludes that the NMFS has not designated any EFH under the MSA within the affected area and that the proposed HNP SLR would have no effect on EFH. Thus, the MSA does not require the NRC to consult with the NMFS for the proposed action.

A.5 National Marine Sanctuaries Act Consultation

The NMSA (TN7197) authorizes the Secretary of Commerce to designate and protect areas of the marine environment with special national significance due to their conservation, recreational, ecological, historical, scientific, cultural, archaeological, educational, or aesthetic qualities as national marine sanctuaries. Under Section 304(d) of the act, Federal agencies must consult with the National Oceanic and Atmospheric Administration's Office of National Marine Sanctuaries if a Federal action is likely to destroy, cause the loss of, or injure any sanctuary resources. No coastal or marine waters or Great Lakes occur near HNP and the HNP SLR would have no effect on sanctuary resources. Thus, the NMSA does not require the NRC to consult with the National Oceanic and Atmospheric Administration for the proposed action.

A.6 References

50 CFR Part 402. *Code of Federal Regulations,* Title 50, *Wildlife and Fisheries*, Part 402, "Interagency Cooperation—Endangered Species Act of 1973, as amended." TN4312.

51 FR 19926. June 3, 1986. "Interagency Cooperation - Endangered Species Act of 1973, as amended." Final Rule, *Federal Register*, Fish and Wildlife Service, Interior; National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Commerce. TN7600.

64 FR 6183. February 8, 1999. "Executive Order 13112 of February 3, 1999: Invasive Species." *Federal Register*, Office of the President. TN4477.

75 FR 61664. October 6, 2010. "Endangered and Threatened Wildlife and Plants; Endangered Status for the Altamaha Spinymussel and Designation of Critical Habitat." *Federal Register*, Department of the Interior. TN12725.

81 FR 88609. December 8, 2016. "Safeguarding the Nation from the Impacts of Invasive Species." Executive Order 13751. *Federal Register*, Office of the President. TN8375.

16 U.S.C. § 1536. Endangered Species Act, Section 7, "Interagency Cooperation." TN4459.

16 U.S.C. § 1801 *et seq*. U.S. Code Title 16, Conservation, Chapter 38, "Fishery Conservation and Management." TN9966.

16 U.S.C. § 3901 *et seq.* U.S. Code Title 16, *Conservation*, Chapter 59, "Wetland Resources." TN10912.

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FWS (U.S. Fish & Wildlife Service). 2025. Letter to NRC Document Control Desk, from M. Ballard, Ecological Solutions, dated December 4, 2025, regarding "List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project." Georgia Ecological Services Field Office, Athens, Georgia. ADAMS Accession No. ML25352A083. TN12720.

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GDNR (Georgia Department of Natural Resources). 2018. "Alasmidonta arcula (I. Lea, 1838)." Atlanta, Georgia. Accessed January 11, 2026, at https://georgiabiodiversity.org/portal/profile?group=mollusks&es_id=17962. TN12737.

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GDNR (Georgia Department of Natural Resources). 2020. "Georgia's Amazing Freshwater Fish Fauna." Atlanta, Georgia. Accessed January 11, 2026, at https://georgiawildlife.com/FreshwaterFish#conservation. TN12730.

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GDNR (Georgia Department of Natural Resources). 2026. "Fish, Rare Species Status Maps; Appling, Jeff Davis, and Toombs Counties." Atlanta, Georgia. Accessed January 8, 2026, at https://georgiabiodiversity.org/ga_all4/map_for_unit_taxgroup_list/cnty/fish. TN12707.

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National Marine Sanctuaries Act. 2000. “National Marine Sanctuaries Act, Title 16, Chapter 32 § 1431 *et seq.* United States Code as amended by Public Law 106-513.” Silver Spring, M.D. Available at https://nmssanctuaries.blob.core.windows.net/sanctuaries-prod/media/archive/library/national/nmsa.pdf. TN7197.

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NRC (U.S. Nuclear Regulatory Commission). 2025. Email from J. Rikhoff, Acting Chief Environmental Technical Review Branch 1 Division of Rulemaking, Environment, and Financial Support Office of Nuclear Material Safety and Safeguards, to M. Alvarez, Section 7 Team Lead NMFS Southeast Regional Office National Marine Fishery Service, dated July 8, 2025, regarding "Designation of Southern Nuclear Operating Co., Inc, as the Non-Federal Representative for the Subsequent License Renewal Application for Edwin I. Hatch Nuclear Plant, Unit Nos. 1 and 2 (Docket Numbers: 050-321 and 050-366)." Washington, D.C. ADAMS Accession No. ML25182A171. TN12709.

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SNC (Southern Nuclear Operating Company, Inc.). 2025. Letter from J.M. Coleman, Regulatory Affairs Director, to NRC Document Control Desk, dated October 20, 2025, regarding "Edwin I. Hatch Nuclear Plant, Units 1 and 2 3535 Colonnade Parkway Birmingham, AL 35243 205 992 5000 NL-25-0403 10 CFR 50 10 CFR 54 Subsequent License Renewal Application Environmental Audit Response to Requests for Confirmation of Information and Requests for Additional Information." Birmingham, Alabama. ADAMS Accession No. ML25293A450. TN12618.

SNC (Southern Nuclear Operating Company, Inc.). 2025. Enclosure 2, Edwin I. Hatch Nuclear Plant Unit 1 and 2, Subsequent License Renewal Application, Appendix E, Applicant's Environmental Report. Birmingham, Alabama. ADAMS Accession No. ML25135A392. TN12548.

SNC (Southern Nuclear Operating Company, Inc.). 2026. Letter from J.M. DeLano, Environmental Affairs Manager, to M. Alvarez, Section 7 Team Lead NMFS Southeast Regional Office National Marine Fishery Service, dated January 5, 2026, regarding "Request for Concurrence with Endangered Species Act Determinations for Edwin I. Hatch, Units 1 And 2, Proposed Subsequent License Renewal in Appling County, Georgia (IPAC Project Code: 2026-0023060)." Birmingham, Alabama. ADAMS Accession No. ML26006A060. TN12711.

SNC (Southern Nuclear Operating Company, Inc.). 2026. Letter from J.M. DeLano, Environmental Affairs Manager, to United States Fish and Wildlife Service Georgia Ecological Services, dated January 6, 2026, regarding "Request for Concurrence with Endangered Species Act Determinations for Edwin I. Hatch, Units 1 And 2, Proposed Subsequent License Renewal in Appling County, Georgia (IPAC Project Code: 2026-0023060)." Birmingham, Alabama. ADAMS Accession No. ML26006A164. TN12739.

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APPENDIX B

NATIONAL HISTORIC PRESERVATION ACT SECTION 106 CONSULTATION

The National Historic Preservation Act of 1966, as amended (NHPA) (TN4157), requires Federal agencies to consider the effects of their undertakings on historic properties and consult with applicable Federal and State agencies, Indian Tribes, individuals, and organizations with a demonstrated interest in the undertaking before taking an action. Historic properties are defined as resources that are eligible for listing or listed on the National Register of Historic Places. The NHPA Section 106 (TN4839) review process is outlined in regulations issued by the Advisory Council on Historic Preservation in Title 36 of the *Code of Federal Regulations* (36 CFR) Part 800, "Protection of Historic Properties" (TN513). In accordance with 36 CFR 800.8(c), "Use of the NEPA Process for Section 106 Purposes," the U.S. Nuclear Regulatory Commission (NRC, the Commission) has elected to use the National Environmental Policy Act of 1969, as amended (NEPA), process to comply with its obligations under Section 106 of the NHPA.

Additionally, in accordance with the NRC's January 9, 2017, Tribal Policy Statement (82 FR 2402-TN5500), the NRC invited State-recognized Tribes to submit any comments or concerns on the scope of the environmental review.

Table B-1 lists the chronology of consultation and consultation documents related to the NRC's NHPA Section 106 review of the proposed Edwin I. Hatch Nuclear Plant (HNP), Units 1 and 2 subsequent license renewal. The NRC staff is required to consult with the noted agencies and organizations in accordance with the laws and regulations listed above.

Table B-1 National Historic Preservation Act Section 106 Correspondence for the Subsequent License Renewal of the Edwin I. Hatch Nuclear Plant

Date	Description	ADAMS Accession No.[(a)]
07/22/2025	Letter from D. Davis, NRC to J. Loichinger, ACHP – request for comments; notification of Section 106 review	ML25192A050
07/22/2025	Letter from D. Davis, NRC to C. Nunn, GA SHPO – request for comments; initiation of Section 106 review	ML25192A049
07/22/2025	Letter from D. Davis, NRC to M. McCormick, Principal Chief, Lower Muskogee Creek Tribe – request for comments	ML25192A146
07/22/2025	Letter from D. Davis, NRC to L. Johnson, Chief, Seminole Nation of Oklahoma – request for comments; initiation of Section 106 review	ML25203A212
07/22/2025	Letter from D. Davis, NRC to R. Morrow, Town King, Thlopthlocco Tribal Town – request for comments; initiation of Section 106 review	ML25203A213
07/22/2025	Letter from D. Davis, NRC to M. Osceola, Chairman, Seminole Tribe of Florida – request for comments; initiation of Section 106 review	ML25203A214
07/22/2025	Letter from D. Davis, NRC to S. Yahola, Town King, Kialegee Tribal Town – request for comments; initiation of Section 106 review	ML25203A215
07/22/2025	Letter from D. Davis, NRC to W. Yargee, Chief, Alabama-Quassarte Tribal Town – request for comments; initiation of Section 106 review	ML25192A077
07/22/2025	Letter from D. Davis, NRC to J. Cernek, Chairman, Coushatta Tribe of Louisiana – request for scoping comments; initiation of Section 106 review	ML25203A208

Date	Description	ADAMS Accession No.[a]
07/22/2025	Letter from D. Davis, NRC to T. Cypress, Chairman, Miccosukee Tribe of Florida – request for comments; initiation of Section 106 review	ML25203A210
07/22/2025	Letter from D. Davis, NRC to D. Hill, Principal Chief, Muscogee Nation – request for comments; initiation of Section 106 review	ML25203A211
07/22/2025	Letter from D. Davis, NRC to S. Bryan, Chairwoman, Poarch Band of Creek Indians – request for comments; initiation of Section 106 review	ML25203A207
08/06/2025	Letter from R. Mangum, ACHP to D. Davis, NRC – acceptance of 36 CFR 800.8(c) notification	ML25219A302
09/24/2025	Letter from S. Rieke, GA SHPO to D. Davis, NRC – acceptance of initiation and 36 CFR 800.8(c) notification	ML25268A002
12/17/2025	Letter from S. Rieke, GA SHPO to B. Goldstein, NRC – concurrence with NRHP evaluations	ML25351A131
02/03/2026	Email from B. Goldstein, NRC to B. Marzella, ACHP requesting comments on the NRC's Section 106 findings	ML26035A170
02/03/2026	Email from B. Goldstein, NRC to M. McLaughlin, GA SHPO requesting comments on the NRC's Section 106 findings	ML26035A171
02/03/2026	Email from B. Goldstein, NRC to 9 federally recognized Tribes[b] and one State recognized Tribe[c] requesting comments on the NRC's Section 106 findings	ML26035A172
02/04/2026	Email from B Marzella, ACHP to B. Goldstein, NRC – no comments	ML26036A027
03/03/2026	Letter from S. Rieke, GA SHPO to A. Waldron, NRC – concurrence with determination of no historic properties affected	ML26063A013

ADAMS = Agencywide Documents Access and Management System; ACHP = Advisory Council on Historic Preservation; SHPO = State Historic Preservation Office; NRC = U.S. Nuclear Regulatory Commission; NRHP = National Register of Historic Places.

(a) Access these documents through the NRC's ADAMS at https://adams.nrc.gov/wba/.

(b) Alabama-Quassarte Tribal Town, Coushatta Tribe of Louisianna, Kialegee Tribal Town, Miccosukee Tribe of Florida, Muscogee Nation, Poarch Band of Creek Indians, Seminole Nation of Oklahoma, Seminole Tribe of Florida, and Thlopthlocco Tribal Town.

(c) Lower Muskogee Creek Tribe.

B.1 References

36 CFR Part 800. *Code of Federal Regulations*, Title 36, *Parks, Forests, and Public Property*, Part 800, "Protection of Historic Properties." TN513.

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54 U.S.C. § 306108 *et seq*. National Historic Preservation Act Section 106, "Effect of Undertaking on Historic Property." TN4839.

National Historic Preservation Act. 54 U.S.C. § 300101 *et seq*. TN4157.